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Natalia Bobro

Ph.D, Doctor of Philosophy,

Director of the Digital Department of the European University,

Director of the “NooLab & AI”

Scientific Laboratory of the European University,

European University

ORCID: <https://orcid.org/0009-0003-5316-0809>

DIGITAL TOOLS AS A KEY ELEMENT OF HUMAN RESOURCE MANAGEMENT TECHNOLOGY IN THE CONTEXT OF THE CURRENT TRANSFORMATION OF HIGHER EDUCATION INSTITUTIONS

Objective. To clarify the role of digital tools in HRM for higher education, focusing on efficiency, staff growth, and adaptability. **Methods.** Review of sources, benchmarking universities, statistical evaluation, and people analytics; examined AI analytics, VR/AR, digital avatars, self-service HR, and e-document systems. **Results.** Digital HR automates administration, personalizes development, boosts productivity, engagement; a unified digital ecosystem links technological, organizational, and communicative layers to raise efficiency, transparency, decision speed. **Scientific novelty.** Shows digital HR exceeds automation, catalyzing resilience, innovation, and sustainability; argues integrated platforms with AI and VR/AR enable a holistic, underexplored staff-management approach. **Practical significance.** Informs HR digitization strategies, building adaptive ecosystems, competitiveness, collaboration; supports models to assess effectiveness and guide integration.

Keywords: digital tools, human resource management, digital transformation, digitalization, digital university, artificial intelligence.

Problem statement. The current digital transformation of higher education institutions is forming a new paradigm for their functioning, within which digital human resource management tools are strategic drivers of innovative development. The combination of integrated information platforms, artificial intelligence-based analytics, immersive technologies (VR/AR), and automated HR solutions not only optimizes administrative processes but also creates an adaptive educational environment focused on rapid professional development and staff engagement.

According to The Business Research Company, the total global market for educational technologies (EdTech and smart classrooms) is already worth \$214.73 billion in 2025 and is expected to grow to \$445.94 billion by 2029, with a compound annual growth rate (CAGR) of approximately 20% [1]. These figures demonstrate not only the massive growth in global investment in digital education solutions but also a strategic shift in the focus of higher education institutions towards the integration of high-tech human resource management tools. In the context of institutional development, this growth in the EdTech market correlates with the active introduction of modern tools that

ensure personalized professional development and increased staff engagement. These trends directly influence university human resource management policies, leading to the integration of new digital HR solutions.

At the same time, intensive digitalization raises a number of challenges, including ensuring information security, protection of confidential data, technological compatibility of innovative solutions with existing infrastructure, and the formation of sustainable digital competence among employees. This determines the need for in-depth scientific analysis of the potential, limitations, and strategies for integrating digital HR tools into the university management system to ensure their adaptability, innovation, and competitiveness in the context of dynamic transformations.

Analysis of recent research and publications. An analysis of scientific publications shows a growing interest in the digital transformation of higher education, particularly in the integration of human resource management technologies. Empirical studies and theoretical developments by G. Kortemeyer, N. Dittmann-Domenichini, C. Merki [2], A. Kozhyna [3], as well as B. Williamson, R. Eynon, and J. Potter [4], cover various dimensions of university

digitalization – technological, educational, and communicative. The works of O. O. Khomenko, M. V. Paustovska, I. A. Onyshchuk [5], and O. Dushchenko [6] emphasize that the implementation of modern digital tools, particularly integrated information systems, AI-based analytics, and immersive technologies, contributes to the formation of a unified digital environment that enhances institutional adaptability and staff performance.

At the same time, there are significant gaps in the existing literature. First, although the conceptual foundations of digital transformation have already been sufficiently covered in the works of N. Verina and J. Titko [7], as well as S. I. Kubiv, G. S. Lopushnyak, Y. I. Lenher, and A. Kozhyna [8], the issue of integrating innovative HR solutions into holistic organizational strategies remains insufficiently explored. Second, the impact of digital technologies on professional development and staff engagement, as well as on the long-term efficiency of management processes, requires more in-depth empirical analysis, as noted by H. N. Lopushnyak, O. Chala, and O. Poplavska [9]. Third, the prospects for applying the latest technologies – artificial intelligence, virtual and augmented reality, and the metaverse – in human resource management are still in the testing stage, which calls for comprehensive research, particularly in the works of O. Aydin, E. Karaarslan, and N. G. Narin [11].

The aim of the article. The aim of the article is to substantiate the conceptual foundations and practical strategies for integrating digital tools into human resource management systems of higher education institutions, demonstrating their role in optimizing administrative processes, enhancing staff engagement, and ensuring institutional adaptability and competitiveness in the context of digital transformation.

Presentation of the main research material. One of the key areas aimed at improving the efficiency of any modern institution, including educational institutions, is its digital transformation. This process involves all participants in the educational environment – from management to scientific and pedagogical and administrative staff, who are expected to master digital competencies in a timely manner. Digital transformation reveals the hidden potential of staff, contributes to the growth of their professional and creative resources, which directly affects the performance of higher education institutions [12, c. 65]

Human resource management technology in higher education institutions can be defined as a set of interrelated tools with specific functional

properties designed to purposefully influence staff in order to achieve the strategic, tactical, and operational goals of the institution's development. In the context of digital transformation, traditional tools are being actively replaced by digital ones, particularly in the field of human resource management. Such digital tools are components of modern technologies that integrate educational, scientific, and administrative processes into a single digital environment of the university [10; 12]. The main goal is to combine all areas of human resource management with the capabilities of digital technologies to improve efficiency at all levels of management.

In this research, digital human resource management tools in higher education institutions are proposed to be understood as a specially formed set of software and/or hardware and software tools, online services, software products, and information systems designed to support, monitor, develop, and evaluate personnel. The main objective is to improve management effectiveness through the introduction of modern information technologies. The choice of a specific tool should be based both on scientific substantiation of its efficiency and on proven practical application focused on solving specific tasks of the higher education institution.

The digital transformation of the university is based on three main components: technological, educational, and communicative [5; 9]. Their combination creates an environment in which staff development occurs more quickly and employees become more flexible and proactive. Communication changes aimed at involving the entire team in the main information processes generated by the university play a special role. The use of traditional social channels in combination with digital ones has a cumulative effect that enhances the impact on both the internal and external environment.

In recent years, leading universities in developed countries have been actively implementing specific digital solutions for human resource management, which increases the efficiency and adaptability of HR processes. One such solution is the use of artificial intelligence in the form of digital avatars (chatbots) to support employees. Many universities have implemented AI assistants or chatbots that can answer typical staff questions about HR policies or procedures 24/7 [13]. For example, in 2024, the National University of Singapore launched AI-Know, an integrated virtual assistant capable of quickly finding information about courses, scientific publications, and internal rules for employees [14]. Such digital avatars not only relieve HR departments of routine consultations

but also facilitate faster communication in the university environment. The emergence of concepts such as the “digital twin” of an employee is also indicative: in particular, Zoom's management proposed the idea of AI avatars that can represent employees at work meetings in 2023 [15]. Although such innovations are only just becoming widespread, they outline the prospects for further digitalization of HR processes.

Another important area is the implementation of integrated HR platforms with employee self-service. Leading universities in Europe and North America are increasingly using unified information systems for human resource management, covering personnel records, payroll, performance evaluation, etc., on a single digital portal. For example, the University of British Columbia in Canada has implemented the Workday platform, which integrates all HR procedures and provides employees with convenient access to personal data and online services [16]. Employees can independently update their data, submit applications (for vacation, advanced training, etc.), and track the status of their consideration in the system.

Analytical studies confirm that such digital HR services for employees are particularly widespread in universities in countries such as the Netherlands, Spain, and Poland [17]. This points to a general trend: developed higher education institutions are massively transitioning to self-service HR models, where digital platforms enhance the transparency and convenience of HR procedures. An important example of the digitalization of HR processes is electronic document management and e-signatures.

In Switzerland, ETH Zurich introduced electronic signatures for concluding employment contracts in 2024, which completely digitized the final stage of hiring [18]. In previous periods, the procedure for concluding an employment contract involved preparing a printed copy of the document, physically signing it, and then transferring it for archiving, which was accompanied by significant time, material, and organizational costs. In modern conditions, the entire cycle – from agreeing on the content to entering an electronic copy of the contract into the employee's digital file – is carried out in an integrated electronic environment. This transformation has significantly reduced bureaucratic procedures, optimized document flow processes, and accelerated the implementation of HR decisions, increasing organizational flexibility and adaptability for all stakeholders. The ability to sign documents remotely using two-factor authentication not only

reduces time spent but also ensures compliance with the highest information security and data protection requirements.

A similar transition to digital document management is also taking place in other developed universities (Germany, Canada, etc.), where electronic systems for approving vacations, reporting, and other HR procedures are being implemented. In addition, universities have begun to actively use data and artificial intelligence for HR analytics. Modern information systems allow for the collection of large amounts of data about personnel (from productivity to engagement) and the use of analytical dashboards to support management decisions. In particular, people analytics helps to proactively identify personnel training needs or employee turnover risks based on real metrics. Research by T. Huynh et al. confirms that integrating advanced technologies (such as AI and VR) into HR processes increases organizational flexibility and speeds up decision-making [19].

Some educational institutions already use AI algorithms in the recruitment process (for preliminary screening of resumes or automating interview scheduling) or for personalizing the development of teachers and employees. Although these tools require attention to data ethics and privacy, their implementation allows for the optimization of HR management at a strategic level.

It is worth noting that in the modern digital age, some universities are testing virtual and augmented reality technologies in human resource management practices. Modern metaverse technologies open up new opportunities for holding virtual events with employee avatars: remote meetings and interviews, online adaptation of new staff, etc. The use of such innovations makes it possible to overcome distance barriers and makes communication more interactive. Due to 3D avatars and an immersive environment, new employees can “visit” digital copies of the university, interact with colleagues, and train their skills in a safe virtual environment. Some researchers predict significant benefits from the use of the metaverse in human resource management, including increased engagement and improved collaboration regardless of the location of employees [11].

Digital transformation in universities encompasses not only tools and skills but also culture and communication structures. Combining traditional communication channels with new digital platforms has a cumulative effect on team building and strengthening the university's external influence. The management of many institutions is consciously introducing

corporate social networks, internal portals, and other online platforms to involve all employees in the university's main information processes and increase management transparency.

However, along with opportunities, digital transformation also brings new challenges. One of the main ones is the technical integration of systems. Many universities face difficulties in combining new digital services with outdated IT infrastructure. According to Global Growth Insights, by 2024, more than 40% of HR professionals reported problems integrating digital solutions with existing systems [20]. These “bottlenecks” can slow down project implementation and require additional investment in modernization. The issue of information security is also coming to the fore: the volume of confidential data that universities handle in digital form is growing, and at the same time, the risk of cyberattacks is increasing. According to current data, more than 70% of HR systems are now deployed in a cloud environment, which coincides with a 40% increase in the number of data leaks targeting such software complexes. Approximately half of the organizations express concern about compliance with data protection legislation. In the field of education, this is particularly important due to the need to protect the personal data of employees and students (compliance with GDPR and similar regulations).

Despite these challenges, the overall trend remains steady: the digital transformation of universities is gaining momentum because its benefits outweigh the costs. As a result, over 2024–2025, a rich body of empirical evidence is being formed, demonstrating that integrating all aspects of human resource management with the capabilities of digital technologies improves the performance of an institution. Quantitative indicators confirm this trend: the global market for HR technologies is growing rapidly, from approximately \$40.5 billion in 2025 to a projected \$82.9 billion in 2033 [20], reflecting large-scale investments by organizations in digital solutions, including in the education sector. Practical examples from universities show positive dynamics. For example, a report by the University of Cincinnati [13] presents the results of the implementation of digital HR initiatives. In particular, there has been a significant reduction in the duration of administrative procedures, which has been

made possible by digital optimization. In addition, corporate services using elements of artificial intelligence were introduced, and integrated information platforms were created for university employees. These measures have significantly improved the efficiency and convenience of access to HR services.

All this contributes to achieving the main goal of digitalization – improving management efficiency at the strategic, tactical, and operational levels, which ultimately ensures more successful functioning of the university in the modern competitive environment.

Conclusions. The implementation of the concept of digital transformation in higher education institutions is a multifaceted process that encompasses all functional areas of their activities and requires a strategic approach to human resource management. Digital tools integrated into HR practice form part of a holistic development strategy, within which technological, organizational, and communication aspects are defined and coordinated. Recent trends indicate a significant expansion of the content and role of digital HR solutions, which go beyond the automation of administrative procedures and cover personalized professional development, increased staff engagement, and the use of intelligent analytical tools.

The modern understanding of digital transformation in human resource management involves the application of innovative technologies, the adaptation of organizational structures, and the expansion of management tools, taking into account global trends and the external environment. The use of a strategic approach to the integration of digital HR tools into university activities leads to the complication and deepening of their content, as well as actualizes the need for constant updating of staff competencies.

Further research should focus on studying the impact of the content and scope of digital HR solutions on the efficiency of management processes, organizational flexibility, and competitiveness of higher education institutions, as well as on developing models for evaluating the effectiveness of digital transformation in the context of human resource development.

The results obtained can be used by the management of HEIs to develop strategies for the digitalization of HR processes aimed at increasing competitiveness.

References

1. The Business Research Company. (2025) EdTech and smart classrooms: Global market report. Available at: <https://www.thebusinessresearchcompany.com/report/edtech-and-smart-classrooms-global-market-report> (accessed August 13, 2025)
2. Kortemeyer G., Dittmann-Domenichini N., Merki C. (2025) Attending lectures in person, hybrid or online at a technical university: How do students choose after the pandemic, and what about the outcome? *Discover Education*, 4 (1), p. 94. DOI: <https://doi.org/10.1007/s44217-025-00500-y>
3. Kozhyna A. (2022) Reducing poverty, inequality and social exclusion in European countries: Based on inclusive approaches to economic development. *Economics and Management of the National Economy, The Crisis of National Models of Economic System*, pp. 29–32. DOI: <https://doi.org/10.30525/978-9934-26-269-2-7>
4. Williamson B., Eynon R., Potter J. (2020) Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, 45 (2), pp. 107–114. DOI: <https://doi.org/10.1080/17439884.2020.1761641>
5. Khomenko O. O., Paustovska M. V., Onyshchuk I. A. (2024) Vplyv interaktyvnykh tekhnolohii na protses navchannia i rozvytok здобувачів вищої освіти [The impact of interactive technologies on the learning process and development of higher education students]. *Naukovi innovatsii ta peredovi tekhnolohii – Scientific innovations and advanced technologies*, 5 (33), pp. 1222–1231. DOI: [https://doi.org/10.52058/2786-5274-2024-5\(33\)-1222-1231](https://doi.org/10.52058/2786-5274-2024-5(33)-1222-1231)
6. Dushchenko O. (2021) Suchasnyi stan tsyfrovoy transformatsii osvity [The current state of digital transformation of education]. *Fizyko-matematychna osvita – Physical and mathematical education*, 28 (2), pp. 40–45. DOI: <https://doi.org/10.31110/2413-1571-2021-028-2-007>
7. Verina N., Titko J. (2019) Digital transformation: Conceptual framework. In *Contemporary Issues in Business, Management and Economics Engineering*, pp. 719–727. DOI: <https://doi.org/10.3846/cibmee.2019.073>
8. Kubiv S. I., Bobro N. S., Lopushnyak G. S., Lenher Y. I., Kozhyna A. (2020) Innovative potential in European countries: Analytical and legal aspects. *International Journal of Economics and Business Administration*, 8 (2), pp. 250–264. DOI: <https://doi.org/10.35808/ijeba/457>
9. Lopushnyak H. N., Chala O., Poplavska O. (2021) Socio-economic determinants of the ecosystem of sustainable development of Ukraine. *IOP Conference Series: Earth and Environmental Science*, 915 (1), pp. 1–9. DOI: <https://doi.org/10.1088/1755-1315/915/1/012019>
10. Bobro N., Hyshchuk R., Strunhar A., Bukovskyi O., Alekseiko V. (2024) Exploring the role of AI in shaping future marketing strategies: Evaluations and outlooks. *Amazonia Investiga*, 13 (80), pp. 43–53. DOI: <https://doi.org/10.34069/AI/2024.80.08.4>
11. Aydin O., Karaarslan E., Narin N. G. (2024) Artificial intelligence, VR, AR and metaverse technologies for human resources management. *arXiv preprint arXiv:2406.15383*. DOI: <https://doi.org/10.48550/arXiv.2406.15383>
12. Bobro N. S. (2024) Tsyfrova platforma yak suchasna orhanizatsiina innovatsiia [Digital platform as a modern organizational innovation]. *Investytsii: praktyka ta dosvid – Investments: Practice and Experience*, 1, pp. 63–66. DOI: <https://doi.org/10.32702/2306-6814.2024.1.63>
13. Springs Apps. (2024) How universities use chatbots in 2024. Available at: <https://springsapps.com/knowledge/how-universities-use-chatbots-in-2024#:~:text=application%20process,content%20with%20the%20school%E2%80%99s%20psychiatrists> (accessed August 14, 2025)
14. The Straits Times. (2024) More AI chatbots for NTU, NUS to answer questions, boost efficiency and cut errors. Available at: <https://www.straitstimes.com/tech/more-ai-chatbots-for-ntu-nus-to-answer-questions-boost-efficiency-and-cut-errors> (accessed August 12, 2025)
15. HR Daily Advisor. (2024) Zoom CEO proposes AI-created digital clones for work meetings. Available at: <https://hrdailyadvisor.com/2024/07/12/zoom-ceo-proposes-ai-created-digital-clones-for-work-meetings/#:~:text=Zoom%20CEO%20Proposes%20AI,avatar%20of%20the%20employee> (accessed August 14, 2025)
16. University of British Columbia. (2024) Welcome to Workday. Available at: <https://hr.ubc.ca/working-ubc/welcome-workday#:~:text=Workday%20Knowledge%20Base> (accessed August 11, 2025)
17. UNLEASH. (2020) A deep dive into digital HR and employee experience. Available at: <https://www.unleash.ai/employee-experience-and-engagement/a-deep-dive-into-digital-hr-and-employee-experience/> (accessed August 11, 2025)
18. ETH Zurich. (2024) ETH introduces electronic signatures. Available at: <https://ethz.ch/staffnet/en/news-and-events/internal-news/archive/2024/10/eth-introduces-electronic-signatures.html#:~:text=As%20part%20of%20its%20efforts,and%20speeding%20up%20HR%20processes> (accessed August 12, 2025)
19. Huynh T. T., Pham M., Luc H. N. (2025) Leveraging digital human resource management to optimize organizational performance in Vietnam. *Humanities and Social Sciences Communications*, 12, p. 802. DOI: <https://doi.org/10.1057/s41599-025-05113-2>
20. Global Growth Insights. (2025) Human resource (HR) technology market. Available at: <https://www.globalgrowthinsights.com/market-reports/human-resource-hr-technology-market-110205#:~:text=,Integration%20Issues> (accessed August 12, 2025)

Бібліографічний список

1. The Business Research Company. EdTech and smart classrooms: Global market report. 2025. URL: <https://www.thebusinessresearchcompany.com/report/edtech-and-smart-classrooms-global-market-report> (дата звернення: 13.08.2025).
2. Kortemeyer G., Dittmann-Domenichini N., Merki C. Attending lectures in person, hybrid or online at a technical university: How do students choose after the pandemic, and what about the outcome? *Discover Education*. 2025. Vol. 4. No. 1. P. 94. DOI: <https://doi.org/10.1007/s44217-025-00500-y>
3. Kozhyna A. Reducing poverty, inequality and social exclusion in European countries: Based on inclusive approaches to economic development. *Economics and Management of the National Economy. The Crisis of National Models of Economic System*. 2022. P. 29–32. DOI: <https://doi.org/10.30525/978-9934-26-269-2-7>
4. Williamson B., Eynon R., Potter J. Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*. 2020. Vol. 45. No. 2. P. 107–114. DOI: <https://doi.org/10.1080/17439884.2020.1761641>
5. Хоменко О. О., Паустовська М. В., Онищук І. А. Вплив інтерактивних технологій на процес навчання і розвиток здобувачів вищої освіти. *Наукові інновації та передові технології*. 2024. № 5 (33). С. 1222–1231. DOI: [https://doi.org/10.52058/2786-5274-2024-5\(33\)-1222-1231](https://doi.org/10.52058/2786-5274-2024-5(33)-1222-1231)
6. Душченко О. Сучасний стан цифрової трансформації освіти. *Фізико-математична освіта*. 2021. № 28 (2). С. 40–45. DOI: <https://doi.org/10.31110/2413-1571-2021-028-2-007>
7. Verina N., Titko J. Digital transformation: Conceptual framework. *Contemporary Issues in Business, Management and Economics Engineering*. 2019. P. 719–727. DOI: <https://doi.org/10.3846/cibmee.2019.073>
8. Kubiv S. I., Bobro N. S., Lopushnyak G. S., Lenher Y. I., Kozhyna A. Innovative potential in European countries: analytical and legal aspects. *International Journal of Economics and Business Administration*. 2020. Vol. 8. No. 2. P. 250–264. DOI: <https://doi.org/10.35808/ijeaba/457>
9. Lopushnyak H. N., Chala O., Poplavska O. Socio-economic determinants of the ecosystem of sustainable development of Ukraine. *IOP Conference Series: Earth and Environmental Science*. 2021. Vol. 915 (1). P. 1–9. DOI: <https://doi.org/10.1088/1755-1315/915/1/012019>
10. Bobro N., Hyshchuk R., Strunhar A., Bukovskyi O., Alekseiko V. Exploring the role of AI in shaping future marketing strategies: Evaluations and outlooks. *Amazonia Investiga*. 2024. Vol. 13. No. 80. P. 43–53. DOI: <https://doi.org/10.34069/AI/2024.80.08.4>
11. Aydin O., Karaarslan E., Narin N. G. Artificial intelligence, VR, AR and metaverse technologies for human resources management. *arXiv preprint arXiv:2406.15383*. 2024. DOI: <https://doi.org/10.48550/arXiv.2406.15383>
12. Бобро Н. С. Цифрова платформа як сучасна організаційна інновація. *Інвестиції: практика та досвід*. 2024. № 1. С. 63–66. DOI: <https://doi.org/10.32702/2306-6814.2024.1.63>
13. Springs Apps. How universities use chatbots in 2024. 2024. URL: <https://springsapps.com/knowledge/how-universities-use-chatbots-in-2024#:~:text=application%20process,content%20with%20the%20school%E2%80%99s%20psychiatrists> (дата звернення: 14.08.2025).
14. The Straits Times. More AI chatbots for NTU, NUS to answer questions, boost efficiency and cut errors. 2024. URL: <https://www.straitstimes.com/tech/more-ai-chatbots-for-ntu-nus-to-answer-questions-boost-efficiency-and-cut-errors> (дата звернення: 12.08.2025).
15. HR Daily Advisor. Zoom CEO proposes AI-created digital clones for work meetings. 2024. URL: <https://hrdailyadvisor.com/2024/07/12/zoom-ceo-proposes-ai-created-digital-clones-for-work-meetings/#:~:text=Zoom%20CEO%20Proposes%20AI,avatar%20of%20the%20employee> (дата звернення: 14.08.2025).
16. University of British Columbia. Welcome to Workday. 2024. URL: <https://hr.ubc.ca/working-ubc/welcome-workday#:~:text=Workday%20Knowledge%20Base> (дата звернення: 11.08.2025).
17. UNLEASH. A deep dive into digital HR and employee experience. 2020. URL: <https://www.unleash.ai/employee-experience-and-engagement/a-deep-dive-into-digital-hr-and-employee-experience/> (дата звернення: 11.08.2025).
18. ETH Zurich. ETH introduces electronic signatures. 2024. URL: <https://ethz.ch/staffnet/en/news-and-events/internal-news/archive/2024/10/eth-introduces-electronic-signatures.html#:~:text=As%20part%20of%20its%20efforts,and%20speeding%20up%20HR%20processes> (дата звернення: 12.08.2025).
19. Huynh T. T., Pham M., Luc H. N. Leveraging digital human resource management to optimize organizational performance in Vietnam. *Humanities and Social Sciences Communications*. 2025. Vol. 12. P. 802. DOI: <https://doi.org/10.1057/s41599-025-05113-2>
20. Global Growth Insights. Human resource (HR) technology market. 2025. URL: <https://www.globalgrowthinsights.com/market-reports/human-resource-hr-technology-market-110205#:~:text=,Integration%20Issues> (дата звернення: 12.08.2025).

Бобро Н.С.

кандидат економічних наук,
директор цифрового департаменту Європейського університету,
директор “NooLab & AI”
наукової лабораторії Європейського університету,
Європейський університет
ORCID: <https://orcid.org/0009-0003-5316-0809>

ЦИФРОВІ ІНСТРУМЕНТИ ЯК КЛЮЧОВИЙ ЕЛЕМЕНТ ТЕХНОЛОГІЙ УПРАВЛІННЯ ЛЮДСЬКИМИ РЕСУРСАМИ В УМОВАХ СУЧАСНОЇ ТРАНСФОРМАЦІЇ ЗАКЛАДІВ ВИЩОЇ ОСВІТИ

Стаття присвячена комплексному дослідженню цифрових інструментів як ключового елемента технології управління людськими ресурсами в умовах сучасної трансформації закладів вищої освіти. Обґрунтовується, що впровадження інноваційних HR-рішень стає стратегічним чинником інституційного розвитку університетів, забезпечуючи не лише оптимізацію адміністративних процедур, а й створення адаптивного, гнучкого та інноваційно орієнтованого освітнього середовища. Особливу увагу приділено інтеграції таких технологій, як аналітика на основі штучного інтелекту, іммерсивні середовища (VR/AR), цифрові аватари та чат-боти, інтегровані HR-платформи, системи самообслуговування співробітників і електронний документообіг. Показано, що їх використання забезпечує автоматизацію рутинних операцій, персоналізацію траєкторій професійного розвитку, підвищення продуктивності та залученості персоналу до стратегічних процесів. У дослідженні підкреслюється, що цифрова трансформація у сфері управління людськими ресурсами має розглядатися як багатовимірний процес, що поєднує технологічний, організаційний і комунікаційний виміри. Їх синергія формує єдину цифрову екосистему університету, у межах якої підвищується ефективність роботи співробітників, посилюється прозорість управління та прискорюється ухвалення рішень. Разом із тим впровадження цифрових інструментів супроводжується низкою викликів: складнощами сумісності нових платформ із застарілою IT-інфраструктурою, загрозами інформаційній безпеці, необхідністю формування високого рівня цифрових компетентностей у науково-педагогічного та адміністративного персоналу. Результати дослідження свідчать, що стратегічна інтеграція цифрових HR-рішень у систему управління дозволяє університетам посилити конкурентні переваги, розширити можливості міжнародної співпраці та забезпечити адаптивність до динамічних глобальних змін. Підкреслюється, що цифрові технології в управлінні персоналом виходять за межі автоматизації, стаючи каталізаторами інституційної стійкості, інноваційності та довгострокового розвитку. Практичне значення роботи полягає у можливості використання отриманих результатів для розробки стратегій цифровізації HR-процесів, спрямованих на підвищення ефективності та конкурентоспроможності університетів. Зроблено висновок, що подальші дослідження мають бути зосереджені на створенні методик оцінювання ефективності цифрових HR-інструментів, розробленні моделей їх оптимальної інтеграції та аналізі довгострокового впливу на гнучкість, залученість і результативність персоналу. Отримані результати мають як теоретичну, так і практичну значущість та сприяють розширенню наукової дискусії щодо формування цифрового університету як соціотехнологічного інституту майбутнього.

Ключові слова: цифрові інструменти, управління людськими ресурсами, цифрова трансформація, діджиталізація, цифровий університет, штучний інтелект.

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