АНОТАЦІЯ

У статті розглянуто методи інтерактивного навчання та підкреслено, що вони стимулюють інтерес, мотивують здобувачів до активної освітньої діяльності, сприяють формуванню позитивної Я-концепції та росту впевненості у власні сили, розвитку організаторських і комунікативних здібностей, здатності слухати інших, поважати альтернативну думку, уникати конфліктів, знаходити компроміси, прагнути діалогу, будувати конструктивні відносини в групі, розвивати критичне мислення, також сприяють креативності, самостійності, активності, умінню брати на себе відповідальність, що формує лідерські компетентності й подальшу професійну самореалізацію. Виокремлено ефективні методи інтерактивного навчання, що сприяють формуванню лідерської компетентності: метод «мозкової атаки», «круглий стіл», групова та панельна дискусія, бліц-опитування (інтерактивна гра «Мікрофон» тощо), ситуаційний аналіз (ситуації-ілюстрації, ситуації-оцінки й ситуації-вправи, аналіз конкретних ситуацій, навчально-творчі задачі, проєктування нестандартних віртуальних ситуацій, освітні проєкти, інтервізії, метод «Дельфі», кейс-метод, метод «кейс-стаді», метод «інциденту», колективне розв'язання творчих завдань, ділові та рольові ігри, інтелект-карти, тренінги, скрайбінг, воркшоп, метод сторителінг, метод «Six Thinking Hats» (шість капелюхів мислення), Світове кафе (The World Cafe) тощо. Представлено метод інтерактивного навчання – онлайн-воркшоп «Стратегічне лідерство», що сприяв отриманню знань про сутність феномену лідерства в освітньому просторі, про актуальні проблем і вимоги до сучасного лідера в освітній організації, методи виявлення власного лідерського потенціалу, про оволодіння навичками переконування, уміннями організації командної роботи, ефективної взаємодії із соціальним оточенням тощо, а отже, сприяв формуванню лідерської компетентності.

Ключові слова: *лідерська компетентність, методи інтерактивного навчання, майбутні педагоги, заклад вищої освіти.*

УДК 371.134:004.9

DIGITAL TRANSFORMATION AS A STRATEGIC VECTOR FOR THE ADVANCEMENT OF HIGHER EDUCATION IN UKRAINE

ЦИФРОВА ТРАНСФОРМАЦІЯ ЯК КЛЮЧОВИЙ НАПРЯМ РОЗВИТКУ ВИЩОЇ ОСВІТИ УКРАЇНИ

Vladimir Ivanchuk
Ph.D. in Philosophy
E-mail: dergen010@gmail.com
ORCID 0000-0001-5302-3511
SHEI «Donbas State Pedagogical University», Ukraine

Володимир Іванчук
кандидат філософських наук,
E-mail: dergen010@gmail.com
ORCID 0000-0001-5302-3511
ДВНЗ «Донбаський державний педагогічний університет», Україна

ABSTRACT

The article explores the digital transformation of education in Ukraine as a key dimension of national modernization and a fundamental vector of European integration. Based on the analysis of international and national policy frameworks – including the Digital Education Action Plan 2021–2027, Artificial Intelligence Act (AI Act), and UNESCO's Guidance for Generative AI in Education and Research – the study reveals the conceptual foundations, directions, and priorities of educational digitalization. The author highlights that digital transformation encompasses the integration of artificial intelligence technologies, virtual and augmented reality, blockchain, big data analytics, mobile learning, MOOCs, and online educational platforms, which collectively redefine the nature and philosophy of higher education.

The study employs a combination of bibliographic search, theoretical generalization, and descriptive-analytical methods to examine how digitalization aligns Ukraine's educational policy with global and European trends. Particular attention is devoted to the role of the Ministry of Digital Transformation of Ukraine and its systemic initiatives – such as the All-Ukrainian Online School, SELFIE integration, and e-document management – which have accelerated the establishment of a national digital ecosystem in education. The article also outlines the impact of wartime conditions on the continuity and resilience of educational processes, emphasizing the crucial role of digital technologies in ensuring accessibility, inclusivity, and academic sustainability.

The findings demonstrate that digital transformation is not limited to technological innovation but represents a paradigm shift toward a human-centered, competence-based, and adaptive educational model. While the process offers unprecedented opportunities for personalization and modernization, it also entails challenges related to infrastructure, digital literacy, data security, and ethical regulation. The author concludes that the sustainable implementation of digital transformation in Ukraine's higher education system will strengthen its international competitiveness and facilitate full integration into the global digital educational and scientific community.

Key words: *digital transformation of education; higher education digitalization; artificial intelligence; digital technologies; educational innovation; challenges and opportunities of digitalization.*

Relevance of the Problem. One of the key vectors in the current transformation of education is its digitalization. The use of digital platforms, the spread of distance and e-learning, the creation of digital learning environments employing artificial intelligence technologies across various educational levels, and the rapid revision of requirements for digital literacy and competence among educators and learners – all these have become commonplace phenomena of modern education. The processes of digital transformation in Ukrainian education fully align with the global trends of digital societal development and correspond to the key initiatives of the European Union as well as UNESCO's framework documents. At present, Ukrainian scholars are actively exploring the opportunities and prospects of implementing digital technologies in

education, particularly within higher education institutions.

Analysis of Research and Publications. The digital transformation of education in Ukraine is guided by a series of strategic and conceptual legal frameworks. Among the most significant documents are:

– The Concept for the Development of Artificial Intelligence in Ukraine (2020), which identifies the introduction of AI technologies in education and science as one of the priority directions of national development, ensuring Ukraine's long-term competitiveness in the international market (*Concept, 2020, p. 4*).

– The Concept for the Digital Transformation of Education and Science until 2026 (2021), which aims to overcome the low level of digital competence among participants in the educational process, to provide learners with high-quality digital content, and to achieve strategic goals such as: "Digital educational environments are accessible and up-to-date," "ICT curricula meet contemporary standards," and "Services and processes in education and science are transparent, efficient, and user-friendly."

– The Concept for the Development of Digital Competences (2021), which defines Ukraine's strategic course toward fostering citizens' knowledge, skills, and abilities in the field of digital technologies. Its main objectives include: the formation and development of digital skills and competences to advance the digital economy and e-democracy; comprehensive legislative reform to define digital education, digital skills, and competences in all societal domains; the establishment of a Digital Competence Framework; and the development of indicators for monitoring digital competence at the national level (*Concept, 2021*).

– The Digital Competence Framework for Citizens of Ukraine (DigCompUA 2.1, 2021), based on the European DigComp 2.1 model. The updated version – *DigCompUA for Citizens 2.2 (2023)* – was adapted to address the challenges of large-scale information warfare, propaganda, and cybersecurity threats from the aggressor state, as well as the emergence of generative AI, virtual and augmented reality, and the Internet of Things (*Vuorikari, 2023*).

– The Strategy for the Development of Artificial Intelligence in Ukraine (2023), which envisions AI as an independent scientific field and promotes the introduction of AI tools and technologies at all levels of education – for optimizing learning processes, profiling students by aptitude, advancing interdisciplinary research, and integrating intelligent transdisciplinary platforms into the educational process (*Strategy, 2023, p. 72*).

A key role in shaping the national policy on digital transformation and the development of digital competencies belongs to the Ministry of Digital Transformation of Ukraine. Through its activities, Ukraine has joined the EU *Digital Europe Programme (2021–2027)* and significantly accelerated its digital transition. As a result, by 2024, Ukraine ranked among the top five countries in terms of digital service development (compared to 102nd place in 2018).

The Ministry's achievements were further recognized by the European Commission's Best Cases Awards 2025, where the Ukrainian AI assistant *Diia.AI* (launched in September 2025) was named the best example of technology-based state-citizen interaction. According to the Ministry's website, *Diia.AI* became one of the

world's first AI assistants capable not only of consulting users but also of directly providing government services (*Diia.AI, 2025*).

Ukraine's legal and strategic initiatives fully correspond to the EU's regulatory documents on digital education and UNESCO's activities in this field, as well as to the best practices of other countries. Among the key international initiatives promoting the digital transformation of education are:

– *Digital Education Action Plan 2021–2027 (European Commission, 2020)* – which defines digital education as a cornerstone of the EU's educational strategy, emphasizing the integration of digital technologies to enhance quality and accessibility of education, expand online, distance, and blended learning, and develop digital competences.

– *The Artificial Intelligence Act (AI Act, 2023)* – one of the first legislative initiatives establishing the legal basis for the development of AI-based educational technologies.

– *Legal and Pedagogical Guidelines for the Educational Use of Generative AI (2025)* – which stress the importance of transparency and prohibit the input of personal or non-public data into AI systems.

– *UNESCO Recommendation on the Ethics of Artificial Intelligence (2022)* – which highlights core values such as respect for human rights and dignity, inclusivity, diversity, environmental responsibility, and peaceful coexistence.

– *UNESCO's Guidance for Generative AI in Education and Research (2023)*, *AI Competency Framework for Teachers (2024)*, and *AI Competency Framework for Students (2024)* – which provide conceptual definitions of "generative AI," "AI literacy," and pedagogical AI practices.

Thus, the processes of digital transformation in education today rest on a robust legal and institutional foundation. Ukrainian scholars such as N. Morze, K. Osadcha, V. Osadchyi, O. Spirin, S. Semerikov, and M. Shyshkina, among others, have provided theoretical and methodological analyses of educational digitalization. Additionally, the topic is widely discussed in the research of V. Vyhovska, S. Virotchenko, A. Huralyuk, S. Lapaienko, O. Lystopad, I. Mardanova, N. Mospan, V. Ogneviuk, S. Sysoieva, T. Pavlysh, O. Potapchuk, O. Storonska, S. Trubachova, et al.

Purpose and Research Methods. The **purpose** of this article is to outline the key directions of the digital transformation of education in Ukraine within the context of European integration, to identify the priority trends in the digitalization of national education and science under martial law, and to analyze the challenges and opportunities that digital transformation brings to the modern Ukrainian educational system.

To achieve this aim, a set of research **methods** was employed:

– the search-bibliographic method, used to identify regulatory and scientific sources relevant to the chosen research problem;

– the method of theoretical generalization, applied to study the key aspects of Ukraine's digital transformation of education in the context of European integration;

– and the descriptive-analytical method, used to summarize both general and specific trends in the digitalization of Ukrainian education and science during wartime conditions.

Main Findings. The digital transformation of education and science currently taking place in Ukraine is fundamentally reshaping higher education. According to the Ministry of Digital Transformation of Ukraine, digital transformation in the field of education and science is defined as "a comprehensive process aimed at building an ecosystem of digital solutions in education and research, including the creation of a secure digital educational environment, the provision of necessary digital infrastructure, the enhancement of digital competence, the transformation of processes and services, and the automation of data collection and analysis" (*Digital Transformation of Education and Science, n.d.*).

Among the key projects initiated by the Ministry are the All-Ukrainian Online School, the introduction of e-reporting (digitalized reporting in educational institutions), e-document management, the connection of Ukrainian institutions to the SELFIE (Self-reflection on Effective Learning by Fostering the Use of Innovative Educational Technologies) tool developed by the European Commission, which assists schools in integrating digital technologies into teaching, learning, and assessment, and the launch of e-licensing systems, among others.

According to the Resolution of the Cabinet of Ministers of Ukraine "Certain Issues of Digital Transformation" (2024), the priority directions and tasks of digital transformation for 2024–2026 include:

- the creation of registries for preschool, general secondary, and extracurricular education using a state digital platform;
- simplification of administrative procedures in educational institutions;
- the organization of electronic document flow and reporting;
- the development and maintenance of the National Electronic Scientific and Information System;
- and the modernization of tools for distance learning, including the upgrade of the national platform "All-Ukrainian Online School" (*Certain Issues, 2025*).

In 2021, the European Commission issued the communication *"2030 Digital Compass: The European Way for the Digital Decade"*, which presented a comprehensive vision for Europe's successful digital transformation by 2030. Alongside digital business and government digitalization, the document emphasized educational priorities such as the development of digital literacy among citizens, the training of highly qualified digital specialists, awareness of online learning platforms, and the ability to implement distance and blended learning (*2030 Digital Compass, 2021*). The coordinated efforts of Ukraine's Ministry of Digital Transformation and Ministry of Education and Science clearly demonstrate the country's adherence to these European initiatives.

Since the onset of the war, UNESCO and other international organizations have provided active support for Ukraine's educational community, particularly in fostering digital transformation and ensuring the continuity of learning. The UNESCO Global Education Coalition (https://www.unesco.org/en/global-education-coalition), originally created during the COVID-19 pandemic, expanded its initiatives in response to the war in Ukraine. It now offers free access to digital educational environments such as:

– Global Skills Academy, which develops youth digital skills and promotes employability and social integration;

– Global Teacher Campus, aimed at improving teachers' pedagogical mastery and proficiency in digital technologies, including online and hybrid learning formats (with courses developed by Microsoft and Coursera);

– Global Learning House, which provides educators, students, and educational providers with access to high-quality digital learning resources.

Furthermore, international assistance to Ukraine's education sector includes the supply of digital equipment and software for remote learning, the expansion of online learning platforms and digital content, the development of electronic assessment systems in higher education, and the strengthening of psychosocial support systems for learners affected by the crisis (*Malytska, 2022, p. 3*).

It is worth noting that Ukrainian education gained significant experience in digital transformation during the COVID-19 pandemic, which triggered a rapid transition to online teaching and learning. As N. Mospan, V. Ogneviuk, and N. Morze correctly observed, the pandemic accelerated the global digitalization of higher education (*Mospan, 2022*).

The outbreak of war in February 2022 has further intensified the relevance of digital transformation in Ukrainian education. Scholars analyzing the digitalization processes during wartime explore how digital technologies enable the continuation of the educational process, create a safe and supportive learning environment, and form a new "digital face" of Ukrainian education.

According to A. Huralyuk (2025, p. 9), digital transformation – which at the beginning of the 21st century was primarily viewed as an innovative alternative to traditional forms of learning – has, under wartime conditions, become a vital organizational and pedagogical prerequisite for the functioning of the entire educational system. Digital technologies have ensured the continuity of education, the creation of individual learning trajectories, and the personalization of educational content.

Researchers also note a transformation in the professional roles of educators. O. Storonska (2023) observes that teachers are no longer merely transmitters of knowledge; they are now developers of digital educational resources, coordinators of digital interaction, and moderators of online platforms. Similarly, S. Lapaienko (2023) argues that digital transformation in education and science necessitates profound changes in pedagogical, theoretical, methodological, and technological dimensions – harmonizing the achievements of pedagogy with those of the information society. S. Alekseeva (2022, p. 20) further emphasizes the need to rethink didactic approaches by promoting learner-centered instruction, collaborative pedagogy, and experience-based learning supported by modern information technologies.

O. Shparyk (2021, p. 72) asserts that digital transformation implies a fundamentally new educational environment based on digital technologies, offering convenient and accessible platforms that foster competitiveness, efficiency, transparency, and the development of digital skills. S. Trubachova, O. Mushka, and P. Zamaskina (2024) identify several priority directions likely to shape the future of Ukrainian education: distance, online, and blended learning; non-formal education; cloud

technologies; gamification; virtual, augmented, and mixed realities; mobile learning; STEM education; educational robotics; 3D technologies; and programming (coding).

According to T. Pavlysh (2023), the digitalization of higher education during wartime has been driven primarily by technologies such as videoconferencing, virtual laboratories, e-learning platforms, shared document systems, video lectures, and learning analytics tools.

The introduction of these digital technologies has qualitatively transformed the educational process, enabling the resolution of new didactic challenges and serving as an effective instrument for the development and testing of innovative teaching methods. O. Potapchuk (2024) emphasizes the relevance of developing *digital universities* based on European models, employing digital education principles to foster a "knowledge society" and integrating digital technologies at every stage of educational organization.

As defined by S. Virotchenko (2024), digital transformation in education is a multifaceted process that involves the implementation of digital tools to optimize learning environments, enhance educational efficiency, modernize institutional management, and strengthen digital competence among all participants. O. Lystopad and I. Mardanova (2024, p. 145) further narrow the definition to the university level, describing it as the creation and regulation of a digital educational space ensuring systematic operation, the effective functioning of digital infrastructure, and the acquisition of digital competence by both administrators and learners.

Conclusions. The conducted analysis of normative and strategic documents, alongside the review of theoretical and empirical research by Ukrainian scholars, has made it possible to determine the contemporary understanding of digital transformation in higher education and to identify a set of technologies currently reshaping the educational process within higher education institutions. These include artificial intelligence, virtual and augmented reality, blockchain, data analytics, mobile learning, massive open online courses (MOOCs), and educational online platforms.

Digital transformation is profoundly redefining the educational landscape. Artificial intelligence, virtual and augmented reality, MOOCs, and mobile learning are making education more accessible, personalized, and engaging, while simultaneously creating new opportunities for educators and learners alike. These technologies contribute to the democratization of education, the enhancement of individualized learning trajectories, and the optimization of administrative and pedagogical processes.

However, the introduction of digital technologies is accompanied by a series of challenges and barriers that must be addressed to ensure sustainable educational development.

First, technical and infrastructural limitations remain significant, particularly in rural and underdeveloped regions. The digital divide – the gap between those who have access to digital technologies and those who do not – continues to impede equal access to quality education.

Second, the success of digital transformation depends heavily on reliable access to high-speed Internet, digital devices, and other technological resources. In many developing countries, and even in certain regions of developed nations, such

infrastructure remains insufficient or entirely absent. The forced integration of outdated systems with modern software further exacerbates technical inconsistencies and reduces efficiency.

Third, data privacy and cybersecurity constitute major concerns, as educational institutions increasingly rely on digital platforms to store and process personal information.

Moreover, the digital transformation of higher education depends largely on the level of digital literacy among educators. Transitioning from traditional teaching methods to digital, virtual, and hybrid learning environments requires both technical proficiency and pedagogical expertise in digital education. This process demands substantial retraining, methodological innovation, and institutional support.

Digitalization also raises socioeconomic and ethical issues, such as inequality in access to technology, disparities in digital competence, and ethical dilemmas regarding data ownership and algorithmic bias. Addressing these concerns requires a balanced and human-centered approach to educational innovation – one that prioritizes inclusivity, equity, and ethical accountability.

In summary, digital transformation represents not merely a technological shift but a paradigm changes in the philosophy, structure, and practice of education. In Ukraine, this process has become particularly critical in the context of European integration and wartime resilience, serving both as a tool for national stability and as a catalyst for modernization. The strategic integration of digital technologies in education ensures not only the sustainability of the learning process during crisis conditions but also Ukraine's full participation in the global digital ecosystem of education and research.

REFERENCES

2030 Digital Compass: the European way for the Digital Decade. (2021). European Commission. Brussels. https://eufordigital.eu/wp-content/uploads/2021/03/2030-Digital-Compass-the-European-way-for-the-Digital-Decade.pdf.

Action Plan for Digital Education 2021–2027 (2020). Brussels : European Commission. https://ecswe.eu/wp-content/uploads/2020/12/ECSWE-Position-Paper-on-DEAP-2021-2027-updated-version.pdf.

AI competency framework for students. UNESCO / Miao Fengchun, Shiohira K. 2024. https://doi.org/10.54675/JKJB9835

AI competency framework for teachers. UNESCO. / Miao Fengchun, Cukurova M. 2024. https://doi.org/10.54675/ZJTE2084

Alekseeva, S. (2022). Current problems of didactics in the conditions of informatization of education: individualization of learning. *Science and Technology, 1*(1), 18–26. https://doi.org/10.52058/2786-6025-2022-1(1)-18-26.

Artificial Intelligence Act. European Union. European Parliament. Strasbourg, 2023. https://www.europarl.europa.eu/doceo/document/TA920230236_EN.html

Concept of digital transformation of education and science for the period until 2026. Draft for public discussion (2021). https://mon.gov.ua/news/kontseptsiya-tsifrovoi-transformatsii-osviti-i-nauki-mon-zaproshue-do-gromadskogo-obgovorennya.

Digital Competence Framework for Citizens of Ukraine. DigCompUA for Citizens 2.2. Ministry of Digital Transformation of Ukraine, Diya. Osvita. (2023). https://osvita.diia.gov.ua/uploads/1/7451-ramka_cifrovoi_kompetentnosti.pdf.

Digital Transformation of Education and Science. (n.d.). Ministry of Digital Transformation of Ukraine.https://mon.gov.ua/tag/tsifrova-transformatsiya-osviti-i-nauki?&tag=tsifrova-transformatsiya-osviti-i-nauki.

Diya.AI – Europe's best govtech solution for citizens. (2025, November 27). Ministry of Digital Transformation of Ukraine. https://thedigital.gov.ua/news/progress/diiaai-naykrashche-v-yevropi-govtech-rishennia-dlia-hromadian

Guidance for generative AI in education and research. UNESCO, 2023. https://doi.org/10.54675/EWZM9535.

Guralyuk, A. (Ed.). (2025). *Digitalization of education and science during the Russian-Ukrainian war and the restoration of Ukraine.* FOP Yamchinsky O.V. https://dnpb.gov.ua/wp-content/uploads/2025/07/DDETKS-review-digitalization-2025.pdf?utm_source=chatgpt.com.

Lapayenko, S. (2023). Theoretical and methodological support for the digital transformation of education and pedagogy. *Innovative pedagogy*, *55*(3). С. 9–13. https://doi.org/10.32782/2663- 6085/2023/55.3.1.

Legal and pedagogical guidelines for the educational use of generative AI. European Schools. Schola Europaea, 2025. URL: https://www.eursc.eu/BasicTexts/2025-01-D-66-en-2.pdf.

Listopad, O., Mardarova, I. (2024). Digital transformation of higher education: theoretical and practical aspects. *Scientific Bulletin of Izmail State Humanitarian University*, 66. http://visnyk.idgu.edu.ua/index.php/nv/article/view/825.

Malytska, I. (2022). UNESCO Support to the Educational Community of Ukraine during the Russian Military Aggression. Newsletter No. 3 / Institute of Digitalization of Education of the National Academy of Sciences of Ukraine. https://lib.iitta.gov.ua/id/eprint/731488/1/buleten_3_2022%20Malitskaya%20I.D..pdf/

Mospan N. V., Ognevyuk V. O., Sysoieva S. S. Emergency Higher Education Digital Transformation: Ukraine's Response to the Covid-19 Pandemic. *Information Technologies and Learning Tool.* 2022. Vol. 89(3). Pp. 90–104. https://doi.org/10.33407/itlt.v89i3.4827.

On approval of the Concept of Digital Competence Development and approval of the action plan for its implementation, Resolution of the Cabinet of Ministers of Ukraine No. 167-r (2021) (Ukraine).https://zakon.rada.gov.ua/laws/show/167-2021-p#Text.

On approval of the Concept of the Development of Artificial Intelligence in Ukraine, Resolution of the Cabinet of Ministers of Ukraine No. 1556-r (2020) (Ukraine).URL: https://zakon.rada.gov.ua/laws/show/1556-2020-%D1%80#n8.

Pavlysh, T., Basarab, V., Tereshchenko, O., & Rohiv, M. (2023). Digitalization of the educational process in higher education institutions under martial law. Educational Horizons, *56*(1), 106–109. https://doi.org/10.15330/obrii.56.1.106-109.

Potapchuk, O. (2024). Trends in the application of digital technologies in the higher education system of ukraine and eu countries. *Collection of Scientific Papers of*

Uman State Pedagogical University, (1), 49–55. https://doi.org/10.31499/2307-4906.1.2024.302168.

Recommendation on the ethics of artificial intelligence. UNESCO. 2022. https://unesdoc.unesco.org/ark:/48223/pf0000381137

Shparyk, O. (2021). Conceptual foundations of digital transformation of education: European and American discourse. *Ukrainian Pedagogical Journal*, 4, 65–76. https://doi.org/10.32405/2411-1317-2021-4-65-76

Some issues of digital transformation, Order of the Cabinet of Ministers of Ukraine No. 735-p (2025) (Ukraine). URL: https://zakon.rada.gov.ua/laws/show/735-2024-%D1%80#Text

Storonska, O. S. (2023). Peculiarities of the professional activity of a teacher in the conditions of digital transformation of education. *Academic visions*, 24. http://dx.doi.org/10.5281/zenodo.10053423.

Strategy for the Development of Artificial Intelligence in Ukraine: Monograph. (2023). Institute of Artificial Intelligence Problems.https://doi.org/10.15407/development_strategy_2023.

Trubacheva, S., Mushka, O., Zamaskina, P. (2024). Transformational processes in the educational environment of general secondary education institutions in the conditions of digitalization of society. *Ukrainian Pedagogical Journal*, 4, 103–111. https://doi.org/10.32405/2411-1317-2024-4-103-111.

Virotchenko, S. (2024). Digital transformation in education: theoretical concepts and comparative analysis of the experience of Ukraine and the Baltic countries. *Pedagogy of the formation of a creative person in higher and secondary schools*, (93), 9–13. https://doi.org/10.32782/1992-5786.2024.93.2.

Vuorikari, R., Kluzer, S. and Punie, Y. DigComp 2.2: The Digital Competence Framework for Citizens, EUR 31006 EN, Publications Office of the European Union, Luxembourg, 2022. doi:10.2760/115376.

Vygovska, V., Sholudko, V., Balytska, M. (15.06.2025). State digital transformation: analysis for 2019-2024. Vox Ukraine: website. https://voxukraine.org/derzhavna-tsyfrova-transformatsiya-analiz-za-2019-2024-roky.

ДЖЕРЕЛА І ЛІТЕРАТУРА

Алєксєєва, С. (2022). Актуальні проблеми дидактики в умовах інформатизації освіти: індивідуалізація навчання. *Наука і техніка сьогодні*, (1 (1)). https://doi.org/10.52058/2786-6025-2022-1(1)-18-26

Виговська, В., Шолудько, В., Балицька, М. (15.06.2025). *Державна цифрова трансформація: аналіз за 2019-2024 роки*. VoxUkraine | «Вокс Україна» – більше ніж найкраща аналітика про Україну. https://voxukraine.org/derzhavna-tsyfrova-transformatsiya-analiz-za-2019-2024-roky.

Віротченко, С. (2024). Цифрова трансформація в освіті: теоретичні концепції та порівняльний аналіз досвіду України та країн Балтії. *Педагогіка формування творчої особистості у вищій і загальноосвітній школах*, (93), 9–13. https://doi.org/10.32782/1992-5786.2024.93.2

Гуралюк, А. (Ред.). (2025). *Цифровізація освіти і науки в період російсько-*

української війни та відновлення України. ФОП Ямчинський О.В. https://dnpb.gov.ua/wp-content/uploads/2025/07/DDETKS-review-digitalization-2025.pdf?utm_source=chatgpt.com.

Деякі питання цифрової трансформації, Розпорядження Кабінету Міністрів України № 735-р (2025) (Україна). https://zakon.rada.gov.ua/laws/show/735-2024-%D1%80#Text

Дія.AI – найкраще в Європі govtech-рішення для громадян. (2025, 27 листопада). Міністерство цифрової трансформації України. https://thedigital.gov.ua/news/progress/diiaai-naykrashche-v-yevropi-govtech-rishennia-dlia-hromadian

Концепція цифрової трансформації освіти і науки на період до 2026 року. Проєкт для громадського обговорення (2021). https://mon.gov.ua/news/kontseptsiya-tsifrovoi-transformatsii-osviti-i-nauki-mon-zaproshue-do-gromadskogo-obgovorennya

Лапаєнко, С. (2023). Теоретико-методологічне забезпечення цифрової трансформації освіти і педагогіки. *Інноваційна педагогіка*, *55*(3), 9–13. https://doi.org/10.32782/2663- 6085/2023/55.3.1

Листопад, О., Мардарова, І. (2024). Цифрова трансформація вищої освіти: теоретичний та практичний аспекти. *Науковий вісник Ізмаїльського державного гуманітарного університету,* 66. http://visnyk.idgu.edu.ua/index.php/nv/article/view/825.

Малицька, І. (2022). Підтримка ЮНЕСКО освітньої спільноти України під час російської військової агресії. *Інформаційний бюлетень №3 / Інститут цифровізації освіти НАПН України*. https://lib.iitta.gov.ua/id/eprint/731488/1/buleten_3_2022%20Malitskaya%20I.D..pdf/

Павлиш, Т., Басараб, В., Терещенко, О., & Рогів, М. (2023). Цифровізація освітнього процесу в закладах вищої освіти в умовах воєнного стану. *Освітні обрії*, *56*(1), 106–109. https://doi.org/10.15330/obrii.56.1.106-109

Потапчук, О. (2024). Тенденції застосування цифрових технологій в системі вищої освіти України та країнах ЄС. *Збірник наукових праць Уманського державного педагогічного університету*, *49*(1). DOI: 10.31499/2307-4906.1.2024.302168

Про схвалення Концепції розвитку цифрових компетентностей та затвердження плану заходів з її реалізації, Розпорядження Кабінету Міністрів України № 167-р (2021) (Україна). https://zakon.rada.gov.ua/laws/show/167-2021-р#Text.

Про схвалення Концепції розвитку штучного інтелекту в Україні, Розпорядження Кабінету Міністрів України № 1556-р (2021) (Україна). https://zakon.rada.gov.ua/laws/show/1556-2020-р#Text.

Рамка цифрової компетентності громадян України. DigCompUA for Citizens 2.2. Міністерство цифрової трансформації України, Дія. Освіта. (2023). https://osvita.diia.gov.ua/uploads/1/7451-ramka_cifrovoi_kompetentnosti.pdf.

Сторонська, О. С. (2023). Особливості професійної діяльності педагога в умовах цифрової трансформації освіти. *Академічні візії,* 24. https://www.academy vision.org/index.php/av/article/view/666.

Стратегія розвитку штучного інтелекту в Україні: Монографія. (2023). Інститут проблем штучного інтелекту. https://doi.org/10.15407/development_strategy_2023.

Трубачева, С., Мушка, О., & Замаскіна, П. (2024). Трансформаційні процеси в освітньому середовищі закладів загальної середньої освіти в умовах цифровізації суспільства. *Український Педагогічний журнал*, (4), 103–111. https://doi.org/10.32405/2411-1317-2024-4-103-111.

Цифрова трансформація освіти і науки. (б.д.). Міністерство цифрової трансформації України. https://mon.gov.ua/tag/tsifrova-transformatsiya-osviti-i-nauki?&tag=tsifrova-transformatsiya-osviti-i-nauki.

Шпарик, О. (2021). Концептуальні засади цифрової трансформації освіти: Європейський та американський дискурс. *Український Педагогічний журнал*, 4, 65–76. https://doi.org/10.32405/2411-1317-2021-4-65-76

2030 Digital Compass: the European way for the Digital Decade. (2021). European Commission. Brussels. https://eufordigital.eu/wp-content/uploads/2021/03/2030-Digital-Compass-the-European-way-for-the-Digital-Decade.pdf.

Action Plan for Digital Education 2021–2027 (2020). Brussels : European Commission. https://ecswe.eu/wp-content/uploads/2020/12/ECSWE-Position-Paper-on-DEAP-2021-2027-updated-version.pdf

European Parliament. (2023). *Artificial Intelligence Act* https://www.europarl.europa.eu/doceo/document/TA920230236_EN.html

European Schools. (2025). *Legal and pedagogical guidelines for the educational use of generative AI.* https://www.eursc.eu/BasicTexts/2025-01-D-66-en-2.pdf.

Mospan, N. V., Ognevyuk, V. O., & Sysoieva, S. S. (2022). Emergency Higher Education Digital Transformation: Ukraine's Response to the Covid-19 Pandemic. *Information Technologies and Learning Tools*, *89*(3), 90-104. https://doi.org/10.33407/itlt.v89i3.4827

UNESCO (2023). *Guidance for generative AI in education and research*. https://doi.org/10.54675/EWZM9535

UNESCO. (2022). *Recommendation on the ethics of artificial intelligence.* https://unesdoc.unesco.org/ark:/48223/pf0000381137

UNESCO. (2024). *AI competency framework for students* / Miao Fengchun, Shiohira K. https://doi.org/10.54675/JKJB9835

UNESCO. (2024). *AI competency framework for teachers* / Miao Fengchun, Cukurova M. https://doi.org/10.54675/ZJTE2084

Vuorikari, R., Kluzer, S. and Punie, Y. (2022). DigComp 2.2: The Digital Competence Framework for Citizens. Publications Office of the European Union, Luxembourg.

АНОТАЦІЯ

У статті розглянуто процес цифрової трансформації освіти в Україні як ключовий напрям модернізації освітньої системи та складову євроінтеграційного розвитку держави. На основі аналізу міжнародних і національних нормативно-правових документів – Плану дій цифрової освіти

2021–2027, Закону про штучний інтелект (AI Act), Керівництва UNESCO щодо використання генеративного ШІ в освіті та дослідженнях – визначено концептуальні засади, напрями та пріоритети цифровізації освіти. Підкреслено, що цифрова трансформація передбачає комплексне впровадження технологій штучного інтелекту, віртуальної й доповненої реальності, блокчейну, аналітики даних, мобільного навчання, масових відкритих онлайн-курсів (МООС) та освітніх онлайн-платформ, які суттєво змінюють зміст і філософію сучасної вищої освіти.

У дослідженні використано пошуково-бібліографічний, теоретико-узагальнювальний та описово-аналітичний методи для виявлення узгодженості державної політики України з глобальними тенденціями цифровізації освіти. Особлива увага приділяється ролі Міністерства цифрової трансформації України та його ініціативам – Всеукраїнській школі онлайн, впровадженню SELFIE, електронного документообігу, – які сприяли формуванню національної цифрової екосистеми в освіті. Розкрито вплив воєнного стану на забезпечення безперервності освітнього процесу та підвищення його стійкості, наголошено на важливості цифрових технологій для доступності, інклюзивності та якості освіти.

Зроблено висновок, що цифрова трансформація є не лише технологічною інновацією, а й парадигмальною зміною в освітній філософії, що орієнтована на людину, компетентність та адаптивність. Поряд із перевагами, процес супроводжується низкою викликів – технічних, інфраструктурних, етичних та організаційних. Успішне впровадження цифрових технологій у систему вищої освіти України сприятиме підвищенню її міжнародної конкурентоспроможності та інтеграції в глобальний цифровий освітній і науковий простір.

***Ключові слова**: цифрова трансформація освіти, цифровізація вищої освіти, цифрові технології, переваги й виклики цифровізації.*

УДК 378.147:37.011.3-051:316.46

ACCOMPANYING STYLE IN THE FORMATION OF THE LEADERSHIP POTENTIAL OF FUTURE TEACHERS

СУПРОВОДЖУВАЛЬНИЙ СТИЛЬ У ФОРМУВАННІ ЛІДЕРСЬКОГО ПРОТЕНЦІАЛУ МАЙБУТНІХ ПЕДАГОГІВ

Сабіна Іванчук
доктор педагогічних наук, доцент,
E-mail: ivanchuk.sabina@gmail.com
ORCID 0000-0002-9655-0634
Дніпровський національний університет імені Олеся Гончара, Україна

Sabina Ivanchuk
D.Sc. in Pedagogy, Associate Professor
E-mail:ivanchuk.sabina@gmail.com
ORCID 0000-0002-9655-0634
Oles Honchar Dnipro National University, Ukraine