ПЕДАГОГІКА

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ETHICAL ISSUES AND RISKS OF FORMING A DIGITAL UNIVERSITY

The digital transformation of university education is one of the key trends in the modern educational space, opening up new opportunities to improve the quality of the learning process, expand access to education, and develop the digital competencies of students and teachers. At the same time, the process of digitalization is accompanied by a number of ethical challenges related to threats to academic autonomy, digital inequality, personal data protection, risks of losing traditional university values, and changes in the role of a teacher in the learning process. These aspects require detailed analysis and development of effective mechanisms for regulating. The aim of the research is to analyze the ethical risks that accompany the process of digital transformation of the university and to identify possible ways to minimize them in the context of digitalization of higher education. To achieve this aim, the methods of systematic and comparative analysis were used, which allowed us to identify the main ethical challenges of the digital university. Theoretical analysis of the literature helped to identify key issues of digital education, including academic integrity, digital communication, the impact of digital technologies on the quality of education, and the ethics of using artificial intelligence in the learning process. The methods of descriptive analysis are also used to summarize the features of the impact of digital technologies on the university educational environment. The results of the research show that the digital university, being an innovative model of educational space, requires a balanced approach to the implementation of digital technologies. Particular attention should be paid to the protection of personal data, ensuring the academic freedom of teachers and students, and the ethical use of artificial intelligence in the educational process. To minimize ethical risks, it is proposed to implement specialized training courses in digital ethics, strengthen mechanisms for regulating the use of digital technologies in the learning process, and develop ethical codes for the digital university.

Key words: digitalization, digital university, digital ethics, artificial intelligence, digitalization of education, digital etiquette, personal data protection.

Introduction and the current state of the research problem. Digital transformation of university education is an important condition for its development and adaptation to the requirements of the digital society and economy. The concept of a "digital university" is considered by modern science as an innovative model of a higher education institution that ensures the creation of a single digital educational environment aimed at implementing the principles of accessibility, continuity, and inclusiveness of education. At the same time, the digitalization of the university, in addition to its obvious advantages, causes numerous ethical risks that require separate reflection and systematic analysis.

Modern researchers, in particular A. Kozhyna and S.M. Yahodzynskyi, note that the key factors in the emergence of digital universities are the active spread of digital tools and artificial intelligence, which significantly change educational processes, creating new opportunities and at the same time generating new challenges, primarily of an ethical nature (Kozhyna, 2025; Ягодзинський, 2015). However, B. Williamson emphasizes that excessive dependence on digital technologies can lead to the loss of traditional university values, such as academic freedom, humanistic orientation of education, and lively dialogue between teachers and students (Williamson et al., 2020).

Thus, despite the numerous advantages of digitalization, this trend requires careful study from the standpoint of its ethical implications, which determines the relevance and scientific novelty of this research.

Aim and tasks. The aim of the research is to analyze the ethical risks related to the formation of a digital university model and to identify ways to minimize them in the context of digitalization of higher education.

The main tasks of the research are as follows:

 highlighting the ethical issues of digital modernization of the university educational process;

 identification of risks caused by the digital transformation of university management processes;

- determining ways to minimize ethical risks in the activities of teachers in the digital educational environment.

Research methods. The article uses the methods of systematic and comparative analysis to identify the essence and features of ethical issues that accompany the digitalization of universities. The theoretical method of comparative analysis was applied, which consisted in comparing the results obtained with the data of Ukrainian and foreign researches, allowing to determine the specifics of ethical challenges in the digital university.

Moreover, to analyze the theoretical aspects of the education digitalization, the descriptive method was used, which allowed to summarize and detail the features of the impact of digital technologies on the university educational environment, as well as the method of a systematic analysis, which allowed to identify and describe the main ethical risks that arise in the process of higher education digitalization.

The organization of research included an analysis of the modern scientific literature, as well as a generalization of empirical data presented in previous publications. The qualitative characteristics of the research are represented by the analysis of scientific views of the authors who dealt with the issues of education digitalization and its ethical aspects.

Research results. Digital transformation of the educational environment of universities involves the creation of a qualitatively new model of a higher education institution that will meet the needs of modern society and the digital economy. The concept of a "digital university" is considered as an innovative model of a higher education institution aimed at forming a single digital educational environment that provides "accessible and continuous education" and enables users to interact freely within the digital environment, implementing the principle of continuous and inclusive learning (Leiva et al., 2022; Komninos et al., 2023).

Formation of a digital university, on the one hand, is a prerequisite for the sustainable development of a higher education institution, which allows it to adapt to the conditions of a digital society. However, on the other hand, the widespread use of digital technologies and artificial intelligence tools in the learning process carries significant ethical risks and challenges. A number of moral and ethical dilemmas arise, including the problems of personal data protection, digital inequality among students and teachers, the risks of losing academic autonomy by teachers due to excessive standardization of digital technologies, and the ethical use of artificial intelligence in learning processes and research.

The modern scientific literature emphasizes the relevance of the phenomenon of a "digital university" in the context of society's transition to a new digital stage of development, which causes a profound transformation of all spheres of life, including the higher education system (Soroko et al., 2018). Scientists note that the emergence and intensification of the development of digital universities are caused by several factors. First, the need to implement digital tools in higher education to modernize the educational process (Sklyarenko et al., 2024). Second, a significant increase in the role of digital technologies in education has become especially relevant in the context of hybridization of education, which has significantly changed approaches to the educational process (Bobro, 2024). In addition, modern universities are increasingly declaring their identity as "digital" in an effort to meet the demands of the global digital education market.

Thus, the digital university can be defined as an institution focused on the creation and development of integrated digital services in the field of science and higher education, covering all processes of university activity aimed at meeting the needs of participants in the educational process. At the same time, it provides a full digital cycle of creation, processing, storage, search, and dissemination of educational and scientific information (Dushchenko, 2024).

These definitions reveal a digital university as an innovative model of a higher education institution focused on creating a single digital educational environment that will ensure high quality and accessibility of higher education through digital modernization of the learning process, business processes, and IT infrastructure.

It should be noted that some researches interpret a digital university as a digital analog of a traditional university (Khomenko et al., 2024; Verina, Titko, 2019). However, while human resources are the central element of a traditional university, digital technologies and artificial intelligence play a key role in a digital university, creating new opportunities for organizing the learning process, managing an educational institution, and allowing for the transformation of the real educational environment into a digital one.

A typical model of a digital university includes the following elements:

- a management system based on the analysis of digital data;

 a set of digital educational resources and massive open online courses hosted on international digital educational platforms;

 the possibility of flexible adaptation of standard educational and scientific programs according to individual student requests and the needs of research in the real sector of economy;

- ensuring the competencies of students and teachers necessary to work in the digital economy: the ability to operate with information, work in the digital environment, protect intellectual property rights in the context of digitalization of education and science.

In this regard, the following undeniable advantages of a digital university over a traditional one can be identified:

 the possibility of continuous learning regardless of space-time constraints according to individual needs and characteristics of a student;

- the potential of digital technologies and artificial intelligence (interactivity, visualization, adaptive platforms, gamification, individualization, etc.), which makes the educational process more effective and helps to develop digital competencies necessary for future professionals to successfully perform their professional duties in a digital society;

- the flexibility and mobility of administrative and management activity of the university, achieved through

the automation and robotization of the educational process of the higher education institution;

- the absence of barriers to cooperation and interaction between educational organizations, institutions, government agencies, representatives of science and education through the use of various elements of IT infrastructure (digital platforms, online services, etc.), which stimulates innovation, exchange of knowledge and experience, promoting the development of education and research.

As we can see, the purpose of forming a digital university model is to provide for a comprehensive transformation of the educational environment aimed at improving the quality of the learning process through the integration of all its components into a single digital information system. The digitalization of university education leads to a revision of traditional managerial, didactic, and scientific approaches, which in turn causes significant changes in the system of values and normative guidelines of the institution. The transition from distance learning to the integrated use of artificial intelligence and digital technologies creates new models of interaction between participants in the educational process, affects the role statuses of teachers and students, transforms the goals of university activity, and lays the foundation for a new digital academic culture.

Thus, the process of forming a new university model reveals a number of ethical issues and related risks, among which the following areas can be distinguished:

1. The digital modernization of the educational process contributes to its flexibility, accessibility, and efficiency, but is accompanied by a number of ethical challenges. Excessive accessibility of information can lead to knowledge depreciation, and the implementation of digital technologies can lead to a shift in the role of a teacher, their gradual replacement by algorithmic educational platforms, and a decrease in the level of live communication between a teacher and a student. The problems of digital etiquette are manifested in the complexity of regulating communication processes in synchronous and asynchronous modes, which can lead to violations of academic norms of interaction. In addition, the boundaries between personal and professional space are blurred due to the constant integration of digital technologies into learning and work processes. The impact of digitalization on the fulfillment of a teacher's professional duty needs to be analyzed from the point of view of moral responsibility, in particular in the context of balancing the quality of education with the requirements for scientometric indicators.

2. Also, one of the key risks of the digitalization of the educational process, scientists note a decrease in its effectiveness and an increase in the distance between participants (Καρππιοκ, 2019). This can lead to a decline in the quality of education and negatively affect the future professional activities of students. Transformation of knowledge into information flows causes its fragmentation and depreciation. The status of a teacher as a carrier of expert knowledge is being devalued, which in turn undermines the prestige of the profession in higher education insti-

tutions. There is a growing risk of a decline in the culture of communication and behavior, accompanied by a devaluation of moral values, including the principles of mutual respect, empathy, truthfulness, and justice. There are trends towards deformation of personal identity, which is expressed in the reduction of the individual to a "digital subject", resulting in the erosion of traditional moral norms and social foundations.

3. Digitalization of management processes at the university creates new ethical dilemmas. The use of artificial intelligence and automated control systems deprives scientific and educational activity of human-centrism. Intelligent technologies that lack reflection, moral consciousness, and autonomous ethical assessment cannot fully replace live interaction between teachers and students. This threatens to destroy the academic community and raises the problem of the reliability and objectivity of assessing independently acquired knowledge by students. Also, automated education management mechanisms can limit the academic freedom of a teacher and the autonomy of a university, reducing its mission to achieving digital maturity and pragmatic learning (Lopuschnyak et al., 2021). In this case, the university ceases to be a space for cooperation between professor and student in the context of knowledge development, which contradicts traditional ideas about university education.

4. Among the fundamental risks of the university digital transformation is the destruction of the system of traditional ethical values and principles that define its mission and functions. There is a dehumanization of education and its instrumentalization, which leads to a decrease in the quality of interaction between participants in the educational process, loss of critical thinking and analytical skills among students, decreased motivation of teachers, inhibition of creativity and innovation in learning activities. The conditions of the digital environment can restrict the rights and freedoms of a person as a subject of the educational process, which jeopardizes academic autonomy and openness of education. Ultimately, the university digitalization blurs its image as a social institution aimed at the harmonious development of the individual, the formation of culture and moral qualities necessary not only for professional development but also for the development of society as a whole.

5. Digital modernization of the university's IT infrastructure actualizes the issues of privacy and security of personal data. As the preservation of individual freedom in the digital environment is directly related to the personal data protection, questions arise about the limits of ethical collection, storage, and use of information about students and teachers. The university's digital infrastructure should ensure equal access to education regardless of social status, geographic location, and financial possibilities, but the lack of quality digital services and qualified IT professionals can be a barrier to the implementation of inclusive educational technologies. In addition, the absence of a reliable backup and preservation policy for digital content jeopardizes the continuity of the learning process. Other key risks in this sphere include breaches of personal data confidentiality, misuse of personal information, a growing digital divide between students, and unequal access to educational resources. Some researchers suggest that under such conditions, it is possible that the university may be "erased" from the digital space as a result of cyberattacks, technical failures, or IT infrastructure failure, which could cause significant damage to its reputation, financial losses, social isolation, and disrupt learning and research processes (Kubiv et al., 2024; Bobro, 2024).

These risks show that the university digital transformation is accompanied not only by technological challenges but also requires careful analysis from the perspective of ethical aspects and humanistic guidelines of educational activity. In this context, it is of particular importance to understand the role of a teacher who becomes a central figure in the implementation of digital innovations in the learning process and whose effectiveness determines the success of students' adaptation to the new conditions of digital education.

Thus, the digital transformation of teaching activity based on the use of digital technologies plays a key role in improving the personal and professional qualities of a teacher, developing the university's educational environment and, as a result, contributes to the overall progress of digital education. However, the process of digital modernization of pedagogical practices is accompanied by a number of difficulties and ethical dilemmas that can have ambiguous consequences for both the teacher and the higher education system as a whole.

One of the most important aspects is the changing role of the teacher as a carrier and translator of knowledge. In the digital educational environment, the teacher loses the ability to directly contact students (with the exception of hybrid learning formats), which leads to the transformation of the knowledge transfer process into a simple reproduction of text or multimedia information. The traditional university discourse, in which learning involved a joint search for truth, the development of critical thinking, and interpersonal interaction, is disappearing. As a result, knowledge is increasingly being replaced by digital content, which can negatively affect the overall quality of education and change its cultural and ethical foundations.

Moreover, digitalization changes the functional role of the teacher, making them not only a pedagogue but also an active moderator of the digital learning environment. In modern conditions, they perform the following roles:

- tutor helps students to differentiate information, analyze digital sources, and transform them into knowledge;

 coach provides support and motivation to students in the process of digital learning;

 verifier monitors attendance and assesses student performance on online platforms and in hybrid learning environments;

 facilitator promotes personal and professional development of students through effective communication and the formation of their independence, initiative, and teamwork skills;

- developer of educational content creates conditions for the effective assimilation of knowledge, skills, and abilities through digital technologies [1; 8].

The transition to such multifunctional roles requires teachers not only to master digital competencies but also to rethink their professional identity. This raises a number of ethical issues, including the need to balance traditional university values with the demands of digital education. The main ethical challenges include:

1. Maintaining professional authority and status of a teacher in the context of digital transformation.

2. Adaptation of methods and forms of teaching that correspond to the new roles of the pedagogue without losing the quality of education and ensuring the formation of a holistic personality of a student.

3. Performing professional duties in the digital environment in compliance with the principles of moral responsibility, in particular when assessing and monitoring the level of students' knowledge.

4. Maintaining the boundaries between the digital educational space and the student's private sphere.

5. Ensuring the confidentiality of students' digital footprints, responsible use of their personal data, and the use of secure learning platforms.

The digital transformation of the teacher also actualizes the issue of digital etiquette and culture of behavior in the virtual learning environment. This applies to both the general rules of communication during online classes (requirements for appearance, organization of workspace, use of video communication) and the specifics of communication in digital environments (e-mail, chats, messengers), where there is a need to regulate the style and form of messages, the use of symbols, punctuation, and other non-verbal elements of digital communication. In addition, in the process of creating educational content and organizing distance assessment (proctoring), the issue of correct use of digital media and academic integrity arises.

The identified ethical issues of the teaching digital transformation are accompanied by a number of risks that affect both the quality of education and the role of the teacher in a digital university. In particular:

- Decline in the quality of education due to the restriction of live communication between the teacher and students and the use of digital technologies that change the classical model of education, turning the teacher into a tutor or curator of the digital educational process.

– Reduction of teaching staff at universities, decrease in the prestige and social status of the profession of university teacher due to the gradual replacement of their functions by digital technologies (artificial intelligence, online courses, automated learning systems). According to forecasts, the profession of a lecturer may lose its relevance, and its representatives will remain in demand only if they have unique knowledge or high communication skills.

- Degradation of traditional university values that define teaching as a process not only of knowledge

transfer but also of developing students' creative potential, their intellectual and moral growth, and the teacher's selfrealization.

- Loss of the educational component in the digital learning process, which causes a decrease in moral standards in communication, loss of empathy, respect, responsibility, and integrity, which in turn can lead to dehumanization of both the educational environment and society as a whole.

- Reputational risks related to the presentation of a teacher in the digital space, including the dissemination of low-quality educational content, inconsistency with their professional image, as well as the possibility of unintentional dissemination of false information that may damage the reputation of individuals or the university as a whole.

Therefore, the digital transformation of university education, on the one hand, contributes to increasing its accessibility, efficiency, and adaptability to the challenges of modern society, and on the other hand, it creates a number of ethical risks related to the preservation of academic autonomy, digital inequality, data privacy, and the changing role of the teacher. Of particular importance is the question of balance between the use of digital technologies and the preservation of traditional university values, which requires deep scientific understanding.

Discussion. The conducted research has shown that the university digital transformation, despite its potential benefits, is accompanied by numerous ethical risks. The results confirm the conclusions of previous studies by L.A. Leiva et al. which emphasize that the implementation of digital technologies and artificial intelligence can significantly change the role of the teacher and student, affecting the quality of learning and academic autonomy [4]. Our research also confirms the conclusions of S. Yahodzynskyi and B. Williamson that excessive dependence on digital resources can lead to the devaluation of knowledge, dehumanization of the educational process, and threaten traditional moral and academic values [2; 3].

At the same time, the results obtained are scientifically new in terms of a comprehensive analysis of ethical risks, in particular with regard to digital inequality, personal data protection, and the ethics of digital communication. A comparative analysis with the researches of Ukrainian and foreign authors, such as L.A. Leiva, B. Williamson, S. Yahodzynskyi, shows that modern universities should implement not only technical means of digitalization but also develop special strategies aimed at ethical regulation of the use of digital tools.

Therefore, to overcome the identified ethical risks, it is necessary to develop and integrate specialized training courses, such as "Ethics of artificial intelligence" or "Digital etiquette in higher education", which will help to ensure a balance between technological innovation and academic standards. This approach will preserve the quality of the educational process and create conditions for sustainable development of universities in the era of digitalization. **Conclusions.** The obtained research results confirm that the university digitalization is a prerequisite for improving the quality, accessibility, and adaptability of education. At the same time, this process is accompanied by numerous ethical risks related to the dehumanization of education, the diminished role of the teacher, the violation of personal data confidentiality, and digital inequality.

To minimize these risks, it is necessary to implement systemic measures, among which the development of ethical codes for the digital university, the creation of courses on digital ethics, and regular improvement of teachers' digital competencies are of particular importance. Further research should focus on the development of mechanisms for ethical regulation of universities in the context of increasing digitalization.

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ЕТИЧНІ ПРОБЛЕМИ ТА РИЗИКИ ФОРМУВАННЯ ЦИФРОВОГО УНІВЕРСИТЕТУ

Цифрова трансформація університетської освіти є однією з ключових тенденцій сучасного освітнього простору, що відкриває нові можливості для підвищення якості навчального процесу, розширення доступу до освіти та розвитку цифрових компетенцій студентів і викладачів. Водночас процес цифровізації супроводжується низкою етичних викликів, пов'язаних із загрозами академічній автономії, цифровою нерівністю, захистом персональних даних, ризиками втрати традиційних університетських цінностей і зміною ролі викладача в навчальному процесі. Ці аспекти потребують детального аналізу та розробки ефективних механізмів регулювання. Метою дослідження є аналіз етичних ризиків, які супроводжують процес цифрової трансформації університету, і визначення можливих шляхів їх мінімізації в умовах цифровізації вищої освіти. Для досягнення поставленої мети використано методи системного та порівняльного аналізу, що дало змогу виокремити основні етичні виклики цифрового університету. Теоретичний аналіз літератури допоміг визначити ключові проблеми цифрової освіти, зокрема питання академічної доброчесності, цифрової комунікації, впливу цифрових технологій на якість освіти й етики використання штучного інтелекту в навчальному процесі. Також застосовано методи описового аналізу для узагальнення особливостей впливу цифрових технологій на університетське освітнє середовище. Результати дослідження засвідчують, що цифровий університет, будучи інноваційною моделлю освітнього простору, потребує збалансованого підходу до впровадження цифрових технологій. Особливу увагу слід приділити питанням захисту персональних даних, забезпеченню академічної свободи викладачів і студентів, етичному використанню штучного інтелекту в освітньому процесі. Для мінімізації етичних ризиків запропоновано впровадження спеціалізованих навчальних курсів із цифрової етики, посилення механізмів регулювання використання цифрових технологій у навчальному процесі та розробку етичних кодексів цифрового університету.

Ключові слова: діджиталізація, цифровий університет, цифрова етика, штучний інтелект, цифровізація освіти, цифровий етикет, захист персональних даних.

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