ECONOMIC BULLETIN
of Cherkasy State Technological University Vol. 27. Issue 2(79)2026 68–77

UDC 331.5
DOI: 10.24025/2306-4420.79(2).2026.358459

JEL Classification Code: I23, O33, L10
Article's History:
Received: 26.03.2026; Revised: 13.04.2026;
Published: 18.05.2026.

Natalia Bobro*
PhD, 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, Kyiv, Ukraine; Walzenhausen, Switzerland
03115, 16-v Akademika Vernadskoho Blvd., Kyiv, Ukraine
https://orcid.org/0009-0003-5316-0809

Digital identification of users in educational information systems as a tool for enhancing the competitiveness of universities

Abstract. The competitiveness of universities in the digital environment increasingly depends on the quality and accessibility of educational services, the stability of digital interaction and the manageability of platform solutions. Digital identification of users, which determines the convenience of logging into the system, uninterrupted access to resources, as well as the possibilities of standardising procedures and personalising services, is one of the basic elements of the digital architecture of a higher education institution. The study aimed to substantiate the role of digital identification of users in educational information systems as a tool for enhancing the competitiveness of universities and to empirically verify the effects of its implementation based on the university's digital platform. To achieve this aim, a comprehensive model approach was used, combining factor-based structuring of the prerequisites for the digitalisation of management of a higher education institution and quantitative comparison of the results before and after the implementation of digital identification. The methods of analysis included systematisation of factors according to the logic of the factor matrix, processing of digital event logs of the platform, user surveys on a five-point satisfaction scale, and statistical comparison of average values and variability parameters.

The results of the pilot implementation in September-October 2025 showed positive and statistically significant changes in key indicators. The average daily number of active users of the platform increased from 800 to 950, which corresponds to an increase of 18.8, and the variability of use decreased due to a reduction in the coefficient of variation from 15.0 to 13.7, which characterises more stable user interaction with digital services. At the same time, the average level of user satisfaction increased from 3.8 to 4.4, and the share of high ratings increased, reflecting an improvement in user experience and a reduction in barriers to access. The practical value of the study lies in the possibility of using the obtained indicators as managerial guidelines for assessing the effectiveness of digital solutions in higher education and substantiating the feasibility of scaling digital identification as a tool for improving service quality, access stability and competitive advantages of the university

Keywords: digital university, competitiveness, digitalisation, digital services, user engagement, digital competencies, operational efficiency

*Corresponding author

Introduction

The digital transformation of higher education has intensified competition between universities for students, partnerships, and resources, making the quality of digital services one of the key measures of institutional competitiveness. University platforms that provide learning, communication, and administrative procedures are increasingly seen as management infrastructure rather than just a tool to support the educational process. In this context, digital user identification is a basic mechanism that determines the manageability of access to services, the reliability of interaction, the possibilities for personalisation and scaling of digital solutions, as well as the level of trust in the university's digital environment.

B Williamson *et al.* (2020) examine pandemic practices of distance education and show that digital technologies in times of crisis transformations simultaneously expand access to learning and exacerbate issues of control, equity, and data management, reinforcing the importance of controlled access mechanisms in educational information systems. G. Kortemeyer *et al.* (2025) analyse students' choices of full-time, hybrid, and online formats after the pandemic and demonstrate that user-friendliness and accessibility of digital services are factors that can change learning behaviour and outcomes; therefore, reducing barriers to entry to platforms is of practical value to universities. G. Lampropoulos and A. Sidiropoulos (2024) argue that digital interaction mechanisms, particularly gamification approaches, increase engagement and learning outcomes in the long term, but the effect of such tools depends on stable access and continuity of user scenarios.

N. Verina and J. Titko (2019) propose a conceptual model of digital transformation that emphasises the need to integrate technologies into processes and align digital changes with management decisions, allowing digital identification to be viewed as the "entry layer" of platform architecture that connects users with services and data. O. Tymoshenko and S. Yahodzinskyi (2024) emphasise that the digitalisation of universities in the context of modern challenges requires systematicity and institutional readiness, and therefore, access and control tools should be designed as part of a competitive strategy, rather than as a local IT option. Kubiv *et al.* (2020) show that the innovation potential and institutional conditions of the environment determine the ability of organisations to scale innovations and convert them into competitive advantages, which is relevant for universities in the process of forming their own digital infrastructure.

Krap *et al.* (2024) summarise that digital achievements are changing management approaches through automation, standardisation of procedures, and the use of data in decision-making, which reinforces the economic and managerial rationale for digital identification as a means of reducing transaction costs for accessing and maintaining services. N. Bobro *et al.* (2025) argue that digital transformation optimises costs and improves the operational resilience of organisations through digital tools and process automation, allowing digital identification to be interpreted as a component that simultaneously increases access reliability and reduces the user support workload. N. Bobro *et al.* (2024) emphasise the role of strategic methods and tools in ensuring the effectiveness of organisations, which is methodologically consistent with the approach to digital identification as a management mechanism for formalising access and improving the manageability of digital processes.

Despite the existence of theoretical models of digital transformation and numerous studies on the digitalisation of universities, the question of how digital identification affects indicators related to university competitiveness, in particular user engagement, user experience quality, and service reliability, remains insufficiently empirically substantiated. This work aims to fill this gap by combining factor analysis of the prerequisites for digitalisation and quantitative assessment of the effects of implementing digital identification.

The aim of the article was to substantiate the use of digital user identification in educational information systems as a tool for enhancing the competitiveness of universities and to empirically verify the results of its implementation on the EUni platform. The research tasks are to systematise the internal and external factors of university management digitalisation, identify opportunities and risks using SWOT logic, and quantitatively compare key indicators before and after the implementation of digital identification. The scientific novelty of the work lies in combining factor

modeling of the determinants of digitalisation with an empirical assessment of the impact of digital identification on behavioural and service metrics, which can be interpreted as components of the university's competitive advantages in the digital environment.

Literature review

To enhance the competitiveness of universities in the digital environment, higher education institutions must implement coordinated technological and management solutions, and scientific literature on digital transformation confirms this logic. N. Verina and J. Titko (2019) propose a conceptual model of digital transformation that emphasises the integration of technologies into processes, organisational changes, and the manageability of digital services, which methodologically leads to the need for unified access and control mechanisms in educational information systems. O. Tymoshenko and S. Yahodzinskyi (2024) consider the digitalisation of universities in the context of modern challenges and emphasise that the effectiveness of digital initiatives is determined by institutional readiness and the systematic nature of management decisions, rather than the fragmentary implementation of individual IT tools, which is important for justifying digital identification as an infrastructural element of the digital ecosystem. Tangentially to the managerial dimension, N. Bobro *et al.* (2024) highlight the role of strategic methods and tools in improving the effectiveness of organisations, which can be interpreted as an argument in favor of formalising digital access procedures, including user identification and authorisation.

The impact of external shocks and changes in educational practices on accelerating digitalisation was particularly evident during the pandemic. B. Williamson *et al.* (2020) show that digital technologies in the context of the coronavirus crisis have become not only a tool for distance learning, but also a factor in the transformation of educational management, where issues of access, control, fairness, and data security are becoming more acute – that is, problems directly related to digital identification. In the post-pandemic period, G. Kortemeyer *et al.* (2025) analyse how students choose full-time, hybrid, or online formats and demonstrate the importance of the convenience and effectiveness of digital services for learning behaviour. This reinforces the thesis that stable and easy access to the platform through digital identification reduces barriers to participation and supports regular interaction with the educational environment. At the same time, G. Lampropoulos and A. Sidiropoulos (2024) show in a long-term study that digital interaction mechanisms (in particular gamification) can increase engagement and learning outcomes, which further highlights the role of identification as an "entry layer" for personalised scenarios, motivational tools, and learning activity analytics.

The economic dimension of digital transformation reinforces the practical significance of digital identification as a tool for competitive advantage. A. Krap *et al.* (2024) summarise that digital achievements are changing modern management approaches through automation, increased transparency, and reliance on data, which is relevant to university management in terms of reducing transaction costs and standardising procedures for accessing services. In line with this, N. Bobro *et al.* (2025) substantiate that digital transformation can optimise costs and support sustainable operating models by reducing resource-intensive manual operations, which provides grounds for considering digital identification as a solution that simultaneously improves process efficiency and service quality. Additionally, S. Kubiv *et al.* (2020), in the context of the innovation potential of European countries, emphasise the importance of institutional conditions and innovative activity for competitive advantages, which allows digital identification solutions to be interpreted as part of a university's innovation infrastructure aimed at increasing its attractiveness and sustainability in the context of competition in the educational services market.

Materials and methods

The empirical basis of the research is the pilot implementation of a digital user identification system on the EUni digital platform at the private higher education institution "European University" during September-October 2025. The following materials were used for analysis:

– EUni platform event logs (log files) recording daily user activity and authentication results;

– service support data (records of requests related to access and login to the system);

– results of a user survey assessing their experience of interacting with the platform on a 5-point scale;

– accompanying administrative data necessary for the correct grouping of indicators before and after the implementation of digital identification.

To ensure comparability of indicators, identical observation intervals were used: for activity metrics – 30 days before and 30 days after implementation; for satisfaction assessment – two symmetrical survey waves with an unchanged sample composition (n = 210 respondents in each wave).

The study was conducted using a quasi-experimental "before/after" comparison design on the same experimental base, recording changes in key performance indicators of the digitalisation of the management system. The sample of users for the survey was formed according to the following criteria:

– having an active account in EUni;

– actual use of the platform during the observation period;

– representation of the main categories of users, with a predominance of the student audience, which corresponds to the objectives of assessing the service component of digital identification.

For log files, complete coverage of events over a specified observation period was applied, since activity and authentication registration on the platform are systematic and do not require selective sampling.

The research methodology is based on a comprehensive model approach that combines an institutional and organisational interpretation of the prerequisites for digitalisation with a quantitative assessment of the results of the pilot implementation of digital identification. SWOT logic was used to structure the factors of digitalisation of the higher education institution management system, which made it possible to align the university's internal resources and constraints with the external opportunities and threats of the digital environment and to form a factor matrix as a basis for applied implementation.

The following methods were used to obtain quantitative results:

1. Analysis of EUni platform event logs – to calculate the average daily number of active users, variability parameters, and system usage stability indicators.

2. User surveys – to measure the level of satisfaction with the EUni experience (5-point scale), as well as to calculate the share of high marks (≥4.0) and the share of maximum marks (5.0).

3. Statistical methods of description and comparison – mean values (M), standard deviation (SD), standard error (SE), coefficient of variation (CV). To test the significance of differences between indicators before and after implementation, Welch's t-test for independent samples with unequal variances was used; the level of significance was assessed by the p-value.

4. Comparative-analytical method – to compare the results obtained with the conclusions of previous studies on the digital transformation and digitalisation of universities, as well as to interpret the role of digital identification as a tool for competitiveness (Verina & Titko, 2019; Tymoshenko & Yahodzinskyi, 2024 *et al.*).

The effectiveness of digital identification was assessed according to the following groups of indicators:

–behavioural (platform usage intensity, average daily user activity);

–service (user satisfaction level, share of high marks);

–operational (stability of use, variability parameters, reduction in access and login requests).

The methods, materials, and criteria presented ensure the reproducibility of the study: other researchers can replicate the approach using similar data sources (log files, user surveys, service logs), a symmetrical "before/after" design, and appropriate statistical procedures.

Results

The digitalisation of the higher education institution management system in modern conditions is determined by a set of interrelated factors, which can be grouped into internal and external ones. Internal factors include organisational culture, the level of digital literacy of the administration, teachers, and students, the availability of IT infrastructure and resources, as well as a leadership-aligned strategy for implementing digital innovations in key managerial and educational processes (Verina & Titko, 2019; Tymoshenko & Yahodzinskyi, 2024). An organisational culture focused on embracing change and using digital tools is associated with faster integration of platform solutions and standardisation of digital procedures. In contrast, inertial management practices increase the transaction costs of transformation and slow down the scaling of digital services (Krap *et al*., 2024; Bobro *et al*., 2025).

External factors include macroeconomic conditions, technological trends, and socio-regulatory changes that shape the context of digital development in universities. Economic stability and the availability of public and private funding determine the possibilities for implementing digital initiatives and supporting digital infrastructure, while a country's innovation potential and institutional conditions influence the speed of diffusion of management and educational innovations (Kubiv *et al*., 2020; Tymoshenko & Yahodzinskyi, 2024). At the same time, the development of artificial intelligence, data analytics, cloud services, and VR/AR solutions is expanding the toolkit for modernising management decisions through digitalisation (Krap *et al*., 2024). Social expectations regarding the quality and flexibility of education, transparency of management decisions, and accessibility of services, which have intensified as a result of pandemic transformations and the spread of distance and blended learning formats, are also important drivers (Williamson *et al*., 2020; Kortemeyer *et al*., 2025).

To systematise these factors, it is advisable to use a comprehensive model approach that combines a qualitative interpretation of institutional prerequisites and a quantitative comparison of the effects of digital identification at the level of management and service indicators. SWOT logic is used as a tool for structured generalisation of internal strengths and weaknesses, as well as external opportunities and threats of digitalisation, which allows linking management decisions on digital identification with the parameters of the university's competitiveness in the digital environment (Verina & Titko, 2019; Bobro *et al*., 2024). On this basis, a factor matrix was formed (Table 1), which served as the foundation for the further practical implementation of the EUni project at the European University.

Table 1. SWOT analysis of digitalisation factors in the higher education institution management system

	Internal factors	**External factors**
Strengths	– High level of technical equipment – Qualified IT staff – Availability of proprietary developments and software – Strong academic reputation	– Cooperation with technology companies – Access to grants for digital innovation projects – Growing demand for educational programmes based on digital technologies
Weaknesses	– Limited financial resources for large-scale digitalisation projects – Insufficient level of digital literacy among some teachers – Poor integration of existing systems – Slow decision-making processes	– Rapid obsolescence of technology – High competition among universities to attract students – Regulatory barriers and data protection requirements
Opportunities	– Development of innovative educational technologies (VR, AR, AI) – Expansion of online education and international cooperation – Improvement of the quality of educational services through immersive technologies and innovative solutions – Improvement of management processes through automation	– Support for government initiatives on the digitalisation of education – Partnerships with international educational and technological organisations – Growing popularity of distance learning

Продовження таблиці 1.

	Internal factors	External factors
Threats	– Cybersecurity vulnerabilities – Resistance to change among staff – Technical failures in systems – High cost of technology support and upgrades	– Economic instability and funding cuts – Rapid changes in labor market requirements – Increased competition from EdTech companies and online platforms

Source: compiled by the author independently

As we can see in Table 1, the potential of digital identification in university management is formed at the intersection of infrastructural and human resource prerequisites and the external environment of digital innovations, while risks are concentrated in the areas of resource constraints, system integration, and cybersecurity. The logic of this distribution is consistent with the general conclusions about the multidimensionality of digital transformation, where the result is determined simultaneously by technological, organisational, and market factors.

Strengths (high level of technical equipment, qualified IT staff, proprietary developments, academic reputation) are the basis for the rapid deployment of a unified digital identity as an "entry layer" to educational services. Their combined effect is that the university can ensure:

- stability and scalability of authentication;
- operational support for users;
- adaptation of functionality to internal processes;
- trust in the service among students and staff.

This profile of internal advantages fits the conceptual framework of digital transformation, where institutional readiness and technological capacity determine the speed and quality of change (Verina & Titko, 2019; Tymoshenko & Yahodzinskyi, 2024).

Weaknesses point to the "bottlenecks" of scaling digital identification: a lack of funding for large projects, uneven digital literacy among teachers, poor integration of existing systems, and slow management decisions. In practical terms, this means that even with the presence of the EUni platform, the effects of competitiveness may be limited if digital identification is not supported by:

- integration architecture (unified protocols/directories/roles);
- access and accountability regulations;
- a programme to enhance the digital competencies of staff.

The possibilities demonstrate that digital identification can be not only about "security," but also about developing competitive advantages through the expansion of educational products: support for VR/AR/AI solutions, scaling of online and blended learning, international cooperation, and automation of management procedures. Considering the growing demand for distance and hybrid formats, simplifying access through single identification enhances the actual availability of services and the university's ability to quickly combine educational trajectories (Williamson *et al*., 2020; Kortemeyer *et al*., 2025). In this context, digital identification acts as an "infrastructure catalyst" that lowers barriers to entry to services and increases the intensity of platform usage.

The threats are concentrated in two areas. The first is technical and security (cyber vulnerabilities, technical failures, high maintenance and update costs). This is critical for digital identification, as compromised accounts or authentication failures have a cascading effect on all services. The second is market and economic (funding instability, rapidly changing labor market requirements, competition with EdTech platforms). Here, identification acts as a factor in retaining users in the university ecosystem through convenience, trust, and service integration, but it requires constant investment and updates to avoid becoming obsolete in the face of external alternatives.

Thus, increasing the university's competitiveness through digital identification is most likely when strengths (infrastructure, IT competencies, proprietary developments) are used to realise opportunities (scaling hybrid/online education, automation, partnerships), while weaknesses (financing, integration, digital competencies) are addressed as risk factors that exacerbate threats (cyber risks, support costs, competition).

As part of a pilot study of a digital user identification system based on the EUni platform, key performance indicators of the digitalisation of the higher education institution management system were collected and analysed at the private higher education institution "European University" in September-October 2025. Table 2 shows the dynamics of the average number of active users of the platform per day: this indicator increased from 800 (before implementation) to 950 (after implementation), which is equivalent to an increase of approximately 19%.

Table 2. Dynamics of the average number of active users of the EUni platform per day before and after the implementation of digital identification

Indicator	Before implementation	After implementation	Change (absolute)	Change (relative), %
Number of observations, *n*	30	30	-	-
Mean value, persons/day (*M*)	800	950	150	18.8
Standard deviation, persons (*SD*)	120	130	10	8.3
Standard error, persons (*SE*)	21.9	23,7	1,8	8.2
Coefficient of variation, % (*CV*)	15.0	13.7	-1.3	-8.7
t-statistics (Welch), *t*	4.64	4.64	-	-
Level of significance, *p*	<0.001	<0.001	-	-

Source: compiled by the author independently

At the same time, Table 3 shows an increase in user satisfaction: the mean rating of the experience of working with the system increased from 3.8 to 4.4 (on a five-point scale), i.e., by approximately 16%. Statistical analysis confirmed that the observed changes are statistically significant ($p < 0.05$), so the improvement in indicators is not accidental.

Table 3. Comparison of user satisfaction with the EUni platform before and after the implementation of digital identification (5-point scale)

Indicator	Before implementation	After implementation	Change (absolute)	Change (relative), %
Sample size, *n* (respondents)	210	210	0	0.0
Mean satisfaction score (*M*)	3.8	4.4	0.6	15.8
Standard deviation (*SD*)	0.7	0.6	−0.1	−14.3
Standard error (*SE*)	0.05	0.04	−0.01	−20.0
Share of marks ≥4.0, %	52.4	78.1	25.7	49.0
Share of marks 5.0, %	18.6	34.3	15.7	84.4
Satisfaction index (norm, 0–100)	70.0	85.0	15.0	21.4
t-statistics (Welch), *t*	9.45	9.45	0.00	0.0
Level of significance, *p*	0.001	0.001	0.00	0.0

Source: compiled by the author independently

Discussion

The obtained results demonstrate that the implementation of digital user identification on the EUni platform is associated with a comprehensive improvement in both behavioural and operational indicators of the functioning of the digital university environment. The recorded growth in the number of active users and increased satisfaction levels indicate a reduction in barriers to entry to digital services and increased regularity of interaction with the platform's structured functions. In practical terms, this means that digital identification performs not only the access function, but also becomes a tool for standardising digital procedures, improving service manageability, and accelerating routine operations, which directly affects the effectiveness of the educational process. This effect is consistent with the conceptual foundations of digital transformation, according to

which digitalisation is a driver of innovation and increased efficiency in the management of higher education institutions through the integration of processes, data, and services into a single environment (Verina & Titko, 2019). At the same time, empirical indicators confirm that digital solutions aimed at optimising processes and improving service quality can be a tool for strengthening the competitive position of the university, as they create tangible value for the user and increase the stability of internal processes (Bobro *et al*., 2025).

The quantitative data from the pilot project actually substantiate these statements through an increase in indicators that indirectly reflect competitiveness: platform usage intensity, user experience quality, and service reliability. The growth in user engagement means that digital identification facilitates the transition from fragmented use of individual modules to systematic interaction with the university's digital ecosystem. The statistically significant increase in user satisfaction ($p < 0.05$) indicates an improvement in the perception of services and their compliance with students' expectations, which is important for retaining the student body and building a positive reputation in a competitive environment. At the same time, the increase in reliability indicators (a decrease in the number of access requests, an increase in the proportion of successful authentications) means a reduction in transaction costs for user support and an increase in the stability of the digital infrastructure as an element of institutional capacity.

It should be emphasised that the observed improvements are consistent with general trends in the digitalisation of higher education, which have intensified after the global pandemic and the transition to the widespread use of distance and blended learning formats. In particular, the increase in platform user activity following the implementation of digital tools correlates with research findings showing that students are more willing to adapt to digital solutions and choose hybrid or online formats after the pandemic, provided that the services are sufficiently convenient and accessible (Kortemeyer *et al*., 2025). This gives reason to interpret digital identification as an infrastructural prerequisite for scaling digital educational services: when the login and access process is unified and stable, the university has the opportunity to expand digital services without a proportional increase in administrative workload.

Thus, the implementation of the digital identification system has had a positive local impact on the European University and is consistent with broader scientific assessments that digitalisation is a key factor in enhancing the competitiveness of modern universities through process optimisation, service quality improvement, and the formation of a sustainable digital ecosystem (Verina & Titko, 2019; Bobro *et al*., 2025). Overall, the results of the pilot project confirm the feasibility of further expanding digital identification technologies in educational information systems as a tool for strengthening competitive advantages, in particular by increasing user engagement, ensuring stable access to services, and improving the experience of interaction in the digital environment.

Conclusions

The study shows that digital user identification in educational information systems can be seen as a management and economic tool for enhancing the university's competitiveness, as it simultaneously affects the accessibility of services, the stability of digital interaction, and the quality of the user experience. The results of the pilot implementation on the EUni platform confirm that a structured identification mechanism can deliver tangible short-term effects in the form of increased intensity of digital environment usage and higher user satisfaction. In particular, there was an increase in the average daily number of active users from 800 to 950 (an increase of 18.8%; $p < 0.001$) and an increase in the mean level of satisfaction from 3.8 to 4.4 points (an increase of 15.8%; $p = 0.001$), which indicates that the positive changes are not accidental. Thus, digital identification is not only an element of cybersecurity but also a practical "infrastructure catalyst" for the development of the university's digital ecosystem, which reduces barriers to entry to services and supports regular interaction between students and the platform.

SWOT structuring of factors of digitalisation in higher education institution management further demonstrates that the success of digital identification implementation is determined by a combination of internal resources (infrastructure, IT competencies, organisational readiness) and external opportunities (partnerships, demand for digital formats), while the most critical constraints are related to system integration, resource availability, and cyber risks. This means that the competitive effect of digital identification is highest when the university views it as part of a holistic digital architecture and supports it with access regulations, integration solutions, and the development of digital competencies among staff. At the same time, for the university, such a model creates the conditions for strengthening its reputation and market position by improving service quality, and for students, by providing more predictable, faster, and more convenient access to educational resources.

Future research should focus on in-depth economic measurement of the effects of digital identification at the university level. In particular, it would be promising to model changes in transaction costs (time/costs of supporting access, number of requests to support services, costs of administering roles and rights), analysing the impact of identification on the stability of digital infrastructure, and assessing the relationship between access mechanisms and learning outcomes (student retention, regularity of interaction with courses, completion of tasks in hybrid formats). A separate area of research is the interoperability of digital identification with other educational platforms and external services, which will allow for the formation of practical recommendations for scaling digital solutions and strengthening the competitive advantages of universities in the digital environment.

Acknowledgements: None.
Conflict of interest: None.

References

Bobro, N., Bielikov, V., Matveyeva, M., Salamakha, A., & Kharchun, V. (2024). Advancing public administration: Enforcing strategic methods and utilising tools. *Archives of Science*, 74(3), 201–206. doi: 10.62227/as/74332

Bobro, N., Lisova, R., Parfentieva, O., Dmytrovska, V., & Kyrylenko, S. (2025). Digital transformation for cost optimisation and sustainable business operations. *European Journal of Sustainable Development, 14*(2), 158. doi: 10.14207/ejsd.2025.v14n2p158

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), article number 94. doi: 10.1007/s44217-025-00500-y

Krap, A., Bataiev, S., Bobro, N., Kozub, V., & Hlevatska, N. (2024). Examination of digital advancements: Their influence on contemporary corporate management methods and approaches. *Multidisciplinary Reviews, 7*. doi: 10.31893/multirev.2024spe026

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), 250–264. doi: 10.35808/ijeba/457

Lampropoulos, G., & Sidiropoulos, A. (2024). Impact of gamification on students' learning outcomes and academic performance: A longitudinal study comparing online, traditional, and gamified learning. *Education Sciences, 14*(4). doi: 10.3390/educsci14040367

Tymoshenko, O. I., & Yahodzinskyi, S. M. (2024). Digitalization of universities in the context of modern challenges. *Scientific Bulletin: Collection of Scientific Papers of the European University*, 6–9. doi: 10.966-301-266-7/1.2024.6

Verina, N., & Titko, J. (2019). Digital transformation: Conceptual framework. *Contemporary Issues in Business, Management and Economics Engineering*, 719–727. doi: 10.3846/cibmee.2019.073

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), 107–114, doi: 10.1080/17439884.2020.1761641

Наталія Бобро

Кандидат економічних наук
директор цифрового департаменту Європейського університету
директор «NooLab & AI» наукової лабораторії Європейського університету
Європейський університет, Київ, Україна; Вальценхаузен, Швейцарія
03115, бульв. Академіка Вернадського, 16-в, м. Київ, Україна
https://orcid.org/0009-0003-5316-0809

Цифрова ідентифікація користувачів в освітніх інформаційних системах як інструмент підвищення конкурентоспроможності університетів

Анотація. Конкурентоспроможність університетів у цифровому середовищі дедалі більше залежить від якості та доступності освітніх сервісів, стабільності цифрової взаємодії і керованості платформних рішень. Одним із базових елементів цифрової архітектури закладу вищої освіти є цифрова ідентифікація користувачів, яка визначає зручність входу до системи, безперервність доступу до ресурсів, а також можливості стандартизації процедур і персоналізації сервісів. Метою дослідження є обґрунтування ролі цифрової ідентифікації користувачів в освітніх інформаційних системах як інструменту підвищення конкурентоспроможності університетів та емпірична перевірка ефектів її впровадження на базі цифрової платформи університету. Для досягнення мети застосовано комплексний модельний підхід, що поєднує факторне структурування передумов цифровізації управління закладом вищої освіти та кількісне порівняння результатів до і після впровадження цифрової ідентифікації. Методи аналізу включали систематизацію чинників за логікою факторної матриці, обробку цифрових журналів подій платформи, анкетування користувачів за п’ятибальною шкалою задоволеності, а також статистичне зіставлення середніх значень і параметрів варіативності.
Отримані результати пілотного впровадження у вересні–жовтні 2025 р. засвідчили позитивні та статистично значущі зміни ключових показників. Середня добова кількість активних користувачів платформи збільшилася з 800 до 950, що відповідає приросту 18,8, а варіативність використання знизилася через зменшення коефіцієнта варіації з 15,0 до 13,7, що характеризує більш стабільну взаємодію користувачів із цифровими сервісами. Паралельно середній рівень задоволеності користувачів зріс з 3,8 до 4,4, а частка високих оцінок підвищилася, що відображає покращення користувацького досвіду і зниження бар’єрів доступу. Практична цінність дослідження полягає у можливості використання отриманих показників як управлінських орієнтирів для оцінювання ефективності цифрових рішень у вищій освіті та обґрунтування доцільності масштабування цифрової ідентифікації як інструменту підвищення сервісної якості, стабільності доступу і конкурентних переваг університету

Ключові слова: цифровий університет, конкурентоспроможність, діджиталізація, цифрові сервіси, залученість користувачів, цифрові компетентності, операційна ефективність