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The Role of Digitalization in The Transformation of Human Resource Management

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Abstract

Digitalization has revolutionized the way organizations manage human resources, shifting from traditional practices to automated, data-driven approaches. This study aims to examine the impact of digital technologies on recruitment, training, and performance evaluation, highlighting the advantages and challenges associated with this transformation. The methodology includes a theoretical analysis of existing literature and a review of practical cases from international contexts. The findings reveal that digitalization provides numerous benefits, including increased efficiency, improved employee experiences, and enhanced decision-making capabilities through data analytics. However, challenges such as high implementation costs, lack of technological skills, and data security concerns persist. The paper concludes by recommending that organizations implement training programs to develop the digital skills of their workforce, invest in technologies that adhere to privacy standards, and focus on integrating digital systems that support their long-term human resource management strategies. These measures are essential to fully leverage the potential of digitalization in an increasingly technology-dependent world.

Keywords: *Digitalization; Human Resource Management; Recruitment; Training and Development; Performance Evaluation; Digital Technology; Data Analytics; Organizational Transformation; Challenges of Digitalization; Process Automation.*

1. INTRODUCTION

Digitalization has fundamentally transformed the way organizations manage their human resources, shifting from traditional processes to automated, data-driven approaches. In an increasingly interconnected and competitive world, digital technology has opened vast opportunities for enhancing efficiency, productivity, and employee experiences. Modern human resource management practices, including recruitment, training, performance evaluation, and employee data management, have greatly benefited from technological advancements, offering more personalized and strategic approaches. However, this transformation has also introduced new challenges for organizations. High implementation costs, lack of technological skills among employees, and concerns over data privacy and security are some of the key barriers businesses face in their efforts to adopt digitalization.

The primary aim of this study is to examine the impact of digitalization on human resource management, analyzing the advantages, challenges, and transformations this technology brings to everyday HR processes. The study seeks to address critical questions such as: How does digitalization improve efficiency and decision-making accuracy in HR? What are the main challenges organizations encounter during the implementation of digital technologies, and how can they overcome them? The specific objectives include analyzing the impact of digitalization on employee recruitment and training, exploring the role of data analytics in performance evaluation, and addressing the challenges faced by organizations during their digital transformation.

The paper is structured into several key chapters. Initially, the introduction presents the context of the topic and its importance for modern organizations. Subsequently, the theoretical framework explores the concepts and theories related to digitalization and human resource management. The methodology chapter describes the approach used to gather and analyze data. The findings and analysis chapter highlights the key advantages and challenges, supported by concrete examples and case studies. Finally, the conclusion provides recommendations for organizations to fully leverage the potential of digitalization and overcome existing obstacles. This study

contributes to both academic and practical literature, offering valuable insights for organizations and researchers to better understand how to harness technology in human resource management.

2. THEORETICAL FRAMEWORK

Digitalization, as a process of transforming information, communication, and operations into digital formats, has become a critical element in managing modern organizations. In the context of human resource management (HR), digitalization involves the use of technologies such as artificial intelligence (AI), automation, and data analytics to enhance work processes, increase efficiency, and enable more informed decision-making (Qerimi, 2012). Through digitalization, HR has evolved from an administrative function into a strategic partner that contributes to achieving organizational objectives by delivering sustainable value and improving employee experiences.

Theoretical models of human resource management have evolved to reflect the integration of digital technologies. The classical HR model focused on basic functions such as recruitment, training, and performance management. With technological advancements, more sophisticated models, such as the Integrated HR Technology Model and the HR Data Analytics Model, have emerged. These models prioritize the use of data to identify trends, predict needs, and optimize employee performance (Shehu-Lokaj, 2019). Contemporary models underscore the importance of automation and AI in facilitating decision-making and improving the efficiency of human resources.

Key concepts such as automation, artificial intelligence, and data analytics have transformed the way HR operates. Automation involves using technological tools to replace manual tasks and enhance productivity, such as digital platforms that scan and analyze thousands of resumes within seconds during recruitment processes. Artificial intelligence has enabled the development of intelligent systems to predict employee needs, personalize training programs, and increase engagement in organizational processes. For instance, chatbots and virtual assistants address common employee concerns, providing personalized experiences and reducing the workload on HR staff.

Another critical aspect is data analytics, which allows organizations to monitor employee performance, analyze trends, and make evidence-based decisions. HR analytics aids in identifying talent, measuring engagement, and proactively addressing future challenges. This capability goes beyond improving traditional processes, fundamentally reshaping HR strategies and positioning it as a cornerstone of organizational success (Singh, J., & Singh, B., 2022).

The integration of digital technologies into human resource management has not only brought technical advancements but has also influenced organizational culture. The use of such technologies emphasizes the importance of flexibility, innovation, and employee-focused approaches (Magnus, 2016). As organizations embrace these technologies, they face challenges such as a lack of employee technological skills, changes in organizational structures, and the need for continuous adaptation to new technologies.

Analyzing these concepts and models makes it clear that digitalization is not merely a passing trend but a force that is redefining the rules of human resource management. To maximize these opportunities, organizations must develop tailored strategies that integrate digital technologies sustainably and ethically, ensuring that technological transformation aligns with and supports their long-term mission and objectives.

3. RESEARCH METHODOLOGY

The methodology for this study combines a theoretical analysis of scientific literature with practical case study analysis. The theoretical approach is grounded in a review of selected sources from existing literature, including scholarly articles and reports from organizations specializing in human resource management and technology. The practical component of the study examines concrete examples from companies that have integrated digital technologies into their HR practices, illustrating the impact of these technologies on organizational performance.

Methdological Approach

A combination of theoretical study and practical case analysis was necessary to gain a deeper understanding of the relationship between digitalization and human resource management (Yin, 2018). The theoretical study focused on identifying key concepts and theories related to digital transformation and its impact on HR processes. Meanwhile, the case study analysis explored how these theories and concepts are applied in real-world organizational practices. This dual approach ensures a comprehensive exploration of the subject, bridging theoretical knowledge with practical applications.

Description of Resources

The primary resources for this study include:

- Scholarly articles from internationally indexed journals, such as Scopus and Web of Science, addressing the impact of technology on HR (Footnote: Brewster, C., Chung, C., & Sparrow, P., 2016).
- Industry reports from organizations specializing in technology and human resources, providing up-to-date data on global trends and best practices (Footnote: Insights., 2022).
- Case studies from international and regional companies that have adopted technologies such as artificial intelligence, data analytics, and automation in their HR processes (Footnote: Marr, 2021).

Case Selection Criteria

The cases analyzed were selected based on the following criteria:

- Companies that have implemented digital technologies in one or more HR processes, such as recruitment, training, and performance evaluation.
- Organizations that reported measurable outcomes related to improved performance and efficiency.
- Examples from various sectors to provide a diverse perspective on the impact of digitalization.

This cmbination of theoretical approach and practical case study analysis aims to provide a comprehensive and detailed understanding of the transformation brought about by digitalization in human resource management. The selection of reliable sources and the analysis of concrete cases were crucial in ensuring an in-depth and evidence-based examination of the subject.

4. FINDINGS AND ANALYSIS

4.1. Advantages of Digitalization in HR - Recruitment: Enhanced Efficiency and Speed

Digitalization has transformed the recruitment process, making it more efficient and faster. Digital platforms such as LinkedIn, Indeed, and Glassdoor (Urban, 2022) have created new opportunities for both employers and potential employees, enabling broader and more personalized recruitment approaches. Artificial intelligence (AI) plays a significant role in this transformation by employing advanced algorithms to analyze resumes, match candidates to suitable positions, and improve the candidate experience through chatbots and other automated communication tools. For instance, systems like HireVue utilize AI to analyze video interviews, identifying the most suitable candidates (HireVue, 2021) based on behavioral patterns and responses.

Training: E-learning and Virtual Training

Employee training and development have significantly benefited from e-learning technologies and virtual training platforms. Digital technology enables organizations to provide flexible, personalized, and cost-effective courses. Platforms such as Coursera, Udemy, and LinkedIn Learning allow employees to undertake training anytime and anywhere (Kopp, 2021). Additionally, virtual training using augmented reality (AR) and virtual reality (VR) is particularly valuable in technical and complex sectors (Pantelidis, 2020), enabling practical and safe simulations for real-world job scenarios. This flexibility enhances the effectiveness of training while also improving employee engagement and experience.

Performance Evaluation: Data Analytics for Employee Performance

Data analytics has revolutionized the measurement and management of employee performance. Systems like SAP SuccessFactors and Workday (SE, 2022) provide robust tools for monitoring employee progress, setting goals, and identifying areas for improvement. Predictive analytics aids organizations in forecasting future employee performance (Davenport, 2017) by analyzing historical data and current behavior. Moreover, these technologies help identify factors contributing to motivation or decreased productivity, offering actionable recommendations to enhance human resource management. This data-driven approach empowers organizations to make informed and strategic decisions regarding the development of their human resources.

The aforementioned advantages demonstrate that digitalization is a transformative force for HR, driving efficiency, improving employee experiences, and fostering a more strategic approach to human resource management. While these benefits are substantial, they also emphasize the need for organizations to adopt these technologies sustainably and carefully, ensuring they align with long-term organizational goals and values.

4.2. CHALLENGES AND LIMITATIONS

High Initial Implementation Costs

One of the primary challenges organizations face in adopting digital technology for human resource management is the high initial implementation cost. Deploying technological platforms, such as human resource information systems (HRIS), requires significant financial investments in infrastructure, equipment, and software licenses (Laudon, K. C., & Laudon, J. P., 2020). For instance, an organization adopting a system like SAP SuccessFactors must account not only for purchase costs but also for staff training and ongoing maintenance expenses. Furthermore, smaller organizations often struggle to achieve a satisfactory return on investment due to their limited financial and human resources.

Lack of Digital Skills Among Employees and Managers

Another major challenge is the lack of digital skills among employees and managers. While technology offers extraordinary opportunities to enhance HR processes, many employees feel unprepared to effectively utilize digital tools. For example, insufficient knowledge of data analytics platforms or artificial intelligence (AI) applications can limit the potential of these technologies. This challenge highlights the critical need for developing digital skills through training programs (Prensky, 2012) and professional development initiatives. Investing in employee readiness is essential to fully realize the benefits of digital transformation in HR.

Privacy and Data Security Risks

Digitalizing human resources also raises significant concerns about employee privacy and data security (Solove, D. J., & Schwartz, P. M., 2020). Data collected and stored via HR platforms, including personal information, performance metrics, and other sensitive details, are vulnerable to cyberattacks and security breaches. Additionally, the implementation of digital technologies often introduces ethical dilemmas, particularly concerning the use of personal data for analytics or performance prediction. A report by Deloitte (Insights., Global Human Capital Trends: Leading the Social Enterprise—Reinvent with a Human Focus, 2022) revealed that 45% of organizations lack adequate policies to ensure employee data protection.

These challenges emphasize that while digital technology has the potential to transform HR management, organizations must carefully plan to address the high initial costs, invest in employee and managerial training, and implement robust data protection policies and mechanisms. Without tackling these limitations, the potential benefits of digitalization may remain unattainable.

4.3. TRANSFORMATION OF HUMAN RESOURCE MANAGEMENT

Shifting from Traditional to Strategic Roles Through Technology

In the digital era, technology has fundamentally reshaped how human resource management (HR) functions. From a traditional role primarily focused on payroll administration, recruitment, and document management, HR has evolved into a strategic partner that helps organizations achieve their long-term objectives. Technologies such as artificial intelligence (AI), human resource information systems (HRIS), and data analytics have enabled HR to proactively contribute to strategic decision-making. For instance, leveraging analytics to identify employee performance trends allows for predictions and interventions that enhance productivity and align with business goals. This shift toward a strategic role also necessitates HR's active involvement in transforming organizational culture, driving changes that prioritize diversity, inclusion, and sustainability. Technology has facilitated this process by providing tools to measure and improve employee engagement and promote transparency in decision-making processes.

Usin Technology to Enhance Employee Experience

Employee experience has become a top priority for modern organizations, and technology plays a central role in its enhancement. Platforms such as Workday and SAP SuccessFactors offer personalized interfaces that help employees manage their daily tasks, access training programs, and pursue professional development. Additionally, chatbots and virtual assistants enable employees to receive quick, personalized support for administrative issues, reducing bureaucracy and increasing efficiency.

Another critical aspect is the creation of a more flexible and adaptable work environment through technology. Digital platforms allow employees to work from anywhere and at any time, equipping them with the tools needed for effective collaboration. This flexibility has resulted in higher employee satisfaction and engagement. According to a report by Deloitte (Insights., Global Human Capital Trends: Leading the Social Enterprise—Reinvent with a Human Focus, 2022), companies that adopt advanced technologies to improve employee experience report higher

levels of productivity and engagement. The transition from traditional roles to strategic roles and the use of technology to enhance employee experience have positioned HR at the core of organizational strategy. Technology has empowered HR managers to become not only administrators but also change leaders who directly contribute to the long-term success of organizations. This transformation is an ongoing and dynamic process, requiring the active involvement of both managers and employees to fully realize its potential benefits.

5. QUESTIONNAIRE: THE IMPACT OF TECHNOLOGY ON THE TRANSFORMATION OF HUMAN RESOURCE MANAGEMENT

I. Demographic Information

1. What is your position within the company/institution?

- Employee: 77%
- HR Manager: 16%
- Executive Director: 7%

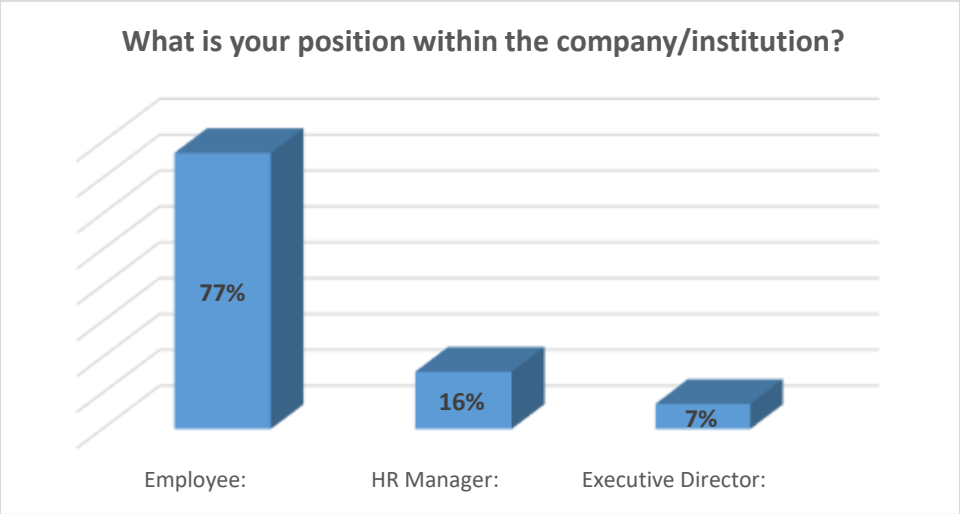


Figure 1

The results clearly indicate that technological transformations in HR predominantly impact operational-level employees, who form the overwhelming majority of respondents in this study. This dominance underscores the importance of investing in training and developing digital skills for this group, as they are the most exposed to technological changes in daily processes. Training operational employees will ensure better adaptation to modern technologies and enhance their efficiency in carrying out tasks.

Conversely, the role of HR managers is equally important, as they serve as a critical link between the development of technological policies and their practical implementation. The 16% representation of HR managers in this study suggests that they are a key component for the success of digital transformation. Further analyses should focus on the specific challenges these managers face, including their adaptation to new technologies and the integration of these technologies into daily HR practices.

Furthermore, executive directors represent only 7% of respondents, suggesting their involvement in implementing technologies is often more indirect. However, their role as strategic decision-makers is indispensable. Executive directors set the organization's vision and strategy, making it vital for them to collaborate closely with other management levels to ensure the success of technological transformation. Greater engagement from this group can help eliminate barriers and drive a successful transformation.

Overall, these insights emphasize the need for collaboration between various organizational levels and a strong focus on developing digital skills to meet the demands of the modern work environment. Such collaboration will enhance efficiency and ensure a sustainable and effective transformation.

Recommendations

1. **Skill Development:**

Organizations should invest in training programs for operational-level employees to equip them with the necessary skills to utilize new technologies effectively.

2. **Strengthening HR Managers' Roles:**

Support programs should be created for HR managers to enhance their capacity for strategic technology management.

3. **Engaging Executive Directors:**

Executive directors must become more involved in monitoring and supporting digital transformation to ensure long-term success.

The findings of this research provide a solid foundation for understanding the challenges and opportunities associated with implementing technology in human resource management. The interpretations above serve as a starting point for further studies and for developing concrete strategies to improve HR experience and efficiency.

2. Organization Size:

- Less than 50 employees: 82%
- 50–250 employees: 14%
- More than 250 employees: 4%

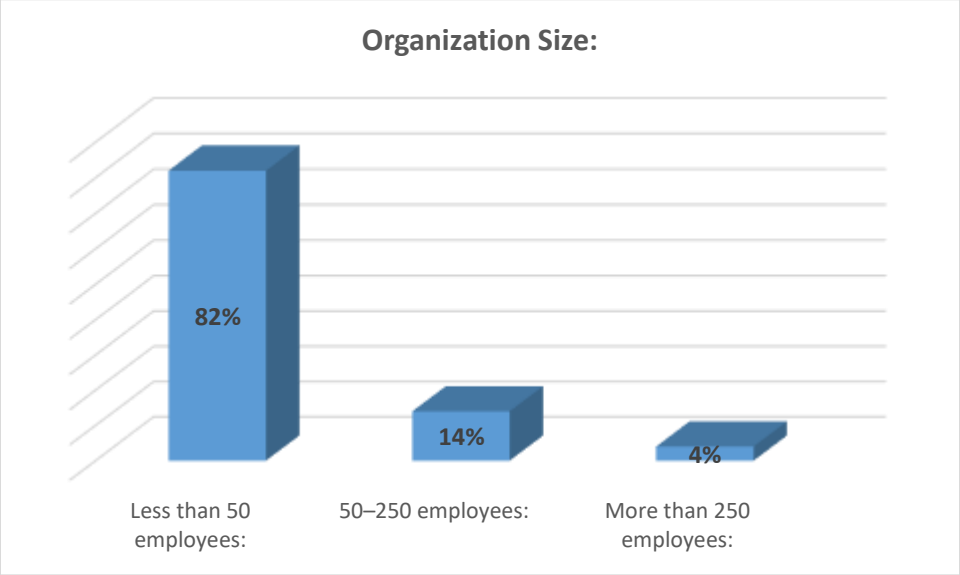


Figure 2

Interpretation and Analysis of Results

The survey results reveal that the vast majority of respondents (82%) are from small organizations with fewer than 50 employees. This finding underscores the importance of digital technologies in human resource management (HR) for smaller organizational environments, where the impact is more pronounced. Medium-sized organizations represent 14% of participants, while large organizations account for only 4% of the total. This distribution carries significant implications for analysis and recommendations.

Insights and Implications

1. **Small Organizations:**

Small organizations dominate participation, representing the majority of entities reporting the impact of digital technologies on HR. This suggests that smaller organizations feel more affected by technological transformations. With limited financial and human resources, small organizations face considerable challenges in implementing technologies. However, the benefits they gain, such as time savings and increased efficiency, are especially valuable. These technologies help optimize daily processes and provide a foundation for strategic improvement.

2. **Large Organizations:**

Large organizations make up only 4% of respondents, suggesting that they have likely already adopted advanced technologies or are less concerned about the impact of technological transformation. Larger organizations typically have ample resources to absorb the costs and complexities of technology implementation and provide continuous training for their staff. This advantage may explain their reduced concerns about the impact of new technologies.

3. **Medium-Sized Organizations:**

Medium-sized organizations, representing 14% of respondents, often occupy an intermediary position. With resources that are more substantial than small organizations but less than large ones, they face unique challenges. These include balancing limited resources with the pressure for innovation and modernization. Medium-sized organizations often need to find ways to adopt technologies that meet their needs without exceeding budget constraints.

Recommendations

1. **For Small Organizations:**
   - Focus on cost-effective and tailored technological solutions that can be quickly implemented. SaaS (Software as a Service) platforms may be a suitable option.
   - Invest in training staff on the use of basic technologies to overcome skill-related barriers.
2. **For Medium-Sized Organizations:**
   - Explore the possibility of forming strategic partnerships with technology companies to reduce costs and maximize benefits.
   - Identify scalable technologies that can adapt to organizational growth.
3. **For Large Organizations:**
   - Develop more complex strategies that integrate artificial intelligence and analytics for strategic decision-making.
   - Promote higher standards for data security and ethical use of technology in HR.

The results suggest that the size of an organization strongly influences how it experiences technological transformation in HR. While small organizations are the primary group needing practical support to adopt digital technologies, larger organizations have the potential to lead innovation. To achieve sustainable transformation, personalized strategies tailored to each organizational segment are essential.

3. The Industry in Which Your Organization Operates:

- Technology: 9%
- Services: 18%
- Manufacturing: 7%
- Education: 29%
- Healthcare: 37%

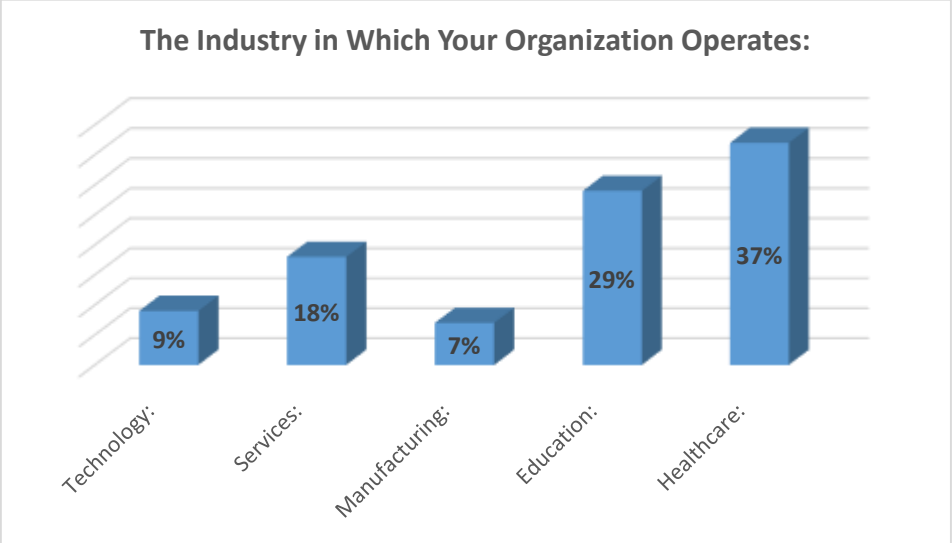


Figure 3

The results reveal an interesting distribution of organizations based on their industry. Healthcare and education dominate, representing 37% and 29% of participating organizations, respectively. The services sector follows with 18%, while technology and manufacturing have lower representations, at 9% and 7%, respectively.

Insights and Implications

1. **Healthcare and Education Sectors:**

The high representation of healthcare and education sectors emphasizes the significance of digital transformation in these fields.

- Healthcare: This sector faces high complexity in HR management, including recruiting specialized staff, managing flexible schedules, and evaluating performance in critical environments. Digital technologies emerge as powerful tools to optimize these processes, improving both efficiency and service quality.
- Education: Digital transformation in HR is equally vital for educational institutions, facilitating curriculum management, training, and professional development for academic staff. Technology enhances the experiences of both staff and students, becoming a core component of growth and modernization strategies.

2. **Services Sector (18%):**

The services sector reflects a different dynamic. While organizations in this sector typically focus on improving customer experience, HR transformation remains a crucial element of their success. Digital technologies play a significant role in talent acquisition and management, addressing the demands of an increasingly competitive market.

3. **Technology and Manufacturing Sectors:**

- Technology (9%): The relatively low representation of the technology sector is surprising, considering its leadership in implementing advanced technologies. This could suggest that technology companies have already achieved a high level of integration and therefore feel less concerned about HR transformation.
- Manufacturing (7%): The low representation of the manufacturing sector indicates that this industry may still be in the early stages of adopting digital technologies. High costs and integration complexities remain significant barriers, highlighting the need for greater financial and strategic support.

Recommendations

1. **For Healthcare and Education Sectors:**

- Invest in HR management systems tailored to the unique needs of these sectors, such as personalized training programs and performance monitoring tools.
- Leverage technologies like artificial intelligence and data analytics to enhance talent identification and improve staff experiences.

2. **For the Services Sector:**

- Focus on adopting technologies that streamline recruitment, performance management, and data analysis to improve both employee and customer experiences.

3. **For Technology and Manufacturing Sectors:**

- Manufacturing: Consider technologies that automate manual processes and enhance HR management in factories and other production environments.
- Technology: Act as a leader by developing advanced models for applying technologies in HR and sharing best practices with other sectors.

The analysis highlights the need for industry-specific strategies to support digital transformation in HR. Healthcare and education are at the forefront of transformation, while manufacturing and technology require tailored approaches to overcome unique challenges. This diversity underscores that the benefits of HR transformation depend heavily on the context and specific needs of each sector.

4. Does your organization use digital technology for human resource management?

- **Yes:** 98%
- **No:** 2%



Figure 4

The results indicate an exceptionally high adoption rate of digital technology in human resource management (HR), with 98% of organizations reporting the use of such technologies, and only 2% indicating non-use. This reflects a clear trend toward digital transformation in HR, fundamentally changing traditional approaches to managing human capital.

Insights and Implications

1. **High Adoption Rate (98%):**

The overwhelming majority of organizations using digital technologies demonstrates widespread recognition of the benefits they offer, including process automation, increased efficiency in recruitment, and improved management of employee data. This high adoption rate also highlights industry pressure to embrace advanced technologies to remain competitive and address the evolving needs of the workforce. These findings underscore the strategic importance of technology in transforming HR practices.

2. **Low Adoption Rate (2%):**

The minimal percentage of organizations not using digital technologies likely represents smaller entities or those operating in industries where digitalization is not yet a priority. In some cases, this lack of adoption may stem from financial constraints or insufficient technological expertise to implement appropriate solutions. This small group highlights the challenges that some organizations still face in integrating technology into their processes, emphasizing the need for greater support in education and funding.

3. **Future Trends:**

Given the high adoption rate, it is expected that the use of digital technologies in HR will soon become a universal standard. This transformation is anticipated to positively impact HR practices, including greater employee engagement and optimization of management processes. Universal adoption of technologies will not only enhance efficiency but also foster innovation and inclusivity within the workplace.

The findings point to a clear trend toward digital transformation in HR, with significant acceptance among organizations. While the majority are well along the path of technological integration, a small minority continues to face challenges that require strategic interventions to ensure that the benefits of technology are equitably distributed across all organizations and sectors.

Recommendations

1. **For Organizations Using Digital Technologies (98%):**
    - Continue improving existing processes by integrating artificial intelligence, data analytics, and automation for repetitive tasks.
    - Invest in employee training programs to ensure effective use of new technologies.

2. **For Organizations Not Using Digital Technologies (2%):**
    - Explore low-cost, tailored solutions to initiate the digitalization process. SaaS platforms could serve as an effective starting point for resource-constrained organizations.
    - Develop partnerships with technology providers to assist in implementing technologies and training staff.
3. **Continuous Monitoring and Improvement:**
    - Organizations should regularly review their HR technologies to ensure alignment with global trends and the specific needs of their operations.

The widespread adoption of digital technologies in HR signifies a clear shift toward strategic, technology-driven human capital management. Organizations embracing this transformation will be better positioned to meet the challenges of an increasingly competitive global environment, while those yet to embark on this journey must act to avoid being left behind. These findings provide a strong foundation for further research into the long-term impact of digital technologies on HR.

5. In which processes are digital technologies most used in your organization?

- Recruitment: 17%
- Training and Development: 11%
- Performance Evaluation: 8%
- Employee Data Management: 55%
- Logistics Asset Registration: 9%

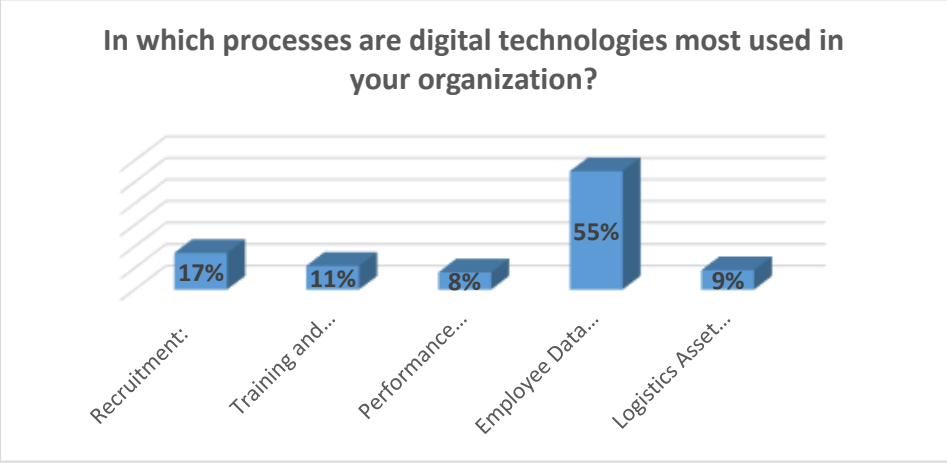


Figure 5

The results reveal that employee data management is the primary process where digital technology is most utilized, accounting for 55% of cases. This dominance reflects the importance of using technological systems, such as Human Resource Information Systems (HRIS), for managing employee information. Organizations appear to recognize the significance of optimizing this process, which involves handling personal data, performance metrics, and administrative tasks. The intensive use of technology in this area aligns with the need to reduce administrative errors, enhance efficiency, and meet privacy and data security requirements.

On the other hand, the use of digital technologies for recruitment represents 17%, indicating that many organizations already leverage digital platforms to improve candidate selection. However, this percentage suggests room for improvement, particularly for organizations that have not fully embraced technologies like artificial intelligence (AI) and Applicant Tracking Systems (ATS). This figure also indicates that digital recruitment may be more prevalent in larger or technologically advanced organizations. In training and development, digital technologies are utilized in 11% of cases, reflecting untapped potential for implementing e-learning platforms and other professional development tools. Organizations appear to need further investment in technologies that can offer personalized and flexible training solutions for employees. The low use of digital technologies in logistics asset registration (9%) and performance evaluation (8%) suggests that these processes are still predominantly handled using traditional methods. This could be due to a lack of funding or challenges associated with adopting new technologies. Performance evaluation, a critical process for strategic HR management, can be significantly improved through advanced analytics and tools for measuring employee performance.

Insights and Implications

1. **Focus on Employee Data Management:**

The high percentage of technology use in managing employee data highlights its role as a foundation for efficient HR processes. This process directly supports organizational compliance with privacy regulations and improves operational efficiency.

2. **Recruitment Needs Further Digital Integration:**

While recruitment benefits from digital tools, the moderate percentage indicates that broader adoption of AI and ATS solutions could further enhance candidate selection and streamline recruitment workflows.

3. **Untapped Potential in Training and Development:**

The relatively low percentage in this area suggests a missed opportunity to invest in technologies like e-learning platforms and virtual training tools, which can provide scalable, flexible, and cost-effective solutions for professional development.

4. **Underutilization in Performance Evaluation and Logistics Asset Registration:**

The low use of technology in these processes points to potential areas for improvement. Advanced tools for performance evaluation can provide data-driven insights that help align employee goals with organizational objectives, while logistics technologies can optimize asset tracking and management.

Recommendations

1. **For Employee Data Management:**
   - Continue investing in robust HRIS platforms that ensure data accuracy, security, and accessibility while supporting compliance with data privacy regulations.
2. **For Recruitment Processes:**
   - Adopt advanced technologies like AI-powered ATS to improve candidate sourcing and selection efficiency.
   - Provide training to HR teams to maximize the potential of digital recruitment platforms.
3. **For Training and Development:**
   - Introduce e-learning platforms and virtual training programs to enhance accessibility and engagement for employees.
   - Explore gamification and AI-driven tools to personalize learning experiences.
4. **For Performance Evaluation and Logistics Asset Registration:**
   - Implement performance analytics tools to provide actionable insights and improve employee development plans.
   - Invest in logistics software to streamline asset registration and ensure better resource management.

The findings highlight a strong focus on leveraging digital technologies for employee data management, while processes like training, recruitment, and performance evaluation require greater attention to fully harness the opportunities offered by digital transformation. Strategic investment and targeted adoption of digital tools can help organizations address these gaps, ensuring a comprehensive and effective transformation in HR practices.

III. Experiences and Perceptions

6. How effective do you believe digital technologies are in improving HR performance?

- 1 - Not effective: 0%
- 2 - Slightly effective: 4%
- 3 - Moderately effective: 11%
- 4 - Quite effective: 33%
- 5 - Highly effective: 52%

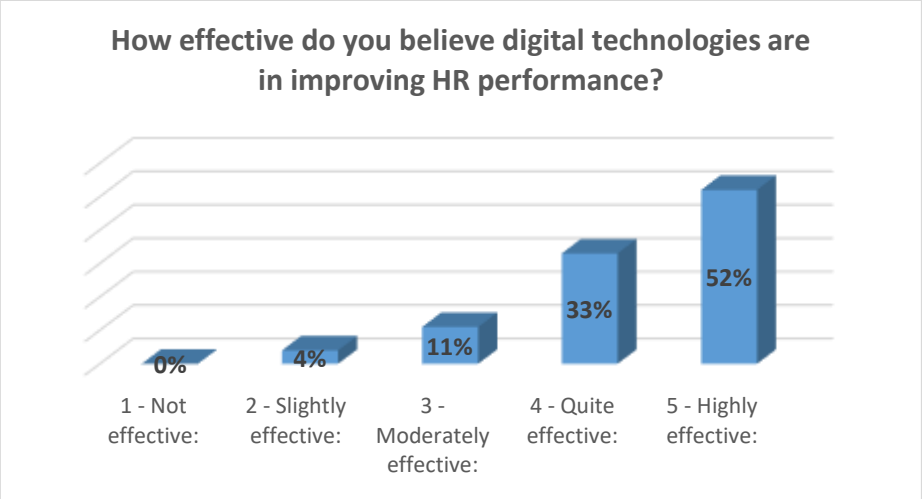


Figure 6

The results reveal an overwhelmingly positive perception of the effectiveness of digital technologies in improving HR performance. A total of 52% of respondents rated these technologies as "highly effective," while 35% considered them "quite effective." These figures demonstrate a high level of confidence in the role of digital technologies in enhancing HR functions and processes.

In contrast, only 11% rated these technologies as "moderately effective," and a very small proportion (4%) viewed them as "slightly effective." Notably, 0% of respondents rated the technologies as "not effective," which underscores the universal and indispensable role of digital technologies in modern workplaces.

Insights and Implications

1. **Dominance of Positive Perceptions:**

The high percentage of respondents viewing digital technologies as effective indicates that these tools are regarded as fundamental to improving HR processes. This suggests that investments in digital technologies have delivered tangible results, enhancing productivity and organizational efficiency. Adopting these technologies is not merely a strategic choice but a necessity for organizations striving to remain competitive in today's fast-paced markets.

2. **Challenges for a Small Segment:**

A minority of respondents (15%) rated digital technologies as only "moderately" or "slightly" effective. This highlights that some organizations are still in the early stages of integrating digital technologies or face specific challenges, such as financial constraints or a lack of digital skills. This gap between positive and moderate perceptions underscores the need for continued support for organizations adapting to technological transformation.

3. **Universal Acknowledgment of Importance:**

The absence of any "not effective" responses reflects a universal acknowledgment of the importance of digital technologies in HR. This also suggests that organizations feel pressured to adapt to modern work standards, emphasizing the evolution toward a fully digitalized work environment. This shift indicates that the use of digital technologies is no longer an optional advantage but a new standard in strategic HR management.

Recommendations

1. **Support for Organizations in Early Stages:**
   - Organizations that perceive digital technologies as "slightly" or "moderately" effective should receive training and resources to enhance their utilization of these tools.
   - Financial and technical support should be provided to overcome initial barriers to adoption.
2. **Promoting Best Practices:**
   - Organizations that have successfully implemented digital technologies should share their experiences and practices to foster benefits across sectors.
   - Case studies and collaborative initiatives can help bridge the gap for organizations struggling with implementation.

3. **Focus on Innovative Technologies:**
    - To sustain and enhance effectiveness, organizations should prioritize integrating advanced technologies such as artificial intelligence, data analytics, and other cutting-edge tools into their HR processes.

The results confirm that digital technologies are perceived as a transformative force in HR management. The high percentage of positive perceptions highlights that these technologies have not only improved HR performance but have also become a new standard in strategic management. For organizations still facing challenges, this presents an opportunity to improve technology integration and fully embrace their transformative potential. These findings underline the critical role of continued investment, training, and innovation to maximize the benefits of digital transformation in HR.

7. What are the most noticeable benefits of using technology in HR? (Select the most significant):

- Time-saving: 24%
- Improvement of employee experience: 6%
- Increased efficiency: 25%
- Better analytics for decision-making: 14%
- Administration management: 31%

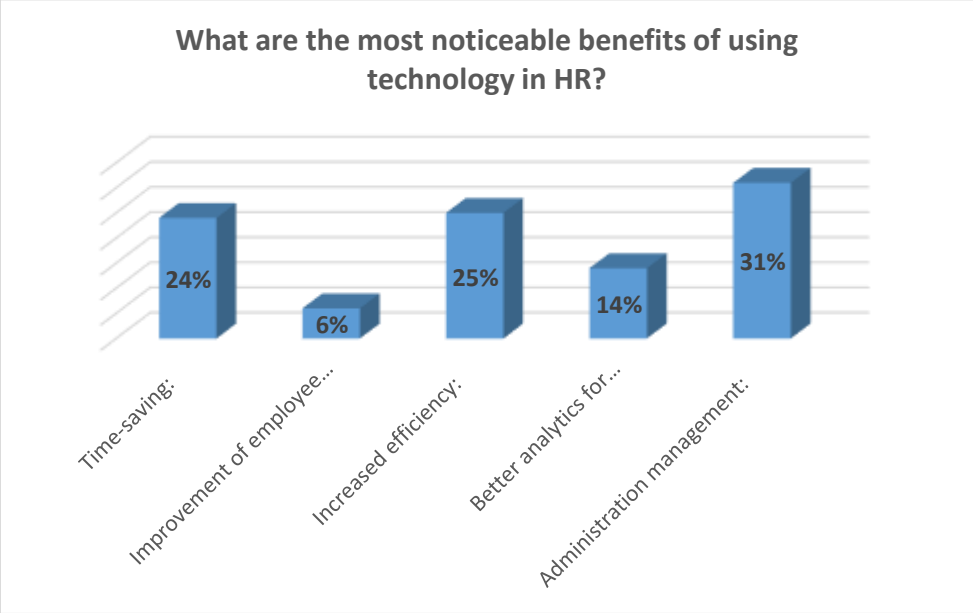


Figura 7

The survey results reveal a clear ranking of the benefits of technology in HR, with administration management and increased efficiency identified as the top advantages. These findings highlight a strong organizational focus on optimizing administrative processes and improving overall productivity through digital technologies.

Administration management was rated the highest, with 31% of respondents identifying it as the most significant benefit. This result underscores the importance of technologies that automate and streamline administrative tasks, enhancing efficiency and reducing human errors. The use of digital platforms for data management and routine administrative processes allows organizations to shift focus toward more strategic functions, laying a robust foundation for further development.

Increased efficiency and time-saving were also prominently highlighted, with 25% and 24% of respondents, respectively, emphasizing these benefits. Digital technologies have enabled organizations to accelerate processes and reduce time spent on repetitive tasks, leading to enhanced productivity. These results suggest that technology is an effective tool for resource optimization and for helping organizations achieve their goals more quickly and efficiently.

Analytics for decision-making, representing 14% of responses, remains a vital component for the strategic transformation of HR. While technology facilitates the use of data for analyzing and predicting organizational needs, the relatively lower percentage for this benefit indicates that many organizations have yet to fully harness the potential of analytics. This suggests a need for greater investment and training in this area to maximize its benefits.

Employee experience improvement, mentioned by only 6% of respondents, suggests that this benefit is not yet a priority for most organizations. This may reflect a focus primarily on process optimization rather than creating an enhanced experience for employees. However, improving employee experience is a crucial component for increasing engagement and satisfaction in the workplace and should receive more attention in future digital transformation strategies.

Insights and Implications

1. **Focus on Administration Management:**

The dominance of administration management as a key benefit reflects the critical role of technology in automating HR processes. This reduces administrative burdens and enables HR departments to focus on strategic initiatives.

2. **Efficiency and Time-Saving as Core Drivers:**

The significant emphasis on efficiency and time-saving highlights the immediate, tangible benefits of digital technologies in streamlining HR processes and enhancing operational productivity.

3. **Underutilization of Analytics:**

The relatively low percentage for analytics for decision-making suggests an untapped opportunity. Organizations need to leverage predictive analytics to forecast talent needs, enhance performance management, and support data-driven strategies.

4. **Employee Experience as a Secondary Priority:**

The limited focus on improving employee experience suggests that organizations may be overlooking a critical area of HR transformation. Investing in technology to support flexibility, personalized development, and engagement can yield long-term organizational benefits.

Recommendations

1. **Expand the Use of Analytics:**
    - Invest in technologies that enable advanced data analytics for strategic decision-making. Predictive analytics can assist in forecasting talent needs and optimizing performance management.
2. **Enhance Employee Experience:**
    - Leverage technology to create a better employee experience through tools that provide flexibility, support, and professional development.
    - Introduce platforms that facilitate communication, feedback, and engagement to increase satisfaction and retention.
3. **Further Optimize Efficiency and Time-Saving:**
    - While these benefits are evident, organizations should continue developing strategies to integrate technology across all aspects of HR management to sustain and enhance productivity.
4. **Raise Awareness of Technology's Potential:**
    - Educate and train staff to recognize and utilize the benefits of technology, particularly in areas like administration, analytics, and employee experience.
    - Encourage sharing of best practices across organizations to foster innovation and adoption of effective solutions.

The results demonstrate that digital technology has significantly improved HR processes, particularly in administration and operational efficiency. However, leveraging technology to enhance employee experience and strategic decision-making through analytics remains an area with significant potential for growth. This analysis underscores the need for organizations to adapt their strategies to fully capitalize on the benefits that technology offers, ensuring a holistic approach to digital transformation in HR.

IV. Challenges and Limitations

8. Which of the following challenges do you consider the most significant during the adoption of technology in HR?

- High implementation costs: 21%
- Lack of digital skills: 34%
- Resistance to change: 6%
- Privacy and data security concerns: 4%
- Lack of awareness about technology adoption: 35%

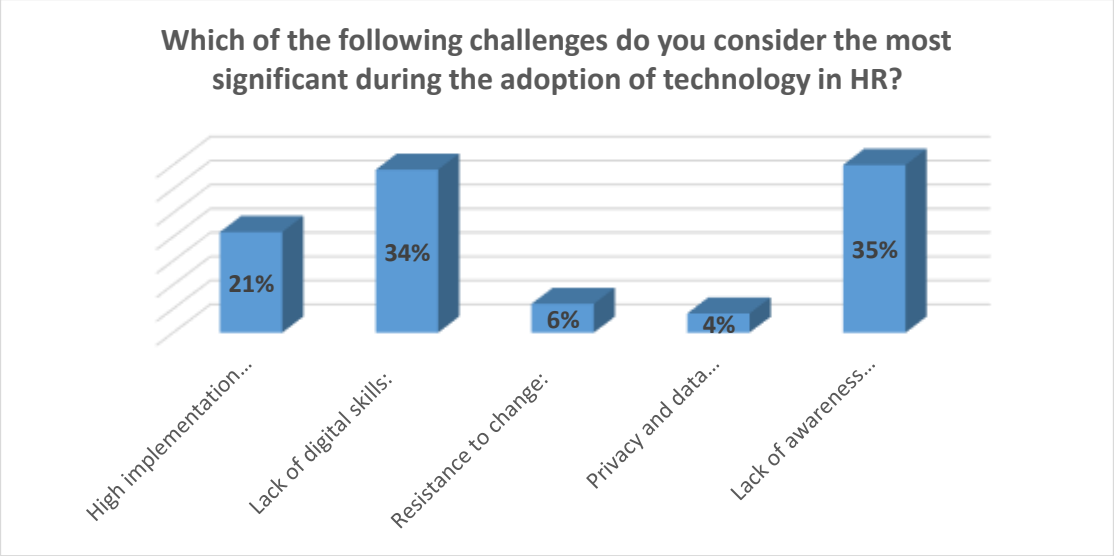


Figura 8

The survey results highlight several key challenges organizations face in adopting technology in human resource (HR) management. The lack of awareness about technology (35%) and the lack of digital skills (34%) emerged as the most prominent challenges, underscoring a significant gap in technological knowledge and competencies. While digital technologies are increasingly ubiquitous, these challenges reveal structural and cultural barriers that many organizations face during the digital transformation process.

Insights and Implications

The analysis reveals that organizations encounter critical challenges when adopting digital technologies in HR management. The lack of awareness about technology, identified by 35% of respondents as the primary obstacle, indicates that many organizations do not fully understand the potential benefits digital technologies bring to HR processes. This lack of awareness may stem from an absence of strategic vision or an organizational culture resistant to innovation. Addressing this structural challenge requires systematic interventions to increase awareness and education about the strategic importance of digital technologies.

The lack of digital skills, noted by 34% of respondents, represents another significant challenge. This highlights a substantial gap in technological capabilities among employees and managers, emphasizing the necessity of investments in training and professional development. Developing digital skills is essential for successfully integrating these technologies into HR. Without addressing this issue, many organizations may struggle to unlock the full potential of digital tools.

High implementation costs, mentioned by 21% of respondents, also remain a notable challenge, particularly for small and medium-sized enterprises (SMEs). Deploying digital systems often requires substantial financial investments, including purchasing technologies, integrating them into existing systems, and training staff. This challenge highlights the need for financial strategies that help organizations minimize implementation costs while maximizing benefits.

Resistance to change (6%) and concerns about privacy and data security (4%) were identified as less significant barriers. These results suggest that most organizations have moved beyond the initial skepticism about digital technologies and have started integrating them as a core part of their HR processes. However, ensuring privacy and security remains a critical issue, particularly for organizations handling sensitive employee data. Addressing this challenge is essential for maintaining trust and complying with legal regulations.

Overall, these challenges demonstrate that the digital transformation of HR is an ongoing journey requiring commitment on multiple fronts. Organizations must work to raise awareness, address the lack of digital skills, and develop financial solutions to alleviate cost burdens. Additionally, fostering an organizational culture that supports change and innovation will be crucial for overcoming existing barriers and ensuring a sustainable transformation.

7. CNCLUSIONS AND RECOMMENDATIONS

The findings of this study clearly illustrate that digital technologies have significantly transformed HR management. Key findings highlight that organizations primarily use technologies for employee data management, time-saving, and efficiency improvements. However, major challenges such as a lack of awareness about technology and digital skills remain critical barriers to address. Furthermore, high implementation costs and the need to improve the employee experience require special attention.

Recommendations for Organizations

1. **Increase Awareness and Education About Technology**
    - Develop awareness campaigns and training programs to inform staff and managers about the benefits of digital technologies. Establishing an innovation-supportive organizational culture is essential for accelerating transformation.
2. **Invest in Training and Professional Development**
    - Regular digital skills training is crucial to address the lack of technological competencies. Customized programs for staff can help organizations achieve higher levels of efficiency and productivity.
3. **Reduce Costs Through Innovative Solutions**
    - Organizations can consider using SaaS (Software as a Service) solutions or strategic partnerships with technology providers to reduce initial implementation and maintenance costs.
4. **Focus on Enhancing the Employee Experience**
    - Digital technologies should be used to create a better experience for employees through flexible platforms, personalized training, and opportunities for professional growth. Enhancing the employee experience helps increase satisfaction and engagement.
5. **Ensure Privacy and Data Security**
    - Organizations must adopt robust standards and policies to ensure data security compliance and protect sensitive employee information.

Suggestions for Future Research

- **Long-Term Impact Analysis of Technologies on Organizational Performance**
    - Future research could focus on measuring the long-term outcomes of implementing digital technologies in HR and their impact on overall organizational performance.
- **Sectoral Comparative Studies**
    - A detailed analysis comparing the adoption and use of digital technologies across various sectors could help identify best practices and specific needs.
- **Strategies for Improving Digital Skills**
    - Research focused on identifying the most effective methods for developing digital skills could contribute to enhancing the level of technological preparedness in organizations.

This study emphasizes the importance of digital technologies in transforming HR management, providing a practical guide for organizations looking to embrace this change. By implementing the right strategies and addressing existing challenges, technology can empower HR to meet the demands of the modern market and enhance its strategic value within the organization.

REFERENCES

Davenport, T. H. (2017). Competing on Analytics: The New Science of Winning. *Boston, MA: Harvard Business Review Press*, 123-140.

Fusnota: Brewster, C., Chung, C., & Sparrow, P. (2016). *Globalizing Human Resource Management.* London, UK: : Routledge.

HireVue. (2021). *How AI Enhances Hiring Decisions.* Available at: www.hirevue.com.

Insights., D. (2022). *Global Human Capital Trends: Leading the social enterprise—Reinvent with a human focus.* New York, NY: Deloitte.

Insights., D. (2022). *Global Human Capital Trends: Leading the social enterprise—Reinvent with a human focus.* . Deloitte: Deloitte University Press.

Kopp, T. &. (2021). *E-Learning in Organizations: Enhancing Employee Development.* . London, UK: Routledge.

Laudon, K. C., & Laudon, J. P. . . (2020). *Management Information Systems: Managing the Digital Firm (16th ed.).* . Harlow, UK: Pearson Education.

Magnus, M. O. (2016). Human Resource Management Practices and Organizational Performance. *International Journal of Economics and Business Management*,, 2(7), 10–22.

Marr, B. (2021). *Future Skills: The 20 Skills and Competencies Everyone Needs to Succeed in a Digital World.* New Jersey: Wiley.: Hoboken, .

Pantelidis, V. S. (2020). The Role of Virtual Reality in Employee Training: An Overview. *Journal of Virtual Reality*, 12(4), 101-115.

Prensky, M. (2012). *From Digital Natives to Digital Wisdom: Hopeful Essays for 21st Century Learning.* Thousand Oaks, California: : Corwin Press.

Qerimi, H. (2012). *Ndërlidhja e Teknologjisë Informative me Menaxhimin e Burimeve Njerëzore [Sistemi Informativ i Burimeve Njerëzore "SIBNJ"]*. Pristina, Kosova: University for Business and Technology - UBT.

SE., S. (2022). *SuccessFactors: Enhancing Workforce Performance.* . Walldorf, Germany: SAP Press.

Shehu-Lokaj, A. (2019). *Processes/Practices of Human Resource Management and Employee Performance* . Tirana, Albania: European University of Tirana.

Singh, J., & Singh, B. (2022). *Impact of Human Resource Management Practices on Employee Performance: The Case of L&T (Lassila & Tikanoja) in Finland.* . Finland.: JAMK University of Applied Sciences.

Solove, D. J., & Schwartz, P. M. (2020). *Information Privacy Law (7th ed.).* . New York, NY: Wolters Kluwer.

urban, E. &. (2022). *Artificial Intelligence for HR Practices: Recruitment and Selection.* . Cham, Switzerland: Springer.

Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods (6th ed.).* Thousand Oaks, California: SAGE Publications.

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