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INNOWACYJNE PODEJŚCIA EDUKACYJNE W OBLICZU GLOBALNYCH WYZWAŃ: DOŚWIADCZENIA UKRAINY

Iryna Pokhylenko

*kandydat nauk prawnych, docent, docent Wydziału Nauk Politycznych i Prawa
Kijowski Narodowy Uniwersytet Budownictwa Lądowego i Architektury (Kijów, Ukraina)
ORCID ID: 0000-0001-5409-7408
pokhilenko_i@ukr.net*

Mykhailo Akimov

*kandydat nauk prawnych, docent, docent Katedry Prawa Karnego
Narodowej Akademii Spraw Wewnętrznych (Kijów, Ukraina)
ORCID ID: 0000-0001-7715-0259
mykhailo.akimov@gmail.com*

Adnotacja. Artykuł poświęcony jest wszechstronnej analizie innowacyjnych podejść do organizacji procesu edukacyjnego w obliczu globalnych wyzwań, w szczególności pandemii COVID-19 i stanu wojennego na Ukrainie. Autorzy analizują najważniejsze trendy w edukacji, w tym powszechne stosowanie technologii cyfrowych, kształcenie na odległość i zmieniające się paradygmaty nauczania. Szczególną uwagę zwrócono na potrzebę reform edukacyjnych; Kluczowym elementem dostosowania procesu kształcenia do wymogów współczesnego rynku pracy i wyzwań społecznych jest podejście do nauczania oparte na kompetencjach oraz wyposażenie absolwentów w wiedzę i umiejętności niezbędne do powojennej odbudowy Ukrainy.

Słowa kluczowe: reformy edukacji, technologie cyfrowe, kształcenie na odległość, podejścia innowacyjne, sztuczna inteligencja, pandemia COVID-19, stan wojenny, adaptacja edukacji.

INNOVATIONAL EDUCATIONAL APPROACHES IN THE CONDITIONS OF GLOBAL CHALLENGES: EXPERIENCE OF UKRAINE

Iryna Pokhylenko

*PhD, Associate Professor,
Associate Professor of the Political Sciences and Law Department
Kyiv National University of Construction and Architecture (Kyiv, Ukraine)
ORCID ID: 0000-0001-5409-7408
pokhilenko_i@ukr.net*

Mykhailo Akimov

*PhD, Associate Professor,
Associate Professor of the Criminal Law Department
National Academy of Internal Affairs (Kyiv, Ukraine)
ORCID ID 0000-0001-7715-0259
mykhailo.akimov@gmail.com*

Abstract. This article is concerned on a comprehensive analysis of innovative approaches to the educational process organization under global challenges, particularly the COVID-19 pandemic and the martial law in Ukraine. The authors examine key trends in education, including the widespread implementation of digital technologies, distance learning and shifts in teaching paradigms. Special attention has been given to the need for educational reforms; a competency-based learning approach has been identified as a crucial element in adapting the educational process to the current demands of the labor market and societal challenges as well as equipping graduates with knowledge and skills necessary for Ukrainian post-war recovery.

Key words: educational reforms, digital technologies, distance learning, innovative approaches, artificial intelligence, COVID-19 pandemic, martial law, education adaptation.

ІННОВАЦІЙНІ ОСВІТНІ ПІДХОДИ В УМОВАХ ГЛОБАЛЬНИХ ВИКЛИКІВ: ДОСВІД УКРАЇНИ

Ірина Похиленко

*кандидат юридичних наук, доцент, доцент кафедри політичних наук і права
Київського національного університету будівництва і архітектури (Київ, Україна)*

ORCID ID: 0000-0001-5409-7408

pokhilenko_i@ukr.net

Михайло Акімов

*кандидат юридичних наук, доцент, доцент кафедри кримінального права
Національної академії внутрішніх справ (Київ, Україна)*

ORCID ID: 0000-0001-7715-0259

mykhailo.akimov@gmail.com

Анотація. Стаття присвячена комплексному аналізу інноваційних підходів до організації освітнього процесу в умовах глобальних викликів, зокрема пандемії COVID-19 та воєнного стану в Україні. Автори розглядають ключові тенденції в освіті, зокрема широке впровадження цифрових технологій, дистанційного навчання та зміну парадигм викладання. Особливу увагу приділено необхідності проведення освітніх реформ; вирішальним елементом адаптації освітнього процесу до сучасних вимог ринку праці та суспільних викликів визначено компетентнісний підхід до навчання і надання випускникам знань та навичок, необхідних для післявоєнного відновлення України.

Ключові слова: освітні реформи, цифрові технології, дистанційне навчання, інноваційні підходи, штучний інтелект, пандемія COVID-19, воєнний стан, адаптація освіти.

Introduction. The contemporary development of education occurs against the backdrop of rapid global transformations driven by both technological advancements and emerging socio-economic challenges.

In many countries, these processes have accelerated changes in educational systems, but in Ukraine the education sector faces additional difficulties caused by martial law. The aggression against Ukraine not only threatens the stability of the educational process but also requires urgent decisions to ensure the continuity of learning in the present circumstances.

One of the key trends in education development is the active implementation and use of digital technologies. The widespread adoption of distance learning, which began during the COVID-19 pandemic, has become a critical tool for ensuring the educational process in wartime. Online platforms, mobile learning applications and interactive resources have enabled educational institutions to continue operating even during evacuations and the displacement of participants of the educational process.

However, new challenges have arisen related to ensuring equal access to digital education. Inclusive education deserves special attention as it has gained new significance under martial law. The need to ensure access to education for people with special educational needs as well as for internally displaced persons and those who have left Ukraine necessitates a reconsideration of approaches to organizing the educational process and integrating these individuals into the educational environment.

Despite the difficulties the Ukrainian government continues to implement reforms in the education sector. These reforms aim to improve the quality of education, prepare pedagogical staff for the new realities and introduce a competency-based approach. These changes are particularly important when the educational system is to be adapted to new challenges related to the war and the need for post-conflict reconstruction.

The aim of the research is to analyze the key trends that define the development of modern education.

1. Technological innovations. Studying the impact of digital educational platforms, artificial intelligence and virtual reality on the educational process. These innovations contribute to the personalization of learning, the development of students' independence and their increased engagement in the learning process.

2. Changing the learning paradigm. Examining the shift from traditional methods to new approaches, such as blended learning, which combines remote and in-person formats. This promotes flexibility and adaptation of the learning process to the needs of students.

3. Globalization Processes. Assessing the impact of global transformations, such as the COVID-19 pandemic and military conflicts, on educational processes. Emphasis is placed on the need to create more inclusive and accessible learning through the use of new digital tools and international cooperation.

Research methodology. The authors employed a combination of various general scientific techniques and methods. These included analysis and synthesis, deduction, induction, forecasting and dialectical methods. To comprehensively analyze the topic, the system analysis and synthesis method allowed identifying the key trends in the development of education. The dialectical method was used to derive new results, enabling a transition from the known to the unknown. Thus, the study encompasses not only the transformation of previously established theoretical knowledge but also the formation of new modifications through systematic additions of new theoretical propositions.

Surveying was also used in the research (the main tool for collecting primary data conducted via Google Forms). The survey targeted all educational process participants, lead to the collection of information about their attitudes toward digital technologies in education, blended learning and the impact of globalization on education. Responses have been received regarding the use of distance learning, the implementation of innovative technologies and the evaluation of educational reforms. These data allowed the identification of key trends associated with the introduction of technological innovations and changes in the learning paradigm.

Analysis of Recent Research and Publications. Let's consider the current state of research on emerging trends in educational development. Malkani C., Pandey N. and Som S. (2022: 365–369), exploring online education systems and comparing them to traditional learning, conclude that the rapid technological developments of recent decades and the pandemic situation have taken us in a new era of academic structure. This structure integrates learning and individual needs through communication devices, now known as online education. This model has significantly impacted educational, psychological and social behaviors. However, education today requires alternative approaches, where anyone can access learning from anywhere (e-learning). Recent data on e-learning and long-term trends toward improving mental health among children have been analyzed too. It has been noted that psychological and physical issues in people who engage in online education, which they may not even be aware of, need to be prevented to avoid their consequences.

In studying distance learning, Pokhlyenko I. (2021: 269–269) notes that in the context of the quarantine digitalization of the educational process distance learning is becoming a priority within the higher education system of Ukraine. Its legal, staffing and financial support as well as the formulation and scientific justification of distance education strategies in general and for higher education in particular are critical.

Sitsylitsyn Y. and Osadchyi V. (2023: 167–180) examine the potential use of the Generative Pre-trained Transformer (GPT) model, specifically ChatGPT, in the distance learning of computer science students. After reviewing and analyzing current research, the authors discuss the relevance and need for the use of artificial intelligence and chatbots, such as ChatGPT, in higher education, particularly to enhance learning effectiveness and maintain student interest in the subject. In light of the global changes in the education system caused by the COVID-19 pandemic and ongoing aggression the authors address the potential challenges of distance learning and its impact on students. Particular attention has been given to the analysis of possible risks and challenges related to the use of ChatGPT in education, particularly ethical concerns and confidentiality.

Sullivan M., Kelly A. and McLaughlan P. (2023: 31–40) also reflect on academic integrity and the use of ChatGPT for student learning.

Alenezi A. (2023: 138–148) explored teachers' perceptions of AI-based gamification, its impact on student motivation, engagement and learning outcomes.

Akimov (2023: 24–26) examined the use of ChatGPT in improving the qualification of the personnel of the National Police of Ukraine.

An important focus is research on education in emergencies. Bajcs I., Bazdan V. and Guszak I. (2024: 2–11) studied the quality of teaching, fear of COVID-19 and student anxiety as predictors of student satisfaction and academic effort in online classes. They emphasize that online learning has been intensively used worldwide for many years, becomes particularly significant during emergencies (such as the COVID-19 pandemic, natural disasters and wars) and eventually has been considered the dominant form of instruction. In addition to the recent pandemic, the world now faces wars and the threat of their spread, making the study of the effects of fear and anxiety on human behavior highly relevant. Students have already experienced heightened depression and anxiety, which affect behavior; therefore, it is crucial to examine their impact on academic behavior in an online context during disruptions in the learning process, considering student satisfaction, academic effort and success in online education during the COVID-19 pandemic (as exemplified by 359 respondents from two universities in Croatia). The results indicated that teaching quality positively influenced student satisfaction, affecting in turn their academic efforts. Additionally, the emotional reaction to the fear of COVID-19 did not affect academic efforts or satisfaction with online classes.

Lugovy V., Kalashnikova S., Talanova Z. and Vlasova I. (2023: 611–628) researched the transformation of higher education in Ukraine. They concluded that globalization processes, sustainable development, the COVID-19 pandemic and other circumstances influence the development of higher education. Ukrainian higher education institutions are also facing challenges related to the aggression of the Russian Federation since 2014, the legal regime of martial law since February 2022 and efforts to prepare for post-war recovery.

Research Results. In studying the latest trends in educational development it is essential to understand the perceptions of learners towards these trends. To this end a survey method was employed. The responses to the survey questions allowed for an assessment of the respondents' preferences and helped incorporate their suggestions into the process of formulating proposals for improving the educational process.

The study involved providing responses to a questionnaire created using Google Forms, based on the video «The Educator for Future Generations: Trends and Reflections» (a final project by participants of the IV Winter School for Professional Development of Iryna Pokhlyenko, Associate Professor at the Department of Political Science and Law of Kyiv National University of Construction and Architecture, PhD in Law, Associate Professor, and Mykhailo Akimov, Associate Professor at the Department of Criminal Law of the National Academy of Internal Affairs, PhD in Law, Associate Professor). Respondents were asked both closed and open-ended questions. For processing open-ended questions, the content analysis method was used. Let's examine the responses to some of the questions from this survey.

The first question was phrased as follows: «To which category of participants in the educational process do you belong?» (see Fig. 1). A detailed analysis of the survey results displayed in the diagram reveals a significant percentage of scientific and pedagogical staff (40 %), indicating the active involvement of the latter in the educational process and in the survey. This may be due to the fact that academic staff is interested in the development of education, involved in its reform and improvement and often responsible for organizing and conducting surveys. An equal percentage of bachelor's degree students (40 %) among the respondents also indicates the active participation of this category in the survey. This may be explained by the fact that bachelor's degree students are the largest group in universities, especially in the early stages of their studies, and are often the target audience for many educational initiatives and surveys.

Master's degree and PhD students make up only 8 % each of the total, which may indicate their smaller number in the overall educational system compared to bachelor's students and academic staff. Similarly, the engagement of this group in surveys may be lower due to their intensive research and specialized study programs. However, it is also possible that this group is less interested in general educational surveys as their academic process is already closely tied to specialized scientific research and they are more likely to participate in other types of surveys related to their academic interests. Thus, the survey covers a broad range of participants in the educational process, reflecting the interest of various categories in participating in the survey.

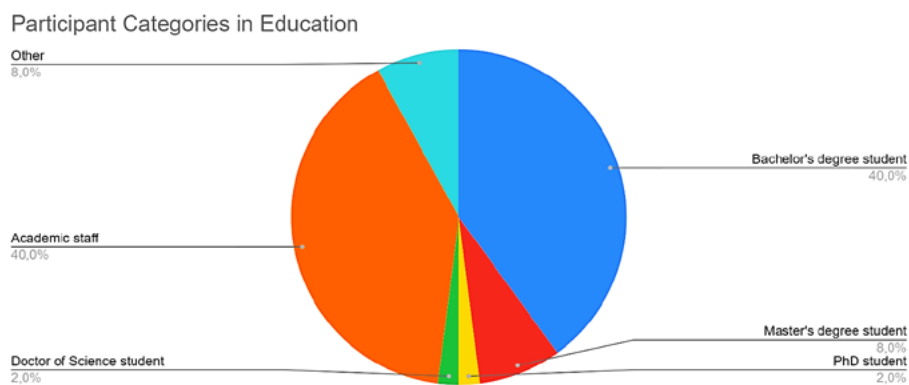


Fig. 1. Education Process Participants

Why is the issue of educational reform so important? The modern world demands new knowledge, skills and competencies from individuals. The traditional education system often fails to keep up with these changes and the emergence of programs utilizing AI has accelerated this gap. Quality education is one of the key factors influencing a country's competitiveness in the global market. Access to quality education is a fundamental principle of social justice. Education helps individuals develop as personalities, shape their worldview and foster critical thinking.

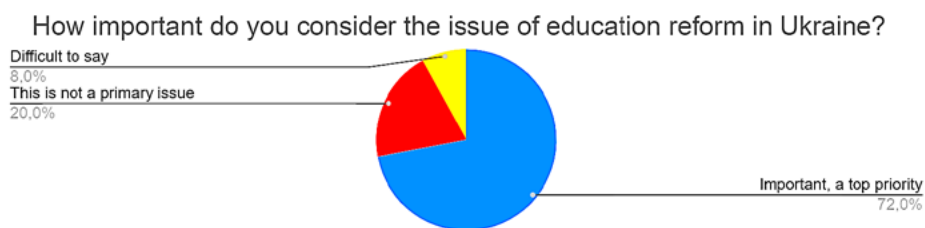


Fig. 2. Education Reform in Ukraine

What indicates the necessity of reforms? Often educational programs do not meet modern requirements and fail to prepare students for life in the real world. Low salaries and the lack of opportunities for professional growth lead to the demotivation of educators. The insufficient funding hinders the provision of proper learning conditions and updating of the material and technical base of higher education institutions. The effects of armed conflict are also evident as the enemy simply destroys buildings and facilities.

Which areas of educational reform are most relevant? It is necessary to develop new educational programs that meet contemporary requirements and promote development of critical thinking, creative abilities and collaborative skills. It is equally important to ensure systematic qualification improvement for educators so that they can use modern teaching methods and technologies and enhance foreign language proficiency. Educational institutions should be equipped not only with modern equipment and internet access but also with modern shelters prepared for prolonged stays. Granting greater autonomy to educational institutions will allow them to respond more flexibly to the needs of students.

In conclusion, it can be stated that the issue of educational reform in Ukraine is extremely relevant. The majority of Ukrainians understand: without high-quality education it is impossible to build a successful future for the country. Thus reform requires the involvement of all stakeholders – the government, the educational community, parents and students. Only through collective efforts can positive results be achieved.

The next question: «How do you assess the quality of higher education in Ukraine?» (see Fig. 3). Survey results: 76 % of respondents rate the quality of education as medium. This indicates that most respondents believe that the higher education system in Ukraine has both positive and negative aspects. Respondents may acknowledge existing educational opportunities but simultaneously recognize the organizational shortcomings, inadequate material and technical provisions or deficient teaching. Another 12 % of respondents rate education as low. This group likely believes that higher education is of bad quality (perhaps due to outdated teaching methods, absence of proper practical training or international competitiveness). Only 8 % of respondents consider the quality of education to be high, demonstrating an optimistic view of higher education in Ukraine. Possibly they have had positive learning experiences or are currently studying at institutions that provide a high level of knowledge and practical skills. Respondents who had difficulty providing an answer (4 %) may indicate uncertainty or a lack of sufficient experience to make an objective assessment of the quality of education.

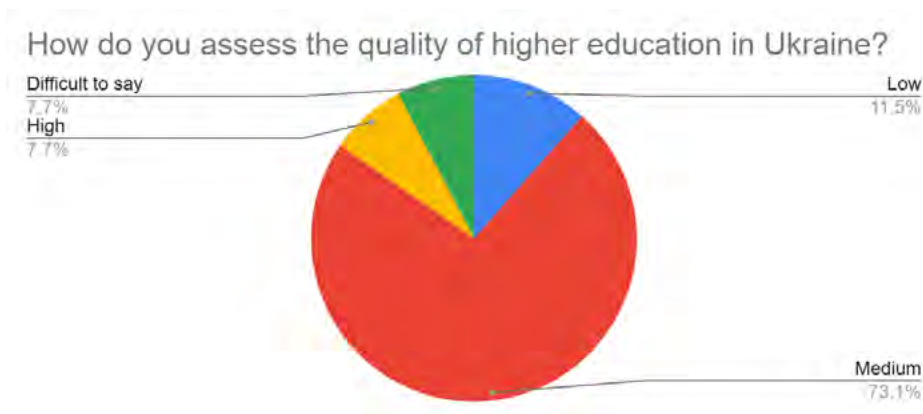


Fig. 3. Quality of Higher Education in Ukraine

So more than three-quarters of respondents confirm that higher education in Ukraine has both positive aspects and significant shortcomings which highlight the need for further improvement to enhance the education system's effectiveness and alignment with contemporary demands.

The next question: «What characteristics should define a modern educator (you may select multiple answers)?» (see Fig. 4). The survey results show that the ability to use technology in the educational process is seen as the most important characteristic – 88 % of respondents indicated this. In the modern world the integration of technology into teaching has become an integral part of the educational process, increasing the effectiveness and adaptability of education to the challenges of the digital age (Fig. 4).

The characteristics selected by respondents – such as in-depth knowledge of one's own field (72 %) and a high level of knowledge in related fields (60 %) – confirm the expectation that educators should not only have a deep understanding of their specialization but also adopt an interdisciplinary approach to teaching. This allows for a more comprehensive preparation of students for the current realities of the job market. Proficiency in foreign languages (44 %) indicates the importance of integrating international experience into the educational process. Educators with a high level of proficiency in foreign languages are able to access international scientific resources and conduct lectures or research at the global level. The mandatory involvement in international cooperation projects (programs, events) and regular participation in fundamental (applied) scientific research (44 % and 36 % respectively) reflects the respondents' belief in the importance of educators being aware of new trends in their fields and contributing to the development of science through research. Active involvement in the educational process and systematic preparation of methodological publications to support the educational process (40 %) reflects respondents' expectations that educators should play a significant role in developing not only students' professional knowledge but also their personal qualities.

Consequently there is a firm believe that a modern educator should possess technological skills, in-depth knowledge of an own field and related disciplines and actively participate in scientific research and international projects. Educators should also take active part the moral development of students and have fluent foreign language skills as an absolute must for adapting to global educational processes.

Conclusions. The analysis confirms that the development of education in Ukraine under global challenges depends on the effective integration of technological innovations, the adaptation of curricula to modern realities and the creation of an inclusive educational environment.

The results of the survey demonstrated the high significance of digital technologies in ensuring the continuity of learning and the need to address issues of accessibility and material and technical support (especially under martial law).

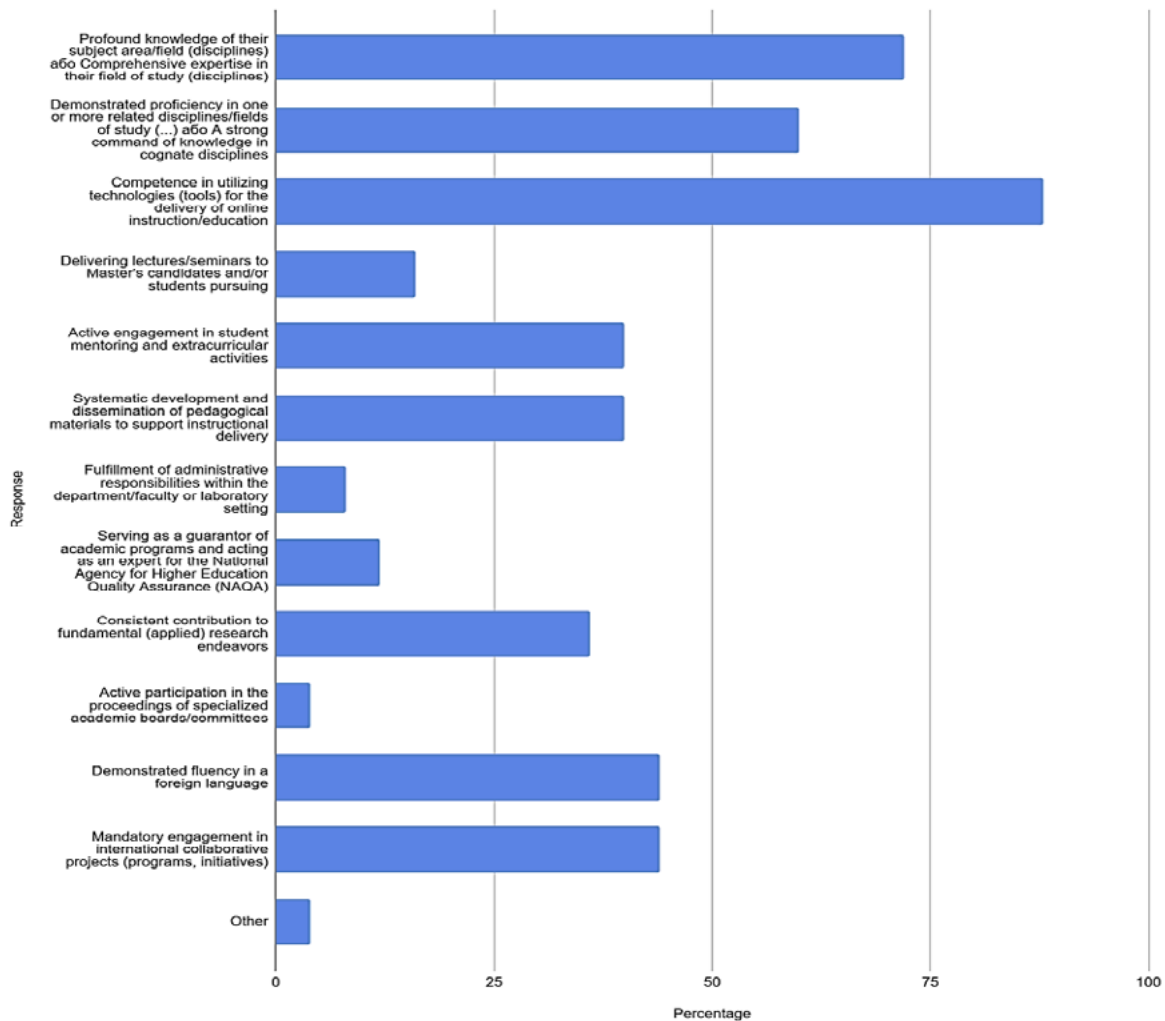


Fig. 4. Characteristics of a Modern Educator/Lecturer/Instructor/Teacher

Based on the data obtained, the authors concluded that educational reform should be based on ensuring a high level of professional training for educators, modernizing educational infrastructure and developing innovative curricula. Special attention should be given to improving the quality of distance learning and ensuring its ethical and psychological aspects.

The prospects for further research in this area include a detailed study of the impact of global transformations on educational policy, the development of supportive mechanisms for students and educators as well as the integration of artificial intelligence and other advanced technologies into the learning process. The need for a comprehensive approach to studying these aspects opens up vast opportunities for interdisciplinary research in the field of education.

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