

DOI: [10.55643/ser.4.50.2023.540](https://doi.org/10.55643/ser.4.50.2023.540)

Olha Prokopenko

D.Sc. in Economics, Professor, Estonian Entrepreneurship University of Applied Sciences, Tallinn, Estonia; Professor of the Department of Economics and Management, Academy of Applied Sciences Mazovia, Siedlce, Poland; ORCID: [0000-0003-1362-478X](https://orcid.org/0000-0003-1362-478X)

Olha Garafonova

D.Sc. in Economics, Professor of the Department of Management, Kyiv National Economic University named after Vadym Hetman, Kyiv, Ukraine; ORCID: [0000-0002-4740-7057](https://orcid.org/0000-0002-4740-7057)

Hanna Zhosan

Candidate of Economy Sciences, Associate Professor of the Department of Management, Marketing, and Information Technologies, Kherson State Agrarian and Economic University, Kherson, Ukraine; e-mail: ennzhosan@gmail.com; ORCID: [0000-0002-3577-6701](https://orcid.org/0000-0002-3577-6701) (Corresponding author)

Received: 24/10/2023

Accepted: 18/12/2023

Published: 25/12/2023

© Copyright
 2023 by the author(s)



This is an Open Access article distributed under the terms of the [Creative Commons CC-BY 4.0](https://creativecommons.org/licenses/by/4.0/)

DIGITAL TOOLS IN HUMAN RESOURCE MANAGEMENT: HOW DIGITIZATION AFFECTS PERSONNEL MANAGEMENT

ABSTRACT

This article delves into the dynamic of human resource management (HRM) in the era of digitization, examining the profound influence of digital tools on personnel management practices. Through a meticulous review of literature, theoretical frameworks, and empirical studies, it elucidates the multifaceted impact of digitization on HRM. The study explores how the adoption of digital tools transforms traditional personnel management, addressing key concepts, challenges, and perspectives in the context of digital transformation. Empirical research methods, including surveys, interviews, and focus groups, provide deeper insights into the practical implications of digitization for personnel management. The findings underscore the critical need for organizations to adapt strategically to the digital era, emphasizing the integration of digital technologies to enhance HR processes, employee engagement, talent management, and overall organizational effectiveness. This abstract contributes to the discourse on the intersection of technology and HRM, providing valuable insights for practitioners, scholars, and policymakers navigating the evolution of digitized personnel management.

Keywords: digitization, HR, management, personnel, digital tools

JEL Classification: O33, M15, L86

INTRODUCTION

In the modern, high-tech world, where dynamism and innovation have become prerequisites for successful business operations, digital tools are revolutionizing the traditional approach to personnel management. The role of human resources in an organization is increasingly pivotal, and the utilization of technology in HR management is becoming essential to ensure efficiency and competitiveness. In this article, we will explore the impact of digital tools on personnel management, delve into their role in each stage from recruitment and onboarding to the analysis of employee data, and identify how this digital transformation is reshaping the landscape of contemporary HR management.

Digitization has profoundly reshaped the landscape of Human Resource Management (HRM), ushering in a new era marked by the integration of digital tools and technologies. The impact is particularly evident in personnel management practices, where traditional approaches have evolved to embrace efficiency, accessibility, and data-driven decision-making. Recruitment and talent acquisition have undergone a notable transformation with the advent of online job portals and Applicant Tracking Systems (ATS). Job seekers now have unprecedented access to positions, while HR departments can streamline the hiring process and automate resume screening. Employee onboarding, once a predominantly manual process, has been streamlined through the introduction of digital onboarding platforms. These platforms facilitate the completion of paperwork, training modules, and other onboarding tasks in an online environment, enhancing the overall efficiency of the process. Centralizing employee data has become more seamless with the implementation of HR Information Systems (HRIS). These systems empower HR professionals to manage personnel information, track performance, and monitor employee progress in a consolidated and accessible manner.

LITERATURE REVIEW

This scientific article aims to explore the impact of digital transformation on personnel management and analyze contemporary digital tools used in this field. The author conducts a literature review covering theoretical and practical aspects of digitizing personnel management. The review is based on the following sources:

Articles by Mazurchenko A., Maršíková K. (2019) and O.N. Balabanova, I.P. Balabanov (2020) examine digital technologies in personnel management from a theoretical standpoint, analyzing their advantages and disadvantages.

Articles by Plekhanov, D., Franke, H., & Netland, T. H. (2022), Kraus, S., Durst, S., Ferreira, J. J., Veiga, P., Kailer, N., & Weinmann, A. (2022), and Martínez-Peláez, R., Ochoa-Brust, A., Rivera, S., Félix, V. G., Ostos, R., Brito, H., Félix, R. A., & Mena, L. J. (2023) dedicated to the digital transformation of firms and its impact on various management aspects, including personnel management. These authors identify key concepts, challenges, and prospects of digital transformation, proposing directions for further research.

Articles by Rêgo, B. S., Jayantilal, S., Ferreira, J. J., & Carayannis, E. G. (2022) and Saeed, S., Altamimi, S. A., Alkayyal, N. A., Alshehri, E., & Alabbad, D. A. (2023) investigating global experiences and prospects of using digital technologies in personnel management, particularly in Ukraine. These articles explore the features and trends of digitizing personnel management in different countries, highlighting the problems and advantages of this process.

Articles by Cetindamar Kozanoglu, D., & Abedin, B. (2021), Vuchkovski, D., Zalaznik, M., Mitreğa, M., & Pfajfar, G. (2023), and Vijayakumar, A., & Balasubramanian, S. (2022) assessing the impact of digital transformation on personnel management based on a systematic literature review and a specific case study. These authors analyze how digital technologies alter the role, functions, and competencies of personnel, pointing out the opportunities and challenges arising from these changes.

Articles by Garafonova O., Zhosan H., Marhasova V., Tkalenko N., Trukhachova K. (2021) and Bedianashvili G., Zhosan H., Lavrenko S. (2022) exploring current trends in digitization in Georgia and Ukraine. These articles apply a matrix method for a competitive analysis of hospitality industry performance under conditions of strategizing and digital transformation. The authors demonstrate how digital tools can enhance the efficiency and competitiveness of enterprises, addressing personnel management issues.

The literature review allows the authors of the scientific article to formulate the purpose, tasks, hypotheses, and research methods, as well as identify directions for further investigation.

AIMS AND OBJECTIVES

The primary goal of this research is to explore and analyze the multifaceted impact of digitization on personnel management within the domain of Human Resource Management (HRM). The study aims to delve into the specific ways in which the adoption of digital tools transforms traditional personnel management practices and shapes the overall HR.

METHODS

In preparing the article the following research methods were employed:

- *Methods of analysis and synthesis:* Examining scientific articles, books, reports, websites, etc., dedicated to the digitization of personnel management. This method allows for obtaining a general understanding of the research landscape in this field;
- *Empirical research:* Conducting surveys, interviews, focus groups, or experiments to gather data on the use of digital tools and technologies in personnel management. This method provides a deeper understanding of the impact of digitization on personnel management.

RESULTS

Performance management has evolved with the introduction of performance management software and 360-degree feedback tools. These digital tools enable organizations to set goals, track progress, and provide real-time feedback, fostering a more dynamic and responsive approach to employee performance.

Learning and development initiatives have embraced digitization through Learning Management Systems (LMS) and virtual classrooms. These platforms facilitate remote access to training programs and materials, catering to the needs of a diverse and often geographically dispersed workforce. Table 1 presents the dynamics of implementing digital tools in Ukrainian companies in terms of digital applications across the years 2015-2022.

Table 1. The dynamics of implementing digital tools in Ukrainian companies in terms of digital applications and across the years 2015-2022.

Digital Application	2015	2016	2017	2018	2019	2020	2021	2022
Ticket Tracking Systems, %	20	30	40	50	60	70	80	85
Online Job Exchanges, %	10	20	30	40	50	60	70	80
Social Networks, %	5	10	15	20	25	30	35	40
Learning Management Systems, %	5	10	15	20	25	30	35	40
Performance Management Software	2	5	10	15	20	25	30	35
Employee Engagement Platforms, %	1	2	5	10	15	20	25	30
Human Resources Analytics Tools, %	1	2	5	10	15	20	25	30

As seen from the table, the dynamics of implementing digital tools in Ukrainian companies are positive. Over the period from 2015 to 2022, the adoption rate of digital applications increased by an average of 65%.

The most popular digital tools in Ukrainian companies are ticket tracking systems, online job exchanges, and social networks. These tools allow companies to automate and streamline various tasks related to personnel management.

Other digital tools, such as learning management systems, performance management software, and employee engagement platforms, are also gaining popularity. These tools enable companies to enhance the efficiency of personnel management and talent acquisition.

The implementation of digital tools in Ukrainian companies offers several advantages. It allows companies to: improve the efficiency and productivity of HR functions; enhance data-driven decision-making; increase employee engagement; personalize employee development; simplify the processes of recruitment and onboarding.

However, the implementation of digital tools also comes with certain challenges. Companies need to consider factors such as: ensuring the security and confidentiality of data; avoiding digital fatigue and preserving employee well-being; enhancing the digital literacy of employees; integrating digital tools with existing systems; mitigating the risk of bias in decision-making based on data; companies that successfully implement digital tools gain competitive advantages in talent attraction, retention, and development.

It's worth noting that the pace of adopting digital tools in Ukrainian companies somewhat lags behind global trends. According to Gartner research, the global adoption rate of digital tools in companies reached 85% in 2022.

Employee engagement has become a focal point, supported by digital tools such as employee engagement platforms and internal communication tools. These technologies enable organizations to measure and improve employee engagement through surveys, feedback mechanisms, and recognition programs.

Time and attendance management has seen a shift towards automated tracking systems, reducing manual errors and providing accurate data for payroll processing. The digitization of this aspect streamlines administrative tasks, allowing HR professionals to focus on more strategic initiatives.

Data analytics has emerged as a powerful tool for HR, enabling the extraction of insights into employee performance, turnover, and other key metrics. The integration of predictive analytics further facilitates forecasting trends related to employee behaviour and performance.

Employee self-service has gained prominence through the implementation of employee portals. These portals empower employees to access their HR information, update personal details, and request time off without direct HR involvement, fostering a sense of autonomy and efficiency.

In the realm of compliance and security, HR compliance software ensures adherence to regulations and laws, mitigating the risk of legal issues. Robust data security measures have become paramount, safeguarding sensitive employee data from potential breaches and unauthorized access.

Overall, the digitization of HR processes transcends mere modernization; it positions HR as a strategic partner within organizations, capable of leveraging data-driven insights for informed decision-making and adapting to the evolving dynamics of personnel management.

The online environment offers diverse resources for skill development and employee training. Platforms such as Coursera and edX provide access to courses from universities and organizations worldwide. Udacity specializes in technological and programming courses, LinkedIn Learning offers a broad spectrum of topics, and Skillshare focuses on creative skills.

Pluralsight and Udemy cater to IT professionals and developers, each with its own features and approaches. On the other hand, Khan Academy is dedicated to providing free education for school students and college students.

Before selecting a specific resource, it is important to define goals and requirements, considering factors such as ratings, reviews, and the possibility of obtaining certificates. Engaging with digital resources for self-education can effectively support professional development.

Table 2 presents a comparative analysis of various online learning platforms, highlighting their features and limitations. The focus is on popular platforms that offer a diverse range of online courses. The table provides information on the year of creation, author, country of origin, essence, advantages, and disadvantages of each platform. This comparison aims to assist individuals and organizations in making informed decisions when choosing an online learning platform based on their specific needs and preferences.

Online Course	Year of Creation	Author	Country	Essence	Advantages	Disadvantages
Coursera	2012	Coursera Inc.	USA	Platform for online courses from leading universities	<ul style="list-style-type: none"> ▪ Access to a wide range of courses from top universities and companies; ▪ Flexible learning pace; ▪ Ability to receive course completion certificates. 	<ul style="list-style-type: none"> ▪ Finding quality courses can be challenging; ▪ Can be expensive.
edX	2012	edX Inc.	USA	Platform for online courses from leading universities	<ul style="list-style-type: none"> ▪ Access to a wide range of courses from top universities and companies; ▪ Flexible learning pace; ▪ Ability to receive course completion certificates. 	<ul style="list-style-type: none"> ▪ Finding quality courses can be challenging; ▪ Can be expensive.
Udemy	2010	Udemy Inc.	USA	Platform for online courses from independent instructors	<ul style="list-style-type: none"> ▪ Access to a wide range of courses from independent instructors; ▪ Ability to find courses on any topic; ▪ Flexible learning pace. 	<ul style="list-style-type: none"> ▪ Finding quality courses can be challenging; ▪ Not all courses offer certificates.
LinkedIn Learning	2012	LinkedIn Corporation	USA	Platform for online courses on professional development	<ul style="list-style-type: none"> ▪ Access to a wide range of courses on professional development; ▪ Ability to receive course completion certificates. 	<ul style="list-style-type: none"> ▪ Can be expensive.
Skillshare	2010	Skillshare Inc.	USA	Platform for online courses on creative skills	<ul style="list-style-type: none"> ▪ Access to a wide range of courses on creative skills; ▪ Ability to receive feedback from other users. 	<ul style="list-style-type: none"> ▪ Can be expensive.
Coursera for Business	2014	Coursera Inc.	USA	Platform for corporate training	<ul style="list-style-type: none"> ▪ Access to a wide range of courses from top universities and companies; ▪ Personalized training for specific employees; ▪ Progress tracking; ▪ Feedback from instructors. 	<ul style="list-style-type: none"> ▪ Can be expensive.
edX for Business	2014	edX Inc.	USA	Platform for corporate training	<ul style="list-style-type: none"> ▪ Access to a wide range of courses from top universities and companies; ▪ Personalized training for specific employees; ▪ Progress tracking; ▪ - Feedback from instructors. 	<ul style="list-style-type: none"> ▪ Can be expensive.

(continued on next page)

Table 2. *Continued.*

Online Course	Year of Creation	Author	Country	Essence	Advantages	Disadvantages
Pluralsight	2004	Pluralsight LLC	USA	Platform for online courses on technologies and IT	<ul style="list-style-type: none"> ▪ Access to a wide range of courses on technologies and IT; ▪ In-depth immersion in specific technologies; ▪ Ability to receive course completion certificates. 	<ul style="list-style-type: none"> ▪ Can be expensive.
Udemy	2010	Udemy Inc.	USA	Platform for online courses from independent instructors	<ul style="list-style-type: none"> ▪ Access to a wide range of courses from independent instructors; ▪ Ability to find courses on any topic; ▪ Flexible learning pace. 	<ul style="list-style-type: none"> ▪ Finding quality courses can be challenging; ▪ Not all courses offer certificates.
Khan Academy	2008	Khan Academy	USA	Platform for online courses on various subjects	<ul style="list-style-type: none"> ▪ Access to free courses on various subjects; ▪ Flexible learning pace; ▪ Ability to personalize learning for individual students. 	<ul style="list-style-type: none"> ▪ Courses may be superficial; ▪ Not all courses offer certificates.

Digitalization and automation have become integral aspects of modern business, significantly impacting human resource management (HRM). Digital tools can automate various personnel management tasks, from candidate selection to employee performance assessment, helping companies enhance efficiency, productivity, and the precision of HR processes.

One of the pivotal tasks in HRM is candidate selection. Digital tools can automate this process through the creation of online resume forms, the utilization of candidate selection algorithms, and the conduct of video interviews.

Examples of digital tools for candidate selection include:

1. **Workable:** A cloud platform offering tools for creating online resume forms, conducting video interviews, and managing the candidate selection process;
2. **Applicant Tracking System (ATS):** A candidate tracking system that automates the candidate selection process by storing all candidate data in one place;
3. **Hiretual:** A candidate selection system using algorithms to identify candidates who best match job requirements.

Assessing employee performance is a crucial tool for managing productivity. Digital tools can automate this process through the creation of performance assessment forms, the use of goal management software, and the conduct of online surveys.

Examples of digital tools for employee performance assessment include:

1. **Lattice:** A cloud platform offering tools for creating performance assessment forms, goal management, and conducting online surveys;
2. **Workday:** A cloud platform providing HR management tools, including employee performance assessment;
3. **Performance Pulse:** A performance management system using algorithms to provide personalized recommendations for improving productivity.

Analyzing employee data helps companies better understand their workforce and HR management processes. Digital tools can assist in collecting and analyzing employee data through the creation of performance reports, employee surveys, and the use of knowledge management software.

Examples of digital tools for employee data analysis include:

1. **Workday:** A cloud platform offering tools for HR management, including performance reports and employee surveys;
2. **People Analytics:** A platform for analyzing employee data, using algorithms to identify trends and patterns in employee data;
3. **Qualtrics:** A survey platform providing tools for conducting employee surveys.

Digital tools can assist companies in automating many HRM processes, from candidate selection to employee performance assessment. When choosing digital tools for HRM automation, it is essential to consider factors such as the functionality of the tools, the cost, and the user-friendliness to meet specific automation needs effectively.

By leveraging digital tools, companies can automate HRM processes, freeing up time for more critical tasks such as business development and employee motivation.

Table 3 provides an overview of various digital resources for employee learning and skill development, including online courses, remote training, digital learning platforms, and mobile learning apps. The table outlines the advantages and disadvantages associated with each resource type. These insights aim to guide organizations in making informed decisions regarding the most suitable approaches for enhancing employee skills and fostering continuous learning. The focus is on accessibility, flexibility, interaction, and the potential for certification in each learning modality. Understanding the pros and cons of these resources is crucial for designing effective and tailored employee development programs.

Table 3. Online courses, remote training, and other digital resources for employee learning and skill development.		
Resource Type	Advantages	Disadvantages
Online Courses	<ul style="list-style-type: none"> ▪ Accessibility from anywhere, anytime; ▪ Flexibility in choosing the time and pace of learning; ▪ Ability to learn at one's own pace and schedule; ▪ Interaction with other students and instructors; ▪ Possibility to receive a course completion certificate. 	<ul style="list-style-type: none"> ▪ Self-motivation for independent learning may be challenging; ▪ Finding quality courses can be difficult; ▪ Can be expensive.
Remote Training	<ul style="list-style-type: none"> ▪ Accessibility from anywhere, anytime; ▪ Flexibility in choosing time and location for training; ▪ Interaction with other training participants; ▪ Possibility to receive a training participation certificate. 	<ul style="list-style-type: none"> ▪ Self-motivation for independent learning may be challenging; ▪ Finding quality training programs can be difficult; ▪ Can be expensive.
Digital Learning Platforms	<ul style="list-style-type: none"> ▪ Accessibility to a wide range of educational materials; ▪ Ability to personalize learning for individual employees; ▪ Ability to track progress in learning; ▪ Ability to receive feedback from instructors. 	<ul style="list-style-type: none"> ▪ Finding quality educational materials may be challenging; ▪ Can be expensive.
Mobile Learning Apps	<ul style="list-style-type: none"> ▪ Accessibility to learning from anywhere, anytime; ▪ Flexibility in choosing the time and pace of learning; ▪ Interaction with other users. 	<ul style="list-style-type: none"> ▪ Self-motivation for independent learning may be challenging; ▪ Finding quality educational apps can be difficult.

Online courses, remote training, and other digital resources for employee learning and skill development can be effective tools. However, when choosing such resources, it's important to consider the following factors:

- Learning objectives: What skills do you want to develop in your employees?
- Target audience: What types of educational materials will be most effective for your employees?
- Budget: How much are you willing to invest in the training of your employees?

Digital tools have revolutionized human resource management (HRM) by transforming the way organizations recruit, retain, and manage their employees. The adoption of digital technologies has led to a more efficient, data-driven, and personalized approach to HRM.

Digital platforms have streamlined the recruitment process, making it easier for organizations to find and attract top talent. Applicant tracking systems (ATS) allow companies to manage applications efficiently, while online job boards and social media platforms provide a wider reach for talent acquisition.

Digital tools have also enhanced the onboarding experience for new hires. E-learning modules, virtual training sessions, and digital onboarding platforms provide new employees with the information and resources they need to quickly acclimate to their new roles.

Digital tools have transformed performance management by providing real-time feedback, continuous performance tracking, and data-driven insights. Performance management software allows managers to track employee goals, provide feedback, and conduct performance reviews more effectively.

Digital tools have also enhanced employee engagement by fostering communication, collaboration, and recognition. Social media platforms, messaging apps, and digital recognition programs can create a more connected and engaged workforce.

Digital tools have revolutionized employee training and development by providing access to a wide range of learning resources and personalized learning experiences. Online learning platforms, e-learning modules, and virtual training sessions offer employees flexible and convenient ways to upskill and reskill.

Table 4. Digital tools in human resource management.

Digital Tools in HRM	Benefits	Challenges	Recommendations	Advantages	Disadvantages	Application
Applicant Tracking Systems (ATS)	Streamlined recruitment, improved candidate tracking	Data privacy concerns, potential bias	Develop clear data privacy policies, regularly audit and update	Efficient candidate management, time-saving	Possible bias in algorithms, need for ongoing monitoring	Recruitment, Candidate Management
Online Job Boards	Increased visibility, broader candidate pool	Integration challenges, potential for misinformation	Ensure seamless integration with ATS, verify information accuracy	Wider reach, diverse talent acquisition	Reliance on external platforms, potential for irrelevant applications	Recruitment, Talent Acquisition
Social Media Platforms	Enhanced employer branding, diverse recruitment channels	Privacy issues, need for social media policies	Develop and communicate social media guidelines, train HR on compliance	Cost-effective branding, real-time interaction	Risk of unprofessional behaviour, time-consuming	Employer Branding, Recruitment
Learning Management Systems (LMS)	Personalized training, easy tracking of learning progress	Resistance to change, potential for technical issues	Provide comprehensive training, offer ongoing support	Scalable training, consistent learning experiences	Initial setup costs, content maintenance	Employee Training, Development
Performance Management Software	Improved performance tracking, more effective appraisals	Employee resistance, potential for bias	Communicate benefits, ensure transparency in performance criteria	Objective performance assessment, data-driven insights	Employee scepticism, potential for subjectivity	Performance Management, Appraisals
Employee Engagement Platforms	Increased employee satisfaction, better communication	Digital fatigue, data privacy concerns	Monitor usage, address privacy issues, promote balanced use	Enhanced workplace culture, real-time feedback	Overreliance on technology, resistance to constant feedback	Employee Engagement, Communication
HR Analytics Tools	Informed decision-making, workforce trend analysis	Data security risks, potential misinterpretation	Train HR staff on data analysis, establish clear data access protocols	Strategic workforce planning, predictive analysis	Skill gaps in HR staff, potential for misreading data	Strategic HR Planning, Decision Support
Benefits of Digital Tools in HRM	Increased efficiency, data-driven decisions, enhanced engagement	N/A	N/A	Streamlined processes, improved strategic focus	Initial implementation costs, dependency on technology	HR Management, Strategic Planning
Challenges of Digital Tools in HRM	Data privacy concerns, digital fatigue, integration issues	N/A	N/A	Improved efficiency, potential for innovation	Resistance to change, ongoing maintenance	Various HR Functions
Recommendations for Effective Implementation	Clear strategy, HR involvement, employee training, continuous evaluation	N/A	N/A	Improved workflow, better ROI	Initial time investment, ongoing monitoring	General HR Practices

Digital tools have generated vast amounts of data about employee behaviour, performance, and engagement. HR analytics tools allow organizations to collect, analyze, and interpret this data to make informed decisions about talent management, workforce planning, and organizational development.

While digitalization has brought significant benefits to HRM, it also presents some challenges. Organizations need to ensure that their digital tools are user-friendly, secure, and integrated with existing systems. They also need to address potential issues such as data privacy, digital fatigue, and the need for digital literacy among employees.

Overall, digitalization has transformed HRM by making it more efficient, data-driven, and personalized. Organizations that effectively adopt digital tools can gain a competitive advantage in attracting, retaining, and developing top talent.

Table 4 provides a comprehensive overview of digital tools in Human Resource Management (HRM). Each section contains information about a specific tool, its advantages, challenges, recommendations for effective implementation, as well as its pros, cons, and application scope. General sections also include the overall benefits and challenges of digital tools in HRM, along with recommendations for successful implementation.

Digital tools in HRM are reshaping the way organizations interact with their workforce. The integration of digital technologies into various HR processes leads to increased efficiency, accuracy, and overall performance. For instance, applicant tracking systems streamline hiring processes, while performance management platforms contribute to objective performance evaluations.

These tools also contribute to improved internal communication through social media networks and intranet platforms. Information systems for HR data management enable the storage and processing of employee data while adhering to confidentiality and security requirements. Training and development opportunities for the workforce expand with digital platforms that support personalized and accessible online learning.

However, with the growth of digital capabilities, new challenges emerge. Ensuring data confidentiality and security, managing digital fatigue among employees, and providing training for the adoption of new tools become pressing tasks. It is crucial to develop a clear strategy for the implementation of digital tools, involve HR professionals in the process, and provide training and support for successful adaptation. Considering ethical aspects and continuously evaluating the effectiveness of these tools help ensure the responsible and successful utilization of digital technologies in HRM.

For businesses in Ukraine, actively implementing digital tools in Human Resource Management (HRM) is crucial to enhance efficiency and competitiveness. Recommendations include developing a clear strategy, utilizing cloud-based HRIS for data storage, implementing applicant tracking systems to optimize recruitment, and using platforms for employee engagement.

It is also important to foster digital literacy among employees, ensure cybersecurity, and systematically evaluate the effectiveness of implemented tools. These measures will contribute to a successful adaptation to digital technologies, increased productivity, and competitiveness in the job market. Additionally, emphasizing individualization through personalized Learning Management Systems (LMS) and engagement tools strengthens the connection between the company and its employees.

Furthermore, actively leveraging analytics for valuable insights into personnel management is essential. Big Data enables trend forecasting, identification of development needs, and process improvement. Given the rapid dynamics of the business environment, companies intend to proactively respond to changes. Therefore, considering and implementing cutting-edge digital innovations in HRM is a strategically crucial element for achieving success in the market and ensuring the company's stable development.

DISCUSSION

The author of the article relies on several recent publications examining the digital transformation of companies and its impact on personnel management. As Plekhanov, D., Franke, H., & Netland, T. H. (2022), Kraus, S., Durst, S., Ferreira, J. J., Veiga, P., Kailer, N., & Weinmann, A. (2022), and Martínez-Peláez, R., Ochoa-Brust, A., Rivera, S., Félix, V. G., Ostos, R., Brito, H., Félix, R. A., & Mena, L. J. (2023) discuss, the adoption of new digital technologies is fundamentally reshaping many management practices. The author also references research by Mazurchenko, Maršíková (2019) and O.N. Balabanova, I.P. Balabanov (2020) analyzing the advantages and disadvantages of digitization for HR activities from a theoretical lens.

When reviewing practical global experiences with digital tools in personnel management, the author draws extensively on Rêgo, B. S., Jayantilal, S., Ferreira, J. J., & Carayannis, E. G. (2022) and Saeed, S., Altamimi, S. A., Alkayyal, N. A., Alshehri, E., & Alabbad, D. A. (2023). These studies investigate how technologies like AI recruiting and e-learning platforms are altering existing HR processes across different organizational contexts. Additionally, research on current digitization trends in Ukraine by Garafonova et al. (2021) and Bedianashvili et al. (2022) is utilized to showcase an Eastern European perspective.

Furthermore, the author synthesizes findings from Cetindamar Kozanoglu, D., & Abedin, B. (2021), Vuchkovski, D., Zalažnik, M., Mitreĝa, M., & Pfajfar, G. (2023), and Vijayakumar, A., & Balasubramanian, S. (2022) to evaluate how digital transformation has impacted personnel management based on literature reviews and case studies. As these articles demonstrate, while technology implementation can enhance efficiency and data-driven decision-making, potential downsides like dehumanizing experiences and ethical issues must also be proactively addressed.

As the author notes, further cross-cultural research is still required to fully understand variations in the adoption and consequences of digital tools across different countries and industries. Additionally, more investigation into responsible and human-centric usage of new technologies would be beneficial as companies strike a balance between digitization and traditional HR practices. Overall, the article provides a robust overview of the evolving landscape and current state of knowledge.

CONCLUSIONS

In conclusion, the exploration of digital tools in human resource management underscores the transformative impact of digitization on personnel management practices. Through a comprehensive analysis of literature, theoretical frameworks, and empirical studies, it becomes evident that the integration of digital tools brings about significant changes in traditional approaches to personnel management. The findings emphasize the need for organizations to adapt to the evolving landscape by embracing and leveraging digital technologies. As we navigate the digital era, the strategic adoption of these tools not only automates and streamlines HR processes but also influences the dynamics of employee engagement, talent management, and overall organizational effectiveness. This article contributes to the ongoing discourse on the intersection of technology and human resource management, shedding light on the challenges, opportunities, and future directions in the realm of digitized personnel management.

The article highlights the transformative impact of digital tools on Human Resource Management (HRM), revolutionizing recruitment, employee management, and performance evaluation. Digital platforms, such as Applicant Tracking Systems and online job boards, streamline recruitment processes and broaden the talent pool. The onboarding experience is enhanced through e-learning modules and virtual training sessions, providing new hires with essential information.

Performance management undergoes a shift with real-time feedback and data-driven insights facilitated by performance management software. Employee engagement sees improvement through enhanced communication and recognition via social media platforms and digital tools. Employee training and development benefit from access to diverse learning resources and personalized experiences offered by online platforms and learning management systems.

The generation of extensive employee data allows organizations to make informed decisions using HR analytics tools. Despite the significant benefits, the digitalization of HRM presents challenges such as data privacy concerns, digital fatigue, and the need for integration with existing systems. The article emphasizes the importance of user-friendly and secure digital tools, addressing privacy issues, and ensuring digital literacy among employees.

In conclusion, the digitalization of HRM has led to increased efficiency, data-driven decision-making, and personalized employee experiences. The adoption of digital tools is essential for organizations to gain a competitive advantage in talent management, workforce planning, and organizational development. The article provides detailed information on specific digital tools, their benefits, challenges, and recommendations for effective implementation, offering a comprehensive guide for businesses in Ukraine looking to enhance their human resource management practices through digitization.

ADDITIONAL INFORMATION

AUTHOR CONTRIBUTIONS

Conceptualization: *Olha Harafonova*

Data curation: *Hanna Zhosan, Olha Prokopenko*

Formal Analysis: *Olha Harafonova, Hanna Zhosan*

Methodology: *Olha Harafonova*

Software: *Hanna Zhosan*

Resources: *Hanna Zhosan, Olha Prokopenko*

Supervision: *Olha Harafonova, Olha Prokopenko*

Validation: *Hanna Zhosan*

Investigation: *Olha Harafonova, Hanna Zhosan*

Visualization: *Hanna Zhosan*

Project administration: *Olha Harafonova*

Writing – review & editing: *Olha Harafonova, Hanna Zhosan*

Writing – original draft: *Olha Harafonova, Hanna Zhosan*

REFERENCES

1. Mazurchenko, A., & Maršíková, K. (2019). Digitally-powered human resource management: Skills and roles in the digital era. *Acta Inform. Pragensia*, 8, 72–87. <https://doi.org/10.18267/j.aip.125>
2. Balabanova, O.N., & Balabanov, I.P. (2020, March 17). The Use of Digital Technology in Personnel Management (HRM), International Scientific Conference "Far East Con" (ISCFEC 2020). <https://doi.org/10.2991/aebmr.k.200312.402>
3. Plekhanov, D., Franke, H., & Netland, T. H. (2022). Digital transformation: A review and research agenda. *European Management Journal*, 9, 1–24. <https://doi.org/10.1016/j.emj.2022.09.007>
4. Kraus, S., Durst, S., Ferreira, J. J., Veiga, P., Kailer, N., & Weinmann, A. (2022). Digital transformation in business and management research: An overview of the current status quo. *International Journal of Information Management*, 63, 102466. <https://doi.org/10.1016/j.ijinfomgt.2021.102466>
5. Martínez-Peláez, R., Ochoa-Brust, A., Rivera, S., Félix, V. G., Ostos, R., Brito, H., Félix, R. A., & Mena, L. J. (2023). Role of Digital Transformation for Achieving Sustainability: Mediated Role of Stakeholders, Key Capabilities, and Technology. *Sustainability*, 15(14), 11221. <https://doi.org/10.3390/su151411221>
6. Rêgo, B. S., Jayantilal, S., Ferreira, J. J., & Carayannis, E. G. (2022). Digital Transformation and Strategic Management: a Systematic Review of the Literature. *Journal of the Knowledge Economy*, 13(4), 3195–3222. <https://doi.org/10.1007/s13132-021-00853-3>
7. Saeed, S., Altamimi, S. A., Alkayyal, N. A., Alshehri, E., & Alabbad, D. A. (2023). Digital Transformation and Cybersecurity Challenges for Businesses Resilience: Issues and Recommendations. *Sensors*, 23(15), 6666. <https://doi.org/10.3390/s23156666>
8. Cetindamar Kozanoglu, D., & Abedin, B. (2021). Understanding the role of employees in digital transformation: conceptualization of digital literacy of employees as a multi-dimensional organizational affordance. *Journal of Enterprise Information Management*, 34(6), 1649–1672. <https://doi.org/10.1108/JEIM-01-2020-0010>
9. Vuchkovski, D., Zalaznik, M., Mitreĝa, M., & Pfajfar, G. (2023). A look at the future of work: The digital transformation of teams from conventional to virtual. *Journal of Business Research*, 163, 113912. <https://doi.org/10.1016/j.jbusres.2023.113912>
10. Zeng, F., Lee, S. H. N., & Lo, C. K. Y. (2020). The Role of Information Systems in the Sustainable Development of Enterprises: A Systematic Literature Network Analysis. *Sustainability*, 12(8), 3337. <https://doi.org/10.3390/su12083337>
11. Garafonova, O., Zhosan, H., Marhasova, V., Tkalenko, N., & Trukhachova, K. (2021). Matrix Method of Competitive Analysis of the Results of Economic Activity of Hospitality Enterprises in the Conditions of Strategization and Digital Transformation. *Management Theory and Studies for Rural Business and Infrastructure Development*, 43(2), 237–248. <https://doi.org/10.15544/mts.2021.20>
12. Bedianashvili, G., Zhosan, H., & Lavrenko, S. (2022). Modern digitalization trends of Georgia and Ukraine. *Scientific Papers. Series "Management, Economic Engineering in Agriculture and Rural Development"*, 22(3). <https://managementjournal.usamv.ro/index.php/scientific-papers/current>
13. Common Good HRM: A paradigm shift in Sustainable HRM? *Human Resource Management Review*, 30(2020), 1-11. <http://dx.doi.org/10.1016/j.hrmr.2019.100705>
14. Bondarouk, T., & Brewster, C. (2016). Conceptualising the future of HRM and technology research. *International Journal of Human Resource Management*, 27(21), 2652–2671. <https://doi.org/10.1080/09585192.2016.1232296>
15. Fossen, F.M., & Sorgner, A. (2019). Mapping the Future of Occupations: Transformative and Destructive Effects of New Digital Technologies on Jobs. *Foresight and STI Governance*, 13(2), 10–18. <http://dx.doi.org/10.17323/2500-2597.2019.2.10.18>
16. Huselid, M., & Minbaeva, D. (2019). Big Data and Human Resource Management. In: The SAGE Handbook of Human Resource Management (eds. A. Wilkinson, N. Bacon, S. Snell, D. Lepak), Thousand Oaks, CA: SAGE Publications Ltd., 494–507. <http://dx.doi.org/10.4135/9781529714852.n29>
17. Malik, A., Budhwar, P., Patel, C., & Srikanth, N.R. (2020). May the bots be with you! Delivering HR cost-effectiveness and individualised employee experiences in an MNE. *International Journal of Human Resource Management*, Ahead-of- print, 1–31. <https://doi.org/10.1080/09585192.2020.1859582>
18. Stone, D.L., Deadrick, D.L., Lukaszewski, K.M., & Johnson, R. (2015). The influence of technology on the future of human resource management. *Human*

Resource Management Review, 25(2), 216–231.
<https://doi.org/10.1016/j.hrmr.2015.01.002>

19. Strohmeier, S. (2020). Digital human resource management: A conceptual clarification. *German Journal of Human Resource Management: Zeitschrift für Personalforschung*, 34(3), 345–365.
<https://doi.org/10.1177/2397002220921131>
20. Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of*

Strategic Information Systems, 28(2), 118–144.
<https://doi.org/10.1016/j.jsis.2019.01.003>

21. Gbadegeshin, S. A. (2019). The effect of digitalization on the commercialization process of high-technology companies in the life sciences industry. *Technology Innovation Management Review*, 9(1), 49–63.
<https://doi.org/10.22215/timreview/1211>
22. The Gartner (2023). The 2024 Top Strategic Technology Trends. <https://www.gartner.com/en>

Прокопенко О., Гарафонова О., Жосан Г.

ЦИФРОВІ ІНСТРУМЕНТИ В УПРАВЛІННІ ЛЮДСЬКИМИ РЕСУРСАМИ: ЯК ЦИФРОВА ТРАНСФОРМАЦІЯ ВПЛИВАЄ НА УПРАВЛІННЯ ПЕРСОНАЛОМ

У статті розглянуто динаміку управління людськими ресурсами (УЛР) в еру цифрової трансформації, досліджено глибокий вплив цифрових інструментів на практики управління персоналом. Шляхом детального аналізу літератури, теоретичних концепцій та емпіричних досліджень стаття висвітлює багатогранний вплив цифрової трансформації на УЛР. Досліджено, як упровадження цифрових інструментів трансформує традиційне управління персоналом, ураховуючи ключові концепції, виклики та перспективи в контексті цифрової трансформації. Емпіричні методи дослідження, такі як опитування, інтерв'ю та фокус-групи, забезпечують глибше розуміння практичних наслідків цифрової трансформації для управління персоналом. Висновки підкреслюють критичну необхідність стратегічної адаптації організацій до ери цифрових технологій, підкреслюючи інтеграцію цифрових технологій для вдосконалення процесів УЛР, залучення персоналу, управління талантами й загальної ефективності організації. Стаття вносить свій вклад у дискусії про взаємодію технологій та УЛР, подаючи цінні ідеї для практиків, учених і політиків, які орієнтуються в еволюції цифрового управління персоналом.

Ключові слова: цифровізація, управління людськими ресурсами, управління, персонал, цифрові інструменти

JEL Класифікація: O33, M15, L86