

stability, morality, positive worldview, unlocking potential for self-development).

Keywords: environment, integrity, education, humanisation of education, sustainability of the educational environment, learners, teaching principles, interactive methods.

Стаття надійшла до редакції: 27.02.2026.

Прийнято до друку: 18.06.2026.

Опубліковано: 30.06.2026.

ЦИФРОВІЗАЦІЯ ОСВІТИ

DOI: <https://doi.org/10.28925/2312-5829/2026.1.3>

UDC 378.147:004.9+37.018.43

Mykhailo ZUIEV

<https://orcid.org/0009-0001-2227-4067>

postgraduate student of the Department of Applied Psychology,
V. N. Karazin Kharkiv National University, 4 Svobody Square,
Kharkiv, Ukraine, mykhailo.zuiev@karazin.ua,

Didactic conditions for the effective use of digital technologies in the training of students of humanities specialties

Abstract. *The article substantiates the didactic conditions for the effective use of digital technologies in the training of students of humanities specialties at a Ukrainian university. The relevance of the study is due to the institutional transition to mixed and distance formats, uneven access to resources, and the need to ensure quality and academic integrity in the digital environment, in particular in conditions of military risks. The goal is to scientifically and methodologically substantiate the system of didactic conditions that transform the use of digital tools from technical support of the course into a pedagogically guided tool for the development of humanitarian learning outcomes (critical reading, argumentation, academic writing, working with sources and data). The methodology is of a theoretical and methodological nature and includes a documentary analysis of normative and contextual materials, a scoping review of scientific publications, qualitative content analysis, and pedagogical modelling with subsequent operationalization of the results in the form of a methodological matrix. Five interrelated didactic conditions were obtained: (1) constructive coordination of learning outcomes, educational activities, and assessment; (2) activity-based and scenario-based design of activities in a digital environment with phased support; (3) organizational and infrastructural sustainability and accessibility (a minimally sufficient set of tools, asynchronous alternatives, clear course structure); (4) formative assessment, feedback, and*

academic integrity, including rules for responsible use of AI; (5) digital pedagogical competence of the teacher and systemic support of students. The practical significance lies in the proposed matrix “condition – indicators – digital-methodological solutions – expected results – evidence/assessment”, which can be used to design disciplines of the humanitarian cycle, develop tasks and rubrics, organize feedback, and increase the sustainability of learning in the Ukrainian context.

Keywords: *humanitarian specialties; didactic conditions; blended learning; digital competence; digital technologies; formative assessment; artificial intelligence.*

Introduction

The digitalization of higher education in Ukraine has ceased to be an “innovative application” and has become a basic condition for ensuring the continuity and quality of education in conditions of multifactorial instability (pandemic experience, security risks, forced mobility of students and teachers, unequal access to infrastructure) (Kharchenko et al., 2024). The regulatory field fixes the obligation of the state and educational institutions to guarantee the accessibility and quality of education, and also determines the forms of its acquisition and the autonomy of higher education institutions, which directly affects institutional decisions regarding digital technologies and the organization of the educational process (Kharchenko et al., 2024). An additional regulatory “framework” for the practice of digital education is secondary legislation, in particular regarding the organization of distance learning, which in recent years has undergone changes and additions due to the conditions of martial law and the need for flexible organization of the educational process (Ministry of Education and Science of Ukraine, & Ministry of Digital Transformation of Ukraine, 2025).

For humanities majors, digital technologies are not limited to technical support of the course (LMS, video communication, tests). They transform the very ways of working with knowledge: searching for and critically evaluating sources, analyzing texts and discourses, digital argumentation, interpreting data in socio-humanitarian studies, academic writing and communication in the digital environment (Nalyvaiko et al., 2022). That is why the key is not a list of services or platforms, but didactic conditions: a set of organizational, methodological, resource, evaluative and ethical factors that make the use of digital technologies pedagogically justified, manageable and reproducible in different groups and disciplines. This approach is consistent with the “ecosystem” logic of modern international frameworks, which emphasizes that the effectiveness of digital education is determined not by individual tools, but by the coherence of infrastructure, data management, professional development of teachers, the quality of digital resources and trust (OECD, 2023).

An important dimension of the problem is digital competence as a target outcome of student training and as a prerequisite for the effective use of technology in education. The European DigComp 2.2 framework offers an

updated understanding of digital competence, taking into account new technologies, including AI, and can be used as a tool for operationalizing educational outcomes and assessment criteria (Vuorikari et al., 2022). At the national level, Ukraine is setting a course for the development of digital competences through government decisions, as well as through frameworks adapted to Ukrainian realities (Nalyvaiko, 2023). In the context of humanities training, this means the need to combine subject-matter outcomes (critical thinking, working with cultural and social meanings, academic writing) with digital literacy requirements (information hygiene, communication, security, creation of digital content).

Separately, the relevance of methodically verified solutions is increasing due to the spread of generative artificial intelligence. For the humanities, this is both a resource (support for writing, ideas, translation, text analysis) and a challenge (risks of academic dishonesty, “invisible” borrowing, hallucinations, shifting responsibility for authorship). In Ukraine, official recommendations are emerging on the responsible use of AI in higher education institutions, which directly indicate the need for institutional policies, transparent rules, pedagogically correct evaluation formats and the development of digital culture of teachers and students (Ministry of Education and Science of Ukraine, & Ministry of Digital Transformation of Ukraine, 2025). This actually introduces an additional layer of didactic conditions – ethical and evaluation – without which “digitalization” can undermine trust in learning outcomes.

Analysis of recent research shows: in international humanities, the body of work devoted to digital humanitarian pedagogy and practices of its implementation is growing; systematic reviews capture the diversity of approaches, but also the fragmentation of evidence and the need for clearer didactic design and evaluation of outcomes (Georgopoulou et al., 2025). In related fields (e.g. digital history), the synthesis of empirical evidence highlights that effectiveness depends on the pedagogical scenario, teacher training, quality of digital resources and student support, rather than on “technology” (Georgopoulou et al., 2025). The Ukrainian context adds factors of access, resource constraints and organizational variability; analytical reviews of e-learning practices in Ukrainian universities during a full-scale war highlight the inequality of technical provision and the need for institutional support mechanisms (Must et al., 2024). In parallel, studies of the use of ICT/AI in Ukrainian education in crisis conditions emphasize the growing role of digital tools but point to the lack of agreed-upon rules and pedagogical models that ensure consistency of quality (Londar & Pietsch, 2023; Skvortsova et al., 2024). At the level of individual humanitarian domains (e.g., foreign language teaching), publications demonstrate the positive potential of ICT for the development of language skills, provided that there is methodological motivation and the correct selection of tools and tasks (Georgopoulou et al., 2025).

Thus, the scientific and practical problem is that the discussion of digital technologies in the training of humanitarians often remains at the level of

describing tools or general advantages of “digitalization”, while didactic conditions themselves are poorly presented as an operationalized construct: with clear components, indicators, efficiency criteria, and methodological steps for implementation, suitable for Ukrainian universities in real organizational and security constraints. International policymakers also warn against “technological determinism”: technology should be subordinated to educational goals, evidence, and principles of justice and safety (UNESCO, 2023; European Commission, 2020). That is why the article proposes a methodologically oriented approach: a description of a system of didactic conditions that ensure the effective, ethical, and measurable use of digital technologies in the training of students of humanities in Ukraine. However, despite the growing body of research, there is still a lack of operationalized models that clearly define didactic conditions as a structured and applicable system, particularly within the context of Ukrainian higher education and its current constraints. This gap highlights the need for a methodologically grounded framework that translates general principles of digital education into practical tools for course design and evaluation in humanities disciplines.

The purpose of the study is to scientifically and methodologically substantiate the didactic conditions for the effective use of digital technologies in the training of students of humanities specialties at the university.

Research objectives:

- 1) To clarify the content and boundaries of the concept of “didactic conditions for the effective use of digital technologies” in the context of the training of students of humanities specialties.
- 2) To identify and systematize key groups of didactic conditions (organizational, methodological, resource, evaluation, ethical) as an interconnected system for ensuring the effectiveness of learning.
- 3) To describe the Ukrainian context of the use of digital technologies in humanities training as a set of factors that influence the implementation of didactic conditions (learning formats, accessibility, security and institutional restrictions).
- 4) To develop a structural model of didactic conditions and present it in the form of a methodologically suitable matrix “condition – indicators – digital solutions/methods – expected results – methods of assessment”.
- 5) To propose methodological recommendations for teachers of humanities disciplines on designing lessons and assessing learning outcomes using digital technologies in accordance with the specified didactic conditions.

Materials and Methods

The study is of a theoretical and methodological nature and is aimed at substantiating and designing a system of didactic conditions for the effective use of digital technologies in the training of students of humanities specialties. The logic of constructing the methodology was consistent with approaches to planning and describing scientific research in the social sciences, where the key is a transparent connection between the goal, analysis materials, analytical

procedures and the obtained scientific and methodological result (Creswell & Creswell, 2018).

The research materials consisted of two interrelated groups of sources. First, this is a corpus of scientific publications (Ukrainian and English-language), covering: digital technologies in higher education; digital didactics and blended learning; the specifics of teaching humanities disciplines in a digital environment; digital competencies and academic integrity in a digital/AI context. Secondly, these are documents of the “contextual layer” (policies, frameworks, recommendations, regulations), which define the organizational and ethical boundaries of the digitalization of education and are therefore relevant for describing didactic conditions in the realities of a Ukrainian university. Document analysis as a method of working with such sources was considered as a systematic procedure for extracting and interpreting the content of documents with a focus on their meanings, functions, and evidentiary role in the research conclusion (Bowen, 2009).

To organize the literature review, the logic of scoping review was used as a way to map the field of research, identify key concepts, approaches, and gaps, which is appropriate in a situation where the phenomenon (didactic conditions of digital humanities education) is described in different disciplinary languages and in different types of publications (Arksey & O’Malley, 2005; Peters et al., 2020). To increase the transparency of the description of the review procedure, the guidelines for structuring and reporting scoping reviews (Tricco et al., 2018) served as a reference.

The literature selection procedure involved searching for keywords in Ukrainian and English (e.g., “didactic conditions”, “digital technologies”, “humanities specialties”, “digital pedagogy”, “digital humanities education”, “blended learning”, “digital competence”, “academic integrity”, “AI in higher education”) in international and open scientific indexes/repositories and bibliographic databases (with subsequent selection of relevant works by title/abstract and full text). The inclusion criteria were focus on higher education; presence of a pedagogical/didactic dimension of the use of digital technologies; relevance to humanities training or universal didactic mechanisms that can be transferred to the humanities domain. Works of a purely technical nature (without pedagogical analysis) were excluded, as well as sources that did not allow reconstructing the educational logic of the use of technologies.

Analytical methods combined qualitative content analysis and pedagogical modelling. At the stage of processing sources, content analysis was used as an approach to systematically isolating semantic units (conditions, mechanisms, indicators of effectiveness, risks/limitations) and their subsequent categorization (Krippendorff, 2018). The categorical scheme was formed in stages: primary coding (isolation of potential didactic conditions and descriptions of their manifestation), grouping codes into larger categories, and clarifying category boundaries with an orientation towards the reproducibility and methodological suitability of the result. For the logic of working with qualitative data and presenting results (matrices, generalizations, connections),

approaches to qualitative analysis and “data display” were taken into account as a means of enhancing analytical transparency (Miles et al., 2014).

The final step of the methodology was pedagogical modelling: based on the categorized results of content and document analysis, a structural model of didactic conditions and a methodological matrix “condition – indicators – digital solutions/methods – expected results – assessment methods” were constructed. This format provides the applied value of the article: it allows not only to describe the conditions theoretically, but also to translate them into the language of lesson planning and monitoring of learning outcomes.

The procedure of methodological synthesis involved four successive stages: mapping and screening relevant literature and contextual documents; identifying recurrent didactic mechanisms and constraints through qualitative coding; grouping them into analytically distinct but interrelated conditions; and operationalizing the resulting system in the form of a matrix suitable for instructional design and evaluation.

Results

In pedagogical science, didactic conditions are often interpreted as system-forming circumstances that are centered on educational activity and can be the object of design and management; in particular, in the context of studying the humanities, their interdependence and the need to consider them comprehensively (and not as a “list”) are emphasized. This is important for digital technologies, since their impact on learning effectiveness is manifested only when the technology is embedded in the logic of the student’s educational actions and the methodological logic of the course (goals – activity – feedback – assessment – reflection) (Opaliuk, 2018).

As a result of the theoretical and methodological analysis, a system of 5 didactic conditions was formed that ensured the effective use of digital technologies in the training of students of humanities specialties at a Ukrainian university. The conditions are presented as a guided model, where each condition has: (a) pedagogical content; (b) implementation indicators; (c) methodological solutions; (d) expected results; (e) assessment methods. This approach avoids the “list of tools” and translates digital technologies into the plane of didactically justified course design (Biggs, 1996; OECD, 2023; Vuorikari et al., 2022).

Model of didactic conditions.

The proposed model is based on the fact that the effectiveness of digital technologies in humanities training occurs only when the following are agreed upon: learning goals/outcomes → learning activities → assessment and feedback → support for participants and the environment. Within the framework of the model, didactic conditions serve as “pillars” of quality, ensuring: (1) semantic and effective certainty; (2) methodically designed activities; (3)

accessibility and organizational stability; (4) correct assessment and academic integrity; (5) professional readiness of the teacher and support for students in the digital environment (OECD, 2023; UNESCO, 2023).

Didactic conditions and their indicators.

Condition 1. Constructive coordination of outcomes, activities and assessment (outcomes-based design). Digital technologies should “work” to achieve clearly defined learning outcomes and replace them with technical activities. For humanities majors, this means integrating subject outcomes (analysis/interpretation, argumentation, academic writing) with digital competencies (information retrieval and evaluation, content creation, security, digital communication) in the style of competency frameworks such as DigComp 2.2 (Biggs, 1996; Vuorikari et al., 2022). Indicators: learning outcomes are formulated measurably; each module has a transparent “correspondence logic” (result → task → criteria); digital tools are tied to a specific learning outcome. In humanities education, this condition ensures that digital tools are not used as isolated technical elements but are directly linked to the development of higher-order cognitive skills such as interpretation, argumentation, and academic writing. For example, a digital annotation tool can be used not simply for reading, but for structured critical analysis aligned with assessment criteria.

Condition 2. Activity-scenario design (active learning activities in a digital environment). In humanities training, the key is not “content consumption”, but the organization of learning activities: working with sources, discussion, collaborative writing, case analysis, digital projects with data/text interpretation. The digital environment should reinforce these activities through scenarios, phasing and support (scaffolding). Indicators: the course has regular high-level tasks (analysis/evaluation/creation); clear phasing (draft → feedback → refinement); requirements for sources and arguments are described; digital artifacts (essay, poster, digital exhibition, mini research) are part of the assessment. In practical terms, this condition is implemented through structured learning scenarios, such as step-by-step essay development, collaborative analysis of texts using shared digital documents, and guided discussions requiring evidence-based argumentation. This allows digital technologies to support deep learning rather than passive content consumption.

Condition 3. Organizational and infrastructural sustainability and accessibility (realistic for the Ukrainian context). The effective use of digital technologies does not imply a “maximum of services”, but a sustainable organization: a single communication channel, LMS as a basic access point, thoughtful asynchronous alternatives, material storage policies, as well as accessibility for students with different levels of resources. In modern conditions

(risks of interruptions, uneven access to equipment/the Internet), this condition becomes didactically critical: without it, the regularity of educational actions and feedback is destroyed (OECD, 2023; UNESCO, 2023). Indicators: the course has a “minimally sufficient” set of tools (not overloaded); offline/slow-speed solutions are provided; deadlines have a buffer; instructions are short and unambiguous; materials are structured and accessible. For Ukrainian universities, this condition is particularly critical due to unstable access to infrastructure. Therefore, course design should include asynchronous participation options, downloadable materials, and flexible deadlines. This ensures continuity of learning even under conditions of disruption.

Condition 4. Formative assessment, quality feedback and academic integrity (including AI). Digital technologies only provide benefits when assessment is not reduced to tests, but supports learning: rubrics, step-by-step tasks, self- and peer-assessment, reflective components. This is especially important for humanities disciplines due to the risks of superficial writing and incorrect borrowing. The spread of generative AI makes it necessary to have transparent rules of acceptable use, requirements for sources and verification procedures (Holmes, et al., 2025; UNESCO, 2023; UNESCO, 2023a). Indicators: rubrics for key works are available; assessment includes formative stages; rules of integrity and use of AI are written (what is allowed/forbidden/how to declare); tasks are designed to require personal reasoning, references to specific sources/data and procedural evidence of work (drafts, notes, protocols). For example, students may be required to submit not only final assignments, but also intermediate drafts, outlines, or reflection notes. In the context of AI use, assignments can include mandatory disclosure statements indicating how AI tools were used and how the results were critically evaluated.

Condition 5. Digital pedagogical competence of the teacher and support for students (human factor as a condition of quality). Digital learning in the humanities requires from the teacher not only technical skills but also integrated pedagogical competence: understanding how technology is combined with subject content and methodology (TPACK logic), as well as the ability to support learning interaction, presence and motivation in online/blended formats (Garrison et al., 2000; Mishra & Koehler, 2006). Indicators: uniform methodological standards of the course (module structure, types of activities, communication rules); regular feedback; support for students in digital procedures (brief instructions, sample examples); balance of workload and digital well-being (realistic requirements, clear boundaries of interaction). This condition also implies the need for consistent course design standards, clear communication rules, and structured feedback cycles. In humanities disciplines, teacher presence in the digital environment is essential for maintaining academic dialogue and supporting students' analytical thinking.

The results obtained are not limited to the description of didactic conditions at the conceptual level. To ensure their methodological suitability and

the possibility of their use by teachers of humanities disciplines in a real course, each condition was operationalized through implementation indicators, typical digital-methodological solutions and ways of recording educational evidence. That is why a generalized matrix is presented below, which translates the model into a format of practical planning and monitoring of results (see Tab.1).

Table 1.

*Didactic Conditions for Effective Use
of Digital Technologies in Humanities Students' Training*

Didactic condition	Indicators (how we see that the condition is met)	Examples of methodological digital solutions	How do we evaluate the result?
1. Alignment of results, activities, and evaluation	the result is measurable; the criteria are transparent	module map in LMS; results checklist	rubric + artifact matching results
2. Activity-scenario design	phasing, scaffolding	collaborative writing; analysis of digital sources; discussion	quality of argumentation; working with sources; process
3. Sustainability and accessibility	asynchronous alternatives, minimal toolset	LMS+1 channel; recordings; instructions	attendance/performance; stability of progress
4. Formative Assessment and Integrity	there are rubrics; AI rules; intermediate feedback	phased submissions; self-assessment; AI declaration	rubric; originality; reflective report
5. Teacher competence and support	regular feedback; course standards	task templates; sample examples	quality survey; analysis of typical errors

Thus, the obtained results are formulated as a methodologically suitable system: 5 conditions + indicators + a matrix for course planning, which meets the request for practicality and allows transferring the model to various humanitarian disciplines, taking into account the Ukrainian context of organizing training.

Discussion

The proposed system of five didactic conditions confirms the conclusion that is consistently traced in modern analytical reports and frameworks of digital education: the effectiveness of digital technologies is determined not by the “tool as such”, but by the coherence of pedagogical design, institutional organization, accessibility, assessment and human support. That is why our model, on the one hand, corresponds to the ecosystem vision of digital education (where governance, infrastructure, quality of resources, teacher competence and equality of access are key), and on the other hand, translates these general principles into methodologically managed components of a humanities course (Kharchenko et al., 2024; OECD, 2023; UNESCO, 2023).

The first condition – constructive coordination of outcomes, learning activities and assessment, in fact sets a “pedagogical filter” for any digital activity: digital solutions are justified only when they reinforce specific learning

outcomes and are reflected in transparent criteria. This logic directly correlates with the constructive alignment approach, which is seen as a tool for improving the quality of teaching through the coordination of results, activities and assessment (Biggs, 1996). For the humanities, this is especially important, since a significant part of the results is of a complex cognitive nature (interpretation, argumentation, work with sources), and digital tools can either reinforce these actions or “replace” them with formal activities without content gain.

The second condition, activity-based design, is consistent with the fact that in digital learning, the critical thing is not the transfer of content, but the organization of interaction, activity and support (scaffolding) in the process of completing complex tasks. For humanities training, this means strengthening the practices of working with sources, collaborative writing, discussion and project-based interpretation of data/texts with clear stages and evidence of the process. This focus is consistent with approaches that emphasize the role of the teacher’s “presence” and the cognitive presence of students in digital communication, as well as the importance of designed learning scenarios (Garrison et al., 2000).

The third condition – organizational and infrastructural sustainability and accessibility in the Ukrainian context acquires the status of not only an organizational, but also a didactic condition: in the absence of a stable “hub” (LMS), asynchronous alternatives, a minimally sufficient set of tools, and a clear structure, the regularity of learning activities and feedback is destroyed. This correlates with the conclusions that digital education depends on the sustainability of the ecosystem, in particular on accessibility and reducing inequalities, rather than on “maximizing technologies” (OECD, 2023; UNESCO, 2023). In our model, this condition is specified through buffering deadlines, lightweight material formats, and the design of alternative ways of participation, which makes it practically applicable to real-world constraints.

The fourth condition – formative assessment, quality feedback, and academic integrity in 2023-2025 acquired a new “sublayer” due to the mass spread of generative AI. Accordingly, the following methodologically appropriate are: phased submissions, rubrics, reflective components, as well as transparent rules for the use of AI with the requirement to declare and verify sources and arguments. This approach is consistent with international positions on the need for ethical governance of EDTech and separate guidelines on generative AI in education and research (UNESCO, 2023; UNESCO, 2023a; Nalyvaiko, 2023). Within the Ukrainian field, such rules can be synchronized with recommendations for the responsible implementation and use of AI in educational institutions (Ministry of Education and Science of Ukraine & Ministry of Digital Transformation of Ukraine, 2025).

The fifth condition of the digital pedagogical competence of the teacher and support for students reinforces the previous ones, since without a “human component” digital solutions do not become didactically effective. The logic of TPACK allows us to consider teacher competence as an integration of subject, pedagogical and technological knowledge, rather than as a set of technical skills

(Mishra & Koehler, 2006). In the humanities, this is manifested in the ability to organize digital reading/writing/analysis practices so that technology does not simplify thinking but supports it.

The limitations of the study are related to its theoretical and methodological design: the model and matrix of conditions are built on an analysis of the literature and normative and contextual documents, and therefore require further testing in different humanities programs, in different types of universities and formats of education. In addition, rapid technological changes (especially in the AI sphere) may require regular updating of the ethical and evaluative components of the model, which corresponds to general warnings about the risks of technological determinism and the importance of evidence-based edtech (UNESCO, 2023).

Conclusions

The article provides a scientific and methodological justification of the didactic conditions for the effective use of digital technologies in the training of students of humanities specialties at a Ukrainian university. Clarification of the concept of “didactic conditions” in digital learning allowed us to consider them not as a list of external factors or technological means, but as a managed system of organizational, methodological and value-normative solutions that ensure the predicted educational result in a specific context.

According to the results of the analysis and generalization, five key didactic conditions were identified and systematized: constructive coordination of learning outcomes, activities and assessment; activity-scenario design of students’ educational work in the digital environment; organizational and infrastructural stability and accessibility of learning taking into account Ukrainian realities; formative assessment, qualitative feedback and academic integrity, including regulation of the use of AI tools; digital pedagogical competence of the teacher and systemic support of students. Collectively, these conditions set the logic under which digital technologies become didactically justified: they enhance learning activities of the humanities profile (working with sources, argumentation, interpretation, academic writing), and do not replace them with formal “digital activities”.

The practical value of the study lies in the fact that the proposed conditions are presented in an operationalized form through the matrix “condition – indicators – digital-methodological solutions – expected results – methods of assessment/evidence”, which makes the model suitable for use in designing disciplines of the humanities cycle, developing tasks and rubrics, organizing feedback, and forming transparent rules of academic integrity. Thus, the results can be used as a methodological tool for improving the quality of digital/blended learning in Ukrainian universities.

Further research should focus on empirical validation of the proposed system of didactic conditions in different humanities disciplines and institutional contexts. It is particularly important to examine how these conditions function in fully online, blended, and face-to-face formats, as well as under varying levels of technological access. Another promising direction is the study of the impact

of AI-integrated assessment models on academic integrity and the quality of student learning outcomes. Longitudinal studies could also explore how the implementation of these conditions influences the development of students' digital and academic competencies over time.

Use of artificial intelligence tools.

Artificial intelligence tools were used only for language refinement and stylistic improvement of the manuscript. No AI tools were used for data analysis, interpretation of results, or generation of the core scientific content. All conceptualization, methodological design, and conclusions were developed by the author.

References

- Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32. <https://doi.org/10.1080/1364557032000119616>
- Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher Education*, 32(3), 347–364. <https://doi.org/10.1007/BF00138871>
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27–40. <https://doi.org/10.3316/QRJ0902027>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE.
- European Commission. (2020). *Digital Education Action Plan 2021–2027: Resetting education and training for the digital age* (COM/2020/624 final). EUR-Lex.
- Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2–3), 87–105. [https://doi.org/10.1016/S1096-7516\(00\)00016-6](https://doi.org/10.1016/S1096-7516(00)00016-6)
- Georgopoulou, M. S., Troussas, C., Triperina, E., & Sgouropoulou, C. (2025). Approaches to digital humanities pedagogy: A systematic literature review within educational practice. *Digital Scholarship in the Humanities*, 40(1), 121–137. <https://doi.org/10.1093/llc/fqae054>
- Holmes, W., Mouta, A., Hillman, V., Schiff, D., Laak, K. J., Atenas, J., Bardone, E., Lohead, K., Gonsales, P., Havemann, L., Seon, J., Go, B., Schreurs, B., Zhgenti, S., Lee, K., Bali, M., Bialik, M., Medina-Gual, L., Knight, S., & Yeo, B. (2025). Critical studies of artificial intelligence and education: Putting a stake in the ground (SSRN Scholarly Paper No. 5391793). *Social Science Research Network*. <https://doi.org/10.2139/ssrn.5391793>
- Kharchenko, A., Nalyvaiko, O., Kreydun, N., Sheiko, A., Ptushka, A., Khatuntseva, S., & Zotova, L. (2024). Digital technologies as a factor of transformation of learning in university education. *Revista Romaneasca Pentru Educatie Multidimensionala*, 16(4), 97–126. <https://doi.org/10.18662/rrem/16.4/909>
- Krippendorff, K. (2018). *Content analysis: An introduction to its methodology* (4th ed.). SAGE Publications. <https://doi.org/10.4135/9781071878781>
- Londar, L., & Pietsch, M. (2023). Providing distance education during the war: The experience of Ukraine. *Information Technologies and Learning Tools*, 98(6), 31–51. <https://doi.org/10.33407/itlt.v98i6.5454>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). SAGE.
- Ministry of Education and Science of Ukraine, & Ministry of Digital Transformation of Ukraine. (2025, April 24). *Recommendations on responsible implementation and use of artificial intelligence technologies in higher education institutions*. <https://lib.iitta.gov.ua/id/eprint/745301/1/shi-v-zakladakh-vyshchoi-osvity-24-04-2025.pdf>. [in Ukrainian]

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>

Must, Ü., & Shapoval, S. (2024). *E-learning practices of Ukrainian universities in wartime*. Education and Youth Board (Harno).

Nalyvaiko, O. O. (2023). Perspektyvy vykorystannia neironnykh merezh u vyshchii osviti Ukrainy [Prospects of using neural networks in higher education of Ukraine]. *Information Technologies and Learning Tools*, 97(5), 1–17. <https://doi.org/10.33407/itlt.v97i5.5322> (ukr)

Nalyvaiko, O. O., Prokopenko, A. I., Kabus, N. D., Khatuntseva, S. N., Zhukova, O. A., & Nalyvaiko, N. A. (2022). Proiektno-tsyfrova diialnist yak zasib formuvannia tsyfrovoi kompetentnosti studentiv humanitarnykh spetsialnostei [Project-digital activity as a means of forming digital competence of humanities specialties' students]. *Information Technologies and Learning Tools*, 87(1), 218–235. <https://doi.org/10.33407/itlt.v87i1.4748> (ukr)

OECD. (2023). *OECD digital education outlook 2023: Towards an effective digital education ecosystem*. OECD Publishing. <https://doi.org/10.1787/c74f03de-en>

Opaliuk, T. L. (2018). Taksonomichna yednist dydaktychnykh umov formuvannia sotsialnoi refleksii maibutnoho vchytelia v protsesi vyvchennia humanitarnykh dystsyplin [Taxonomic unity of didactical conditions for the formation of social reflection of a future teacher in the process of studying humanitarian disciplines]. *Ukrainian Educational Journal*, 3, 118–125. <https://doi.org/10.32405/2411-1317-2018-3-118-125> (ukr)

Peters, M. D. J., Marnie, C., Tricco, A. C., Pollock, D., Munn, Z., Alexander, L., McInerney, P., Godfrey, C. M., & Khalil, H. (2020). Updated methodological guidance for the conduct of scoping reviews. *JBI Evidence Synthesis*, 18(10), 2119–2126. <https://doi.org/10.11124/JBIES-20-00167>

Skvortsova, S., Symonenko, T., Britskan, T., Onopriienko, O., & Romanyshyn, R. (2024). Shtuchnyi intelekt u profesiinii diialnosti vykladacha universytetu v Ukraini: realii ta perspektyvy [Artificial intelligence in professional activities of a university lecturer in Ukraine: realities and prospects]. In *Proceedings of the Second International Workshop on Artificial Intelligence Systems in Education co-located with 23rd International Conference of the Italian Association for Artificial Intelligence (AIxIA 2024)*. *CEUR Workshop Proceedings*. https://ceur-ws.org/Vol-3879/AIxEDU2024_paper_14.pdf (ukr) Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garrity, C., ... Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467–473. <https://doi.org/10.7326/M18-0850>

UNESCO. (2023a). *Global education monitoring report 2023: Technology in education: A tool on whose terms?* UNESCO.

UNESCO. (2023b). *Guidance for generative AI in education and research*. UNESCO. <https://cdn.table.media/assets/wp-content/uploads/2023/09/386693eng.pdf>

Vuorikari, R., Kluzer, S., & Punie, Y. (2022). *DigComp 2.2: The digital competence framework for citizens—With new examples of knowledge, skills and attitudes* (EUR 31006 EN). Publications Office of the European Union. <https://doi.org/10.2760/115376>

Дидактичні умови ефективного використання цифрових технологій у навчанні студентів гуманітарних спеціальностей

Михайло ЗУЄВ,

<https://orcid.org/0009-0001-2227-4067>,

аспірант кафедри педагогіки Харківського національного університету імені В.Н. Каразіна, майдан Свободи 4, Харків, Україна, 61022, mykhailo.zuiev@karazin.ua

Анотація. У статті обґрунтовано дидактичні умови ефективного застосування цифрових технологій у підготовці студентів гуманітарних спеціальностей в українському університеті. Актуальність дослідження зумовлена інституційним переходом до змішаних і дистанційних форматів, нерівномірністю доступу до ресурсів та потребою забезпечення якості й академічної доброчесності в цифровому середовищі, зокрема в умовах воєнних ризиків. Метою є науково-методичне обґрунтування системи дидактичних умов, які перетворюють використання цифрових засобів із технічної підтримки курсу на педагогічно керований інструмент розвитку гуманітарних результатів навчання (критичне читання, аргументація, академічне письмо, робота з джерелами та даними). Методологія має теоретико-методичний характер і включає документний аналіз нормативно-контекстних матеріалів, скопінг-огляд наукових публікацій, якісний контент-аналіз і педагогічне моделювання з подальшою операціоналізацією результатів у вигляді методичної матриці. Отримано п'ять взаємопов'язаних дидактичних умов: (1) конструктивне узгодження результатів навчання, навчальної діяльності та оцінювання; (2) діяльнісно-сценарне проєктування активностей у цифровому середовищі із поетапною підтримкою; (3) організаційно-інфраструктурна стійкість і доступність (мінімально достатній набір інструментів, асинхронні альтернативи, чітка структура курсу); (4) формувальне оцінювання, зворотний зв'язок і академічна доброчесність, включно з правилами відповідального використання AI; (5) цифрова педагогічна компетентність викладача та системна підтримка студентів. Практична значущість полягає у запропонованій матриці «умова – індикатори – цифрово-методичні рішення – очікувані результати – докази/оцінювання», що може бути використана для проєктування дисциплін гуманітарного циклу, розроблення завдань і рубрик, організації зворотного зв'язку та підвищення стійкості навчання в українському контексті.

Ключові слова: гуманітарні спеціальності; дидактичні умови; змішане навчання; цифрова компетентність; цифрові технології; формувальне оцінювання; штучний інтелект.

Стаття надійшла до редакції: 28.02.2026.

Прийнято до друку: 18.06.2026.

Опубліковано: 30.06.2026.