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THE IMPACT OF DIGITAL TRANSFORMATION IN UNIVERSITIES ON GLOBAL ECONOMIC DEVELOPMENT

ВПЛИВ НА ЕКОНОМІЧНИЙ РОЗВИТОК ЦИФРОВОЇ ТРАНСФОРМАЦІЇ УНІВЕРСИТЕТІВ

Summary. The article explores how the digital transformation of universities impacts economic development. Digital technologies have become an integral part of education, changing the quality of education and economic processes. By implementing digital technologies, universities not only improve educational outcomes, but also foster the creation of new industries, jobs, and global markets integration. Special attention is given to digital platforms that ensure effective interaction among teachers, students, and administrators, optimizing resource management and productivity. The economic aspects of digitalization, such as the development of new business models and the integration of economic entities into a unified information space, are also considered. The SWOT analysis highlights both the benefits of digitalization, such as transparency and accessibility of education, and the threats, such as cybersecurity challenges and infrastructure monopolization. The article concludes that digital transformation in universities drives economic growth, encourages innovation, and enhances workforce training for the global market.

Keywords: investment, innovation, investment attractiveness units, innovative updates.

Анотація. У статті проведено дослідження впливу цифрової трансформації університетів на економічний розвиток, яке є актуальною темою у сучасному глобалізованому світі. Цифрові технології стають невід'ємною частиною освітнього процесу, змінюючи як якість навчання, так і загальний стан економічної системи. Університети відіграють ключову роль у цьому процесі, оскільки вони є важливими інституціями, що сприяють підготовці висококваліфікованих фахівців, які стають рушієм економічного зростання. Підкреслено, що університети, які впроваджують цифрові технології, сприяють не лише покращенню освітніх результатів, а й стимулюють розвиток нових інноваційних галузей економіки, створюючи нові робочі місця та сприяючи інтеграції в глобальні ринки. Особливу увагу приділено цифровим платформам, які використовуються для навчання, тестування та адміністрування навчального процесу. Ці платформи є інструментами, які забезпечують ефективну взаємодію між викладачами, студентами та адміністрацією університету, сприяючи поліпшенню управління ресурсами та підвищенню продуктивності освітніх послуг. Розглянуто економічні аспекти цифровізації освітнього процесу. Зокрема, автори звертають увагу на те, що цифрові платформи створюють нові можливості для формування інноваційних бізнес-моделей, сприяють розвитку індустрії освітніх технологій та забезпечують інтеграцію економічних суб'єктів у єдиний інформаційний простір. У статті проведено SWOT-аналіз цифрової трансформації університетів, який показує як сильні сторони цього процесу, так і загрози. Серед сильних сторін відзначено підвищення прозорості освітнього процесу, доступність навчальних матеріалів та можливість дистанційного навчання для різних категорій студентів. Серед загроз цифровізації виділено проблеми недостатньої розробленості регулюючих інструментів та кібербезпеки, а також потенційну монополізацію цифрової інфраструктури. У підсумку, зазначено, що цифрова трансформація університетів є важливим фактором економічного зростання, оскільки вона сприяє розвитку інноваційних технологій, створенню нових форм взаємодії між університетами та ринком праці, а також підвищенню рівня підготовки висококваліфікованих кадрів. Цей процес дозволяє університетам адаптуватися до сучасних викликів глобальної економіки, стимулюючи інтеграцію у міжнародний освітній простір та сприяючи розвитку цифрової економіки.

Ключові слова: цифрова трансформація, університети, економічний розвиток, цифрові платформи, інновації, освітній процес.

Problem statement. The digital transformation of universities represents a multifaceted issue that demands comprehensive analysis. The introduction of digital technologies in the educational process affects not only the quality of education but also global economic development in general. In particular, digital transformation helps to increase the innovative potential of the economy, develop new industries and generates employment opportunities. Despite its importance, there remains a significant gap in understanding the full extent of how the digital transformation of universities influences global economic growth and development.

It is worth emphasizing that universities are the central institutions that ensure the formation of highly qualified personnel, which are crucial for driving economic growth. Advancements in scientific and technological development, as well as in socioeconomic aspects, are closely tied to the level and quality of the educational process. The digitalization of universities holds the potential to substantially influence the economy by fostering innovative solutions and expediting global market integration, ultimately boosting a nation's competitiveness. Consequently, it is essential to thoroughly examine how the digital transformation of higher education institutions impacts global economic dynamics in order to uncover the mechanisms through which modernizing the educational environment can stimulate international economic growth.

Analysis of recent research and publications. The issues of digital transformation of universities and its impact on global economic development have attracted the attention of many researchers. This process is crucial for enhancing the efficiency of educational systems and fostering economic growth through the integration of innovative technologies.

For example, scholars Y.O. Kolodinska, O.V. Skliarenko and O.Y. Nikolaiivskyi focus on the practical application of digital services in developing innovative business ideas. They highlight that digital technologies significantly streamline the processes of creating and implementing innovative solutions across various sectors of the economy, including the education sector [1].

Studies by O. Skliarenko, S. Yahodzinsky, O. Nikolayevsky, and A. Nevzorov emphasize the significance of digital interactive technologies in the modern educational process, particularly at universities. They point out that these technologies not only improve the quality of education, but also contribute to the development of critical thinking and student independence [2].

O.O. Khomenko, M.V. Paustovska, and I.A. Onyshchuk analyze the impact of interactive technologies on student learning and development. They highlight that the digitalization of the educational process stimulates the development of students'

creative abilities and fosters a more inclusive learning environment [3].

From an economic perspective, P.V. Guk and O.V. Skliarenko emphasize the importance of modernizing enterprises, including educational institutions, through the introduction of automated systems. They point out that these technologies help optimize resource management, reduce costs, and boost productivity [4].

Researcher S.M. Yahodzinsky, in his monograph "Global Information Networks in a Socio-Cultural Perspective", highlights that digital technologies create new opportunities for intercultural interaction and the development of global education [5].

An analysis of modern scientific research reveals that the digital transformation of universities is a key factor in their adaptation to the demands of the modern labor market and global economic development. It not only enhances the quality of education but also promotes sustainable economic growth by integrating innovative technologies into all aspects of the educational process.

The purpose of the article. The purpose of the article is to analyze the impact of the digital transformation of universities on global economic development through increasing innovation potential, creating new jobs, stimulating scientific and technological progress and training highly qualified personnel. The article explores the mechanisms by which digital technologies in the educational process contribute to economic growth and the integration of universities into global economic processes.

Summary of the main research material. The integration of digital technological tools in higher education contributes to its transformation and increase the efficiency of the educational process. Digital platforms in universities perform important functions: they provide access to up-to-date educational materials, enable students to retake tests for self-control, and facilitate continuous two-way communication between students and teachers. In addition, these platforms help students develop the skills of searching, analyzing, and classifying information, leading to more effective assimilation and synthesis of new knowledge.

The use of digital platforms also contributes to the comprehensive improvement of the educational process, in particular through the modification of forms, methods and content of disciplines. Digital technologies promote the individualization of learning, allowing for adaptation to modern innovative requirements. This, in turn, impacts the efficiency of the use of educational tools, forms and methods, and optimizes the organization of feedback between teachers and students, which contributes to improving the quality of training of highly qualified specialists.

In a broad sense, digital platforms enable the integration of key elements of the economic system, such as production, consumers, goods, services, and finance, through the integrated use of advanced technical and technological solutions and software. This ensures the formation of a unified information space that optimizes their interaction and enhances the efficiency of functioning in the economic market, contributing to the development of the modern digital economy (Figure 1).

Research by scholars on the use of digital analytical platforms in the economy reveals that in the modern period there are various classification features. For instance, based on functionality, platforms can be categorized as operational, innovative, aggregated, social, integrated, investment, mobilization, or training. Additionally, they can be classified by scale of activity as global, regional, or national [6–8].

Of particular interest in the context of digital transformation are educational platforms, which create a unified information space for distance learning across various user categories. These platforms offer a comprehensive range of teaching materials for selected courses [9, p. 6]. They also enable effective monitoring of learning outcomes for both students and teachers, thereby enhancing the quality of the educational process.

It should be noted that today, digital educational platforms are not only effective in the higher education system but are also actively employed in enterprises and organizations to enhance staff knowledge and skills. They are widely used in business settings to organize educational processes and support the development of professional competencies of employees in a dynamic market [10, p. 64].

Thus, the main tasks of digital learning platforms include: enabling the study of a wide range of

disciplines at a convenient time for students, monitoring acquired knowledge, digitalizing and optimizing professional development for employees in enterprises, organizations and business structures, and facilitating constructive dialogue on teaching methods and presentation of educational and scientific information, etc.

The use of digital platforms in higher education institutions has both strengths and weaknesses (Table 1).

As shown in the table, digital platforms are increasingly becoming essential tools in supporting the educational process at universities amid the shift to a digital economy. Their implementation enhances the transparency and openness of educational data and enables high-level analytical and statistical accounting, thereby improving both internal and external information interactions. Digital platforms also enhance the quality of training for future specialists by offering students access to diverse educational resources, such as video lectures, presentations, case studies, and animations, which facilitate the learning process.

A study of the digital transformation of universities reveals that most digital platforms feature a modular structure, typically including the following components:

- personal accounts of students, teachers and university administration
- knowledge base;
- a module for scheduling and notifying platform visitors;
- a special module for testing, control and certification;
- module of interactive interaction between students and controlling structures;
- system administration module;
- a module for collecting statistics on all types of platform functioning.

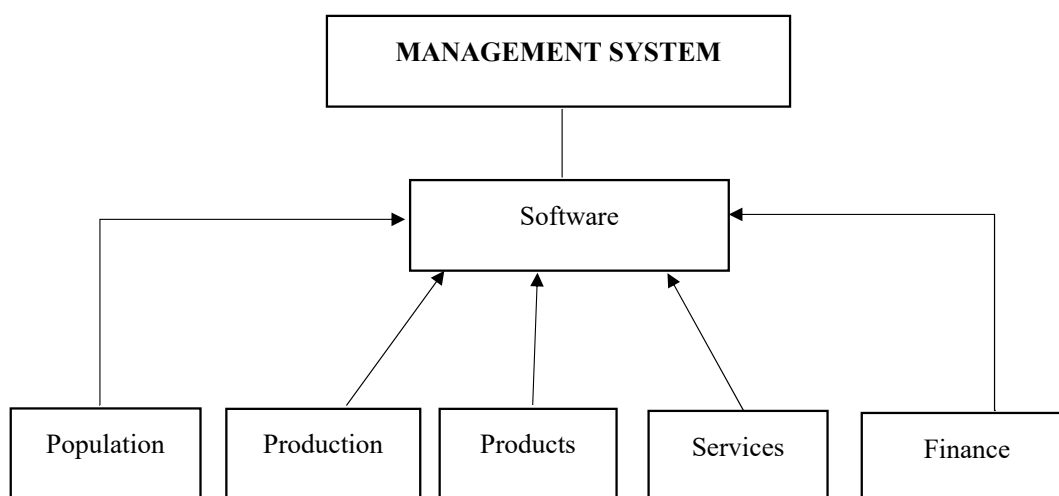


Figure 1 – Main Components of a Digital Platform

Source: formed by the author

Table 1 – SWOT Analysis of the Implementation and Use of Digital Platforms in Universities

| Strengths | Weaknesses |
|---|--|
| <ul style="list-style-type: none"> – obtaining knowledge at any convenient time for students; – increase of openness, transparency and reliability of data, operations in the university computer network; – independent work develops self-organization, discipline, initiative; – improving the quality of electronic document management; conducting analytical and statistical analysis at a high professional level; – improving the quality of the management process at all levels of management; – opportunities for distance learning for people with disabilities; – improving the quality of the educational process. | <ul style="list-style-type: none"> – insufficient development of effective tools for regulating the activities of participants in digital platforms; – insufficient number of qualified specialists in the field of development and use of digital platforms; – lack of advanced ICT tools and specialized knowledge for working with digital platforms among certain categories of users; – lack of communication and social interaction in the process of distance learning; – imperfections and weak information and emotional interaction in the educational process. |
| Opportunities | Threats |
| <ul style="list-style-type: none"> – changing the structure, forms and methods of teaching at the university based on the use of innovations and advanced ICT; – stimulating the development of new types of interaction with the practical sphere; – expanding self-education opportunities for both students and teachers. | <ul style="list-style-type: none"> – insufficient development of tools to control the actions of digital platform owners; – monopolization of digital infrastructure; – insufficiently developed information system and cybersecurity. |

Source: formed by the author

Thus, the use of digital platforms enables students to systematically track their progress in studying disciplines, assess their own knowledge, and revisit previously covered material at their convenience. Additionally, these platforms ensure efficient analytical work by the university administration through advanced digital data processing tools, optimizing business processes and enhancing transparency and openness in management at all levels. This capability supports informed decision-making, which is crucial for achieving the status of a digital university.

Conclusions. The process of digital transformation of universities significantly influences global economic development, in particular through the adoption of innovative approaches to teaching and management in educational processes. The implementation of digital platforms allows universities to improve the quality

of education by optimizing access to information, improving curricula, and promoting individualized learning. In addition, it facilitates the creation of new economic relationships between universities, students, and the labor market, necessitating more flexible and adaptive training for specialists.

Digital transformation fosters the globalization of higher education by enhancing opportunities for collaboration between educational institutions from different countries, positively impacting international economic integration. This expansion creates new avenues for developing human capital, elevating professional competencies, and fostering innovative business models in the field of education. Integrating digital technologies into the educational process also helps to strengthen the link between universities and the economic environment, facilitating the continuous knowledge and innovation exchange.

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