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## DIGITAL CULTURAL DEVELOPMENT UNDER NEW THREATS AND CHALLENGES

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### Abstract

The relevance of digital culture research is that it expands the content and form of the it's industry based on the digital technology use. The digital cultural development refers to the use of digital technologies for the culture of creation, production, distribution and creative content. **The purpose** of the research is in theoretical and practical aspects of the development of the digital cultural industry in the environment of threats and new challenges. **Research objectives:** 1) to analyze the conditions for the digital cultural formation as a factor in the breakthrough development of digital technologies; 2) find out the cultural digitization and digital culturalization development processes; 3) to reveal the modernization digital cultural management directions as a digital cultural formative factor; 4) justify the complex network management system formation as a condition for digital development in the conditions of new threats and challenges. **The object of research** is the digital culture industry as a social and cultural phenomenon. **The subject of the research** is the digital cultural industry development in the environment of threats and new challenges. Digital cultural industry development has deepened and undergone profound changes in many countries. Digitization helps bring digital technologies into the system to deliver cultural products and services, such as digital libraries, digital museums, online reading, online audiovisual media, public cultural clouds, etc. **Researching results.** Digital space formation of it's culture is related to the software technology use such as artificial intelligence, blockchain, graphics and image technology, which allow people to have a deeper immersion experience in the digital space and promote the rapid digital cultural development. Digital culture should meet the development digital industrialization and industrial digitalization trends, implement the digital strategy of the culture industry, accelerate the development of new cultural enterprises, formats and consumption models, transform and modernize traditional formats, improve quality, efficiency and core competitiveness, and improve the modern cultural industrial system.

**Keywords:** digital culture, digital space, digital culture industry, digital technologies, network communication, digital content industry.

### Statement of the problem in a general form and its connection with important scientific or practical tasks

The development of the digital cultural industry in the face of threats and challenges represent

an innovative, interactive cultural service characterized by network communication and personalized consumption. The digital cultural industry includes digital film and television, digital music and big data, digital literature, and digital industries. With the microprocessors and the maturity advent of specialized integrated circuit (ASIC) manufacturing technology, digital integrated circuit performance has experienced a qualitative leap, as a result of which the influence of digital technology on the culture industry has gradually deepened. The digital cultural industry development has deepened and undergone profound changes in many countries. The United States, the United Kingdom, and Japan refer to the digital cultural industry as the copyright industry, the cultural creative industry, and the digital content industry, respectively. In 1995, the “digital content industry” (Digital Content Industry) concept was first officially proposed at the G7 conference of information technology ministers. The “Info 2000 Plan” was formed by the European Union, which

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clarified digital content industry concept. The digital cultural industry development has always remained an important strategy for major developed countries and regions in the world such as Europe, America, Japan and South Korea. Among them, the United Kingdom is the first country to encourage cultural and creative industries through the development of creative digital technologies. The British attach great importance to the digital cultural industry, which is reflected in the name of the cultural department. The full name of the UK Department for Culture is “Digital, Cultural, Media and Sport Department”, which is based on the combination of digital technology and culture, which is a prominent development feature of the British cultural industry. The United States relies on a mature intellectual property management system to enable the copyright industry to lead the “big cultural industry” that includes culture, creativity, digital and other aspects. Japan and South Korea use the term “digital content industry”, which emphasizes the creation of content for information products. In 1994, China was first connected to the Internet, but since then it has rapidly integrated into the wave of the global digital economy and has gradually taken the lead in the digital cultural industry, which continues to deepen in the face of new threats and challenges (Buhaichuk, Nikitenko, & Voronkova, 2023).

**Analysis of the latest research and publications, from which the solution of this problem was initiated and on which the author relies**

Foreign authors (D. Belshaw, B. Hirsch, G. Creeber and R. Martin (G. Creeber & R. Martin), L. Manovich, J. Stommel) and others) contributed to the digital cultural understanding of. The idea of a metaverse is discussed by Tim Sweeney, the head of Epic Games, the company that produces Fortnite.

**Highlighting previously unsolved parts of the general problem, to which the specified article is devoted to**

Digital culture, based on modern information technologies and network digital space, developing in the context of new characteristics different from traditional one. The network forms a new social one, such social media as: 1) Weibo, WeChat, Twitter and Facebook; 2) various cultural phenomena in the digital technological era, such as mass culture, open source culture, own media culture; 3) knowledge socialized production forms, such as Wikipedia and Baidu Encyclopedia, etc. All of these reflect the changes in cultural structure and cultural ecology in the digital technological age, which have caused

the adjustment of the traditional cultural structure and the transformation of the culture industry. In the digital environment, participants in digital culture change from closed to open, making two-way or even multi-directional interaction possible; the status differences of the participants are weakened, and the differences in time and space are weakened. Digital culture is a unique cultural form or cultural pattern of a digital society created by the digital technologies and the Internet development. Digital culture is a new productive way, a way of life and a way of thinking created by modern information technologies for people. Both the cultural digitalization and the culturalization of digital content cannot be separated from the material basis created by digital information technologies, from the constant humanistic formation of the digital space by people. Digital technologies, including hardware and software technology, create an interactive basis of the digital space of the digital cultural industry development in the environment of threats and new challenges (Buhaichuk, Nikitenko, & Voronkova, 2023).

**The purpose of the research** is theoretical and practical aspects of the digital cultural industry development in the environment of threats and new challenges.

**Research objectives:** 1) to analyze the conditions for the formation of digital culture as a factor in the breakthrough digital technological development; 2) find out the cultural digitization and digital culturalization development processes; 3) to reveal the modernization directions of digital cultural management as a factor in the formation of digital culture; 4) justify the formation of a complex network management system as a condition for digital development in the conditions of new threats and challenges.

**The object of research** is the digital culture industry as a social and cultural phenomenon. The subject of the research is the digital cultural industry development in the environment of threats and new challenges.

**Research methodology.** The main research method is an axiological one, which is based on identifying the value orientations of the digital cultural industry development in the environment of threats and new challenges. From the point of content creation and production view, the cultural digitization promotes its innovation with digital thinking, promotes the integration of the latest digital technologies into the entire industrial chain

of cultural production and consumption, realizes networking, intelligence, digitalization, greening, and platformization of cultural product creation and production. Among the methodological foundations, a systematic methodology should be singled out, which helped bring all the scattered facts into a system. Digital culture depends on digital technologies and must bring everything into a system of storage on servers, cloud platforms, computers, mobile phones, tablets and other digital media. It also requires digital processing, storage and distribution technologies to expand the possibilities of further production, display and distribution of digital culture. Digitization helps bring digital technologies into the system to deliver cultural products and services, such as digital libraries, digital museums, online reading, online audiovisual, public cultural clouds, etc. Cultural digitalization is considered from the point of view of the system-structural method and structural-functional analysis, which allows structuring the constituent components of the digital culture industry – the expansion and spread of modern information technologies in the field of culture, due to which the creation, production, demonstration, distribution and consumption of culture have significant digital characteristics. In the form of cultural digitization, digital technologies are integrated into digital culture. One of them is the digitization of cultural products and content, which refers to the transformation of cultural media and carriers. Multimedia technologies make digital culture more visualized, interactive and easier to understand.

#### **Presentation of the main research material with justification of the obtained scientific results**

Digital space and digital culture are rapidly changing the functioning logic of the entire society. To promote the digital cultural development, it is necessary to respond to the growing spiritual and cultural people needs and requests for interaction in the digital space, so that digital culture brings more benefits to all humanity. For this, an order of rules and a cultural ecology of digital space should be built. The widespread digital technological use has formed a virtual space that coexists with the physical world, promotes the unification of economic and social forms, the diversification of network culture, and has given birth to a diverse network cultural ecology. At the same time, the penetration and cyberspace integration, physical space makes the virtual society more and more significantly influencing capable in the real world. A technical order centered on algorithms

has caused problems such as increased information asymmetry and algorithmic discrimination, and brought social risks in terms of security, law, morality, ethics, and privacy (Voronkova, Nikitenko & Metelenko, 2023).

#### **1. Formation of digital culture as a factor in the breakthrough digital technological development**

Software technologies such as artificial intelligence, blockchain and other encryption technologies, graphics and image technologies allow people to have a deeper immersion experience in digital space and contribute to the rapid iteration and digital cultural development. Hardware technology supports the physical construction in digital world and provides an interface for human-computer interaction. Software digital technology ensures the operation rules and digital social order, endows the digital society with humanistic characteristics, and promotes the digital display of cultural content products and the cultural development form of the digital space. The digital world is relatively independent from the real world, its endogenous cultural system is relatively independent, which is different from the real culture and system of civilization. The digital space includes the virtual world created by people using technology and imagination; the cultural form of this world is an extension of the cultural form of the real world, as well as a cultural system that serves the real world. The digital cultural space also includes the metaverse as a virtual reality applications subset, which refers to an interactive, immersive, composite, and shared network collection or virtual space. From a technical point of view, the coordinated hardware technologies and software development together form the lower Metaverse level. The hardware technology provides the channel to enter and exit the Metaverse so that human can intuitively experience the Metaverse, and the software technology provides the operating logic and the Metaverse rules (Voronkova, Nikitenko & Metelenko, 2023).

Constructing and displaying traditional cultural situations through various digital technologies and tools can realize people's real cultural experiences in virtual scenes. The cultural "digitization" significantly changed the medium and cultural presentation, which is a milestone in the protection and dissemination of traditional one. Digital technology and the Internet platform provide effective conditions for digital culture, which is based on digital technology and uses digital space as a platform, emphasizing the paradigm shift

in cultural development caused by technological change. From the perspective of the audience, digital technologies have enriched the cultural experience of users in content creation terms, display methods, communication channels and interactive means, so that digital cultural life is integrated into people lives and presents new online and offline integration functions. Offline experiences depend on cultural facilities such as libraries, cultural centers and art galleries, public places such as city squares, commercial districts, shopping malls, airports, train stations, forming an offline digital cultural experience scene. Online experiences rely on digital media such as televisions, mobile phones, and mobile terminals to provide interactive cultural digital content that forms a new space for cultural consumption. The development of the Internet gradually moved from an information-centric to a fully “socialized” virtual space. The rapid development of modern information technologies and the Internet contributed to the digital space and the real world integration, accelerated social informatization and virtualization processes, and changed the cultural social form. Now digital life has become a new picture of human life, people have endowed “digital” with more expressive cultural attributes due to the large number of digital activities. (Voronkova, Nikitenko & Metelenko, 2023).

## **2. The cultural digitization and digital culturalization development processes**

In cultural digitalization and digital culturalization development processes, digital cultural enterprises and platform enterprises are the main promoters that rely on technological advantages to intervene in the cultural field with public attributes, expand the production and creation of cultural products and services through technological innovative models, to enrich the supply of cultural products. Digital technologies have widened the “digital divide” between platform companies and the government, weakening the government’s right to speak about reconstructing the order of the digital space and shaping culture (Voronkova, Nikitenko, Oleksenko, Andriukaitiene, et al., 2023).

There is a digital marginalized group literacy, such as residents of remoted areas, rural areas, elderly people who lack the ability to use digital tools, identify different digital content. This has created a new digital cultural divide between regions and between groups, leading to inequalities in digital cultural experience and participation in digital culture. The digital space has become the new common home for humanity, people have never been

more connected in digital space than are. Currently, cybercrimes such as privacy invasion, spreading false information, intellectual property rights violation, committing cyber fraud and creating terrorism have become a global public danger around the world, no country can solve them alone, which requires global partners. Cyberspace is connected with the destiny of mankind, and the future of cyberspace must be created jointly by all countries in the world. Contribute to the formation of a shared and mutually beneficial digital community of destiny and maintain a peaceful, safe, open, shared cyberspace. An orderly digital space should aim to enable digital civilization to benefit people of all countries around the world. The development of digital technologies not only innovated the methods of displaying cultural products and services, but also formed a network digital space that coexists with the real world, significantly changed social forms, and in many ways determined the present and the future (Voronkova, Nikitenko, Oleksenko, et al., 2023).

Faced with the new proposal of cultural construction in the age of digital technologies, it is necessary to focus on the following aspects of work. First, to expand the supply of high-quality digital culture to meet people’s spiritual and cultural needs. This is the key content of cultural digital development. Governments should be based on the development of human potential, insist on giving priority to social goods, use digital technologies to promote structural reforms of cultural supply, expand the supply of high-quality digital cultural products and services. The first is to focus on cultural resources, information networks and platform systems to facilitate the construction of new infrastructure in the field of digital culture, the implementation of digital modernization and intellectual transformation of traditional cultural objects, and the acceleration of the formation of data-driven information. The second is to support digital cultural enterprises and platform enterprises to digitally expand the supply and consumption of cultural services, encourage cultural institutions to use big data, artificial intelligence and other technologies to identify public needs, and provide more personalized cultural products and services. Third, it is the expansion of open data exchange of public cultural resources, the encouragement of platform companies and digital cultural enterprises to participate in the development and use of public cultural resource data, the expansion of the production and supply of high-level digital cultural content, and the expansion of digital technologies.

cultural application scenarios and communication channels. Fourth, actively develop new cloud art and cloud exhibition formats, use online audiovisual, interactive broadcasts and other methods to promote the integration of online and offline cultural service consumption and enrich the cultural experience of users. Fifth, promoting the construction of digital culture integrated in urban and rural areas, the dissemination of high-quality digital cultural resources in rural areas. Digital technology will overcome the cultural gap between regions, cities and rural areas and groups, constantly increasing the inclusiveness of digital cultural development. Sixth, it is necessary to deepen the integration of culture and technology and cultivate a new impetus for the digital cultural development (Nikitenko, Voronkova, Oleksenko, et al., 2023).

The development process of cultural digitalization and digital culturalization is the main support for the digital cultural development, which affects the development process and the direction of digitization of culture and digital culture. 1) this is the improvement of the innovative ecology of digital culture from the point of view of technological investment, project incubation, venture capital, transformation of achievements and protection of intellectual property, promotion of expanded composition and rapid application of new technologies in the field of culture, as well as promotion of rapid iteration of digital culture; 2) establish new scientific and technical research centers and joint innovation centers, and strengthen basic technological research, basic technological research and integrated innovation programs in the field of cultural studies to strengthen technological advantages in the fields of intelligent cultural equipment, game mechanisms, portable devices and protection of cultural heritage; 3) promote the deep integration of digital technologies, cultural and creative industries to achieve comprehensive improvements in quality and efficiency in user understanding, user experience, product innovation and operations management; 4) develop network culture and create a digital cultural space, promote the construction of network civilization and the development of an active network culture. In-depth implementation of the network content construction project, strengthening the value guidelines of network content creation, and creating more network cultural content products that can not only meet people's cultural needs, but also strengthen people's spiritual strength; 5) promote

the strengthening of online content management, the improvement of the mechanism of digital cultural products and the development of online culture; 6) to guide the orderly development of new digital cultural forms, for which to strengthen the connection between online products and offline physical objects, to strengthen research on new cultural phenomena, such as the "metaverse"; 7) improve the governance of the digital space, which not only stimulates the economy, provides people with livelihoods and benefits society, but also creates risks such as loss of security control, legal inaccuracy, moral anomie, ethical anomaly and loss of privacy (Gurbaxani, Dunkle, 2019).

Adapting to the new trend of Internet culture, establishing a new regulatory mechanism that meets the characteristics of new industries, new formats and new models of digital culture. It is necessary to fully respect the innovative position of enterprises and promote digital cultural innovation through corporate innovation; promote digital cultural exchanges and mutual learning, build a community of a common future in cyberspace; actively carry out cultural dissemination on the Internet, widely promote online cultural exchanges, academic exchanges, knowledge sharing and media cooperation, so that the Internet can become a platform to showcase the achievements of various civilizations of countries and realize digital civilization. This is active integration into international affairs in the field of digital culture, active participation and leadership in the formulation of international standards and rules in the fields of digital animation, online games, online audiovisual media, digital art, creative design, etc. Actively contribute to the improvement of the global dialogue and consultation mechanism in the digital space, pay attention to the role of international organizations, Internet companies, the technical community, and individual citizens in order to build a new global partnership in digital space relations and build a digital community. Regardless of depth or breadth, digital technologies have moved from quantitative accumulation to qualitative leaps, bringing changes to social and cultural forms, and a digital civilization based on digital technologies is on the rise. At the same time, although digital technology has changed the shape of society and culture, and changed the direction of civilization, it has not changed the basic values of society, especially the pursuit of "goodness", which is a fundamental value beyond real space and virtual space (Nikitenko, Voronkova, Kozar, Oleksenko, et al., 2023).

### **3. Modernization of digital cultural management as a factor in the digital cultural formation**

Digitization is a computer, internet and digital management process that collects, processes, stores and transfers technology. Digital culture refers to digitized cultural resources or cultural resource digitization. Digital culture relies on modern information technologies and intelligent tools (big data, cloud computing, artificial intelligence, etc.). In view of the wave of digital technologies, cultural digitalization and digital cultural economy, an important strategic choice is to accelerate the modernization of digital cultural governance through high-quality development. The modernization of digital cultural management faces a new situation of order change, reformatting of the system and transformation of power. Digital technologies represented by big data, cloud computing, the Internet of Things, blockchain, and artificial intelligence are accelerating innovation programs. The new global technological order is intertwined with changes in the international cultural and economic order. Cultural development faces unprecedented opportunities and challenges (Gramchuk, & Nikitenko, 2023).

Digital technology is deeply integrated into the development process, transformation and innovation of cultural resources, which effectively contributes to an effective product supply, services, supply and demand combination, digital transformation acceleration and interconnection of various cultural entities in building process of a cultural ecosystem and a global cultural value chain. In this process, various systems such as cultural elements, resources, actors, supply and demand, markets will be changed, and the communication, participation, equality, sharing and coordination of the cultural management system will be greatly strengthened and it will move to a higher level. At the same time, digital publishing, film, television, music, entertainment, cultural exhibitions and other new formats and models are emerging in large number. The powerful digital cultural platform functions such as collection, commerce and close communication connect cultural enterprises and consumers worldwide. Individuals have given birth to a vast number of cultural consumers, creative and entrepreneurial groups and expanded the social relations between them, expanding cultural management objects in unprecedented ways, encouraging innovation and high quality to meet needs. Modernizing digital

culture management faces new challenges in legacy and innovation, security and risk prevention (Girvan, 2018).

Cultural management should respond to changes in cultural trends, values, psychology and consumer behavior, and should promote cultural heritage, innovation and development. Facing contradictions and conflicts in the transformation process, the rapid spread and cultural informative divergence, the explosive growth and rapid iteration of cultural products and services, the intellectual property protection rights and data security, cultural security and the cultural market opening. Strengthen digital development management and promote the construction of digital space, for which digital technologies are fully integrated into all areas and the entire building cultural civilization process a with new ideas, formats and models. In recent years, digital technological innovation and iteration speed has accelerated significantly. By increasing social productivity and optimize the resource allocation, the digital space brings new problems and challenges. In recent years, countries have been actively promoting new technologies and applications such as 5G, the Internet of Things, cloud computing, big data, artificial intelligence and blockchain, insisting on innovation and empowerment, and stimulating the new vitality of the digital economy (Dionisio, Burns et al., 2013).

Digital environmental construction has effectively promoted various elements, realizing the optimization, modernization and industrial chain integration, supply chain and value chain, laying an important foundation for building cyber power and digital space. At the same time, in the rapid digitalization development, new problems and challenges have appeared, which require an urgent clarification of the management and strengthening digital development objects. It is necessary to focus on the long-term perspective of platform economical development and take into account the current situation, compensate for shortcomings, eliminate weaknesses, create an innovative environmental structure, and promote the sustainable development of the platform economy. In recent years, the status and role of the platform economy have become more and more visible, the development of some platform companies is not standardized, there are risks. The platform economy is not sufficiently developed, the monopoly Internet platforms problem is becoming more and more visible, which affects the healthy development of the industry in the long term run.

Improving laws, regulations and regulatory mechanisms will help to protect the legal rights and interests of consumers and public, promote the sustainable digital economic development, which will help the formation of a comprehensive network management system (Kohli, Melville, 2019).

#### **4. Formation of a complex network management system as a condition for digital development in the face of new threats and challenges**

To form a comprehensive network management system, it is necessary to analyze the risks and challenges associated with digital technologies. Many technologies – the industrial transformation represented by 5G, artificial intelligence, blockchain, big data and other information technologies are accelerating, which have become the main driving economic and social development force. Widespread use of digital technologies, constantly changing people lives and communication methods, have deeply influenced people's behavior and thinking way, values and moral concepts, creating potential risks. For example, the personal information and data leakage creates risks to protect personal privacy, algorithmic recommendations increase "information cocoons", artificial intelligence technology creates ethical security risks, and so on. In order to cope with the risks and challenges associated with digital technologies, it is necessary to facilitate the management of Internet services, which impose new and higher requirements. So far, the construction of a comprehensive network management system has achieved positive results. The intense network environmental chaos is constantly condensing the main responsibility for the information content of the website platform, the establishment of an industry self-discipline mechanism, and the further "clean network" promotion, the network space continues to be cleared (Nikitenko, Metelenko, et al., 2023).

Creating a clean cyberspace is a long-term task, and there is a need to continuously strengthen the online governance to ensure that informational content is standardized and positive; constantly strengthening the construction of behavioral norms in cyberspace and cultivate cyber ethics and behavioral norms that correspond to socialist core values, further improve system mechanism, and constantly strengthen the supervision and inspection of the protection measure implementation in related areas. In the digital transformation process, cyber security threats are accelerating. With large-scale new technological and application development, network security threats such as data leakage, network

fraud, ransomware, and security vulnerabilities are becoming more prominent, and network security work is facing new risks and challenges. Without network security, there will be no national security, economic and social stability, and it will be difficult to protect the interests of the broad people masses. With the rapid platform economic development, it continues strengthen relevant laws establishment and regulations, consolidate the responsibilities of platform entities for compliance, encourage platform companies to innovate technological applications, improve the quality of products and services, strengthen platform antitrust supervision, promote health and order industry development. "Improving the mechanism for reporting and processing information on the illegal content disclosure, guiding platform companies to promptly and proactively disclose information on self-verification and disposal of illegal content, and timely warning and investigation of major risks and hidden dangers" play a major role, which gives platform companies the opportunity to investigate in advance potential risks. It is necessary to comprehensively improve the ability and management level of technological network, standardize the data resource use and prevent risks caused by new technologies, such as big data has become a decisive factor in digital space formation (Nambisan, Zahra, et al., 2019).

In order to implement science and technology for good and make innovation and technology useful for people, it is necessary to constantly create and improve the management technical regulation system. It is necessary to create and improve the review digital technological application mechanism, regulatory and legal system, as well as to carry out such work as technical algorithm regulation, standard formulation, security assessment and ethical argumentation review. Building network content is the key to cleaning up cyberspace and the starting point for building a digital development management system (Ramaswamy, & Ozcan, 2018).

Take various measures to improve the management digital development capabilities. In order to build a standardized and orderly digital management system, it is necessary to understand the balance between development and management, create a comprehensive, multi-level and three-dimensional regulatory management system, Digital development covers many areas and requires the coordination of various departments to achieve integration and improving the development and management

of the entire process of research and development, production, sales and application in all areas of life. The continuous iterative update of new technologies has put higher demands on the management of digital development, and it is even more necessary to improve the regulatory management system that manages technology together with technology and manages technology together with technology. On the one hand, further strengthening the research and technology application in supervision and management, properly managing the relationship between security and development, openness and autonomy, management and maintenance, and improving the level and ability of technical management. On the other hand, strengthen the network security guarantee system and guarantee capacity building, provide full support and guarantee of network security technology in new technological fields, strengthen the security guarantee for 5G, artificial intelligence, industrial Internet and other industries, improve network security monitoring (Cherep, Voronkova, Cherep, et al., 2023).

#### **Conclusions and prospects for further research in this direction**

Digital culture must adapt to the timing development by applying modern scientific, technical and communication methods, such as information, digital and network technologies, to build a system of public cultural services and further strengthen the public digital cultural construction. To do this, necessary to: contribute to the building a public digital culture system design; develop and improve

the public digital cultural institutions network to achieve bilateral interaction; promote the creation of publicly available digital cultural resources and the implementation of joint construction and joint use; encourage building an open digital culture for mutual benefit and mutually beneficial outcomes. Modernization process acceleration has opened a wide space for the digital cultural formation. Digital cultural management modernization faces new pressures due to changes in concept, expansion of facilities and innovation of methods. With the development of the service economy, the two-way nature of production and consumption and two-way interaction have become more prominent, and everyone's participation in management has become a trend and an opportunity. Relying on various cultural resources, digital culture uses VR, AR, 3D and other digital technologies and information technology platforms such as Internet and big data to realize the temporal and spatial promotion and updating of cultural communication content. The operating rules of the platform and the business environment of the platform should be optimized, promote the healthy industrial development, encourage the company's platform to strengthen its innovation potential and improve, promote the development of the digital economy as a condition for digital development in the face of new threats and challenges. Building the rules and order of the network digital era and creating a good network cultural ecology is the focus of the future construction of digital culture.

#### **Список використаних джерел**

Buhaichuk O., Nikitenko V. & Voronkova V. Formation of a digital education model in terms of the digital economy (based on the example of EU countries). Формування моделі цифрової освіти в умовах цифрової економіки (на прикладі країн ЄС). *Baltic Journal of Economic Studies*. Volume 9. Number 1. Riga, Latvia : "Baltija Publishing", 2023. P. 53–60.

Воронкова В.Г., Нікітенко В.О. & Метеленко Н.Г. Еволюція від Смарт-освіти до смарт-економіки та смарт-бізнесу. Мукачево : Економіка та суспільство, 2023. № 48. 2023.

Voronkova V., Nikitenko V., Oleksenko R., Andriukaitiene R., & Polysaiev O. Environmental crisis overcoming as a factor for achieving economic sustainability in the context of the European green course. *Cuestiones Políticas*. 2023. № 41 (77). P. 612–629.

Voronkova Valentyna, Nikitenko Vitalina, Roman Oleksenko, Regina Andriukaitiene, Julia Kharchenko & Eduard Kliuivenko. Digital technology evolution of the industrial revolution from 4g to 5g in the context of the challenges of digital globalization. *TEM Journal*. 2023. Volume 12. Issue 2. P. 732–742.

Vitalina N., Valentyna V., Oleksenko R., Matviienko H. & Butkevych O. Sustainable agricultural development paradigm formation in the context of managerial experience of industrialized countries. *Revista de la universidad del ZULIA*. 3ª época. Año 14Nº 39. 2023. P. 81–97.

Gurbaxani V., Dunkle D. Gearing up for successful digital transformation. *MIS Quarterly Executive*. 2019. № 18 (3). P. 209–220.

Nikitenko V., Voronkova V., Kozar Yu., Oleksenko R., Yanchevskyi O., Korobko I. Digital Healthcare in the Context of Challenges and Opportunities of Technological Progress in the Countries of the European Union. *Revista de la universidad del ZULIA*. 3a época. 2023. Año 14, Nº 40, P. 315–333.



- Gramchuk M., & Nikitenko V. Present trends and prospects of smart city development. *Humanities studies : Collection of Scientific Papers / Ed. V. Voronkova. Zaporizhzhia : Publishing house "Helvetica", 2023. № 14 (91). P. 35–41.*
- Girvan C. What is a Virtual World? Definition and Classification. *Educational Technology Research and Development. 2018. № 66 (05). P. 1087–1100.*
- Dionisio J.D.N., Burns W.G. & Richard G. 3D Virtual Worlds and the Metaverse: Current Status and Future Possibilities. *ACM Computing Surveys. 2013. № 45 (3). P. 1–38.*
- Kohli R., Melville N.P. Digital innovation: a review and synthesis. *Information Systems Journal. 2019. № 29 (1). P. 200–223.*
- Нікітенко В., Метеленко Н., Воронкова В., & Васильчук Г. Концепція трансформації освітньої парадигми, орієнтованої на потреби та «освіту впродовж всього життя». *Humanities studies : Collection of Scientific Papers / Ed. V. Voronkova. Zaporizhzhia : Publishing house "Helvetica", 2023. № 14 (91). P. 93–101.*
- Nambisan S., Zahra S.A., Luo Y. Global platforms and ecosystems: implications for international business theories. *Journal of International Business Studies. 2019. № 50 (9). P. 1464–1486.*
- Ramaswamy V, Ozcan K. Offerings as digitalized interactive platforms: a conceptual framework and implications. *Journal of Marketing. 2018. № 82 (4). P. 19–31.*
- Cherep A., Voronkova V., Cherep, O., & Kaliuzhna, Iu. A humanistic and cross-cultural approach to organization management as a factor of people's democracy. *Humanities studies : Collection of Scientific Papers / Ed. V. Voronkova. Zaporizhzhia : Publishing house "Helvetica", 2023. № 14 (91). P. 184–195.*

### References

- Buhaichuk, O., Nikitenko, V. & Voronkova V. (2023). Formation of a digital education model in terms of the digital economy (based on the example of EU countries). *Baltic Journal of Economic Studies. Volume 9. Number 1. Riga, Latvia : Baltija Publishing. P. 53–60.*
- Voronkova, V.H., Nikitenko, V.O. & Metelenko, N.H. (2023). Evoliutsiia vid Smart-osvity do smart-ekonomiky ta smart-biznesu. Mukachevo. "Ekonomika ta suspilstvo". № 48. 2023.
- Voronkova, V., Nikitenko, V., Oleksenko, R., Andriukaitiene, R., & Polysaiev, O. (2023). Environmental crisis overcoming as a factor for achieving economic sustainability in the context of the European green course. *Cuestiones Politicas. № 41 (77). 612–629.*
- Voronkova, V., Nikitenko, V., Oleksenko, R., Andriukaitiene, R., Kharchenko, Ju., & Kliuienko, E. (2023). Digital technology evolution of the industrial revolution from 4g to 5g in the context of the challenges of digital globalization. *TEM Journal. Volume 12. Issue 2. 732–742.*
- Nikitenko, V., Voronkova, V., Oleksenko, R., Matviienko, H. & Butkevych, O. (2023). Sustainable agricultural development paradigm formation in the context of managerial experience of industrialized countries. *Revista de la universidad del ZULIA. 3ª época. Año 14. N° 39. 81–97.*
- Gurbaxani, V., & Dunkle, D. (2019). Gearing up for successful digital transformation. *MIS Quarterly Executive. 18 (3). 209–220.*
- Nikitenko, V., Voronkova, V., Kozar, Yu., Oleksenko, R., Yanchevskiy, Ol., & Korobko, I. (2023). Digital Healthcare in the Context of Challenges and Opportunities of Technological Progress in the Countries of the European Union. *Revista de la universidad del ZULIA. 3a época. Año 14, N° 40. 315–333.*
- Gramchuk, M., & Nikitenko, V. (2023). Present trends and prospects of smart city development. *Humanities studies : Collection of Scientific Papers / Ed. V. Voronkova. Zaporizhzhia : Publishing house "Helvetica". 14 (91). 35–41.*
- Girvan, C. (2018). What is a Virtual World? Definition and Classification. *Educational Technology Research and Development. 66 (05). 1087–1100.*
- Dionisio, J.D.N., Burns, W.G., & Richard, G. (2013). 3D Virtual Worlds and the Metaverse. Current Status and Future Possibilities. *ACM Computing Surveys. 45 (3). 1–38.*
- Kohli, R., & Melville N.P. (2019). Digital innovation: a review and synthesis. *Information Systems Journal. 29 (1). 200–223.*
- Nikitenko, Vitalina, Metelenko, Natalia, Voronkova, Valentyna, & Vasylchuk, Hennadii (2023). Kontseptsiiia transformatsii osvitnoi paradyhmy, oriietovanoi na potreby ta "osvitu vprodovzh vsoho zhyttia". *Humanities studies : Collection of Scientific Papers / Ed. V. Voronkova. Zaporizhzhia : Publishing house "Helvetica". 14 (91). P. 93–101.*
- Nambisan, S., Zahra, S.A., & Luo, Y. (2019). Global platforms and ecosystems: implications for international business theories. *Journal of International Business Studies. 50 (9). 1464–1486.*
- Ramaswamy, V, Ozcan, K. (2018). Offerings as digitalized interactive platforms: a conceptual framework and implications. *Journal of Marketing. 82 (4). 19–31.*
- Cherep, Alla, Voronkova, Valentyna, Cherep, Oleksandr, & Kaliuzhna, Iuliia (2023). A humanistic and cross-cultural approach to organization management as a factor of people's democracy. *Humanities studies : Collection of Scientific Papers / Ed. V. Voronkova. Zaporizhzhia : Publishing house "Helvetica". 14 (91). 184–195.*

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## РОЗВИТОК ЦИФРОВОЇ КУЛЬТУРИ В УМОВАХ НОВИХ ЗАГРОЗ ТА ВИКЛИКІВ

### Анотація

Актуальність дослідження цифрової культури у тому, що вона розширює зміст і форму культурної індустрії на основі використання цифрових технологій. Розвиток цифрової культури стосується використання цифрових технологій для її культури створення, виробництва та поширення культурного та творчого контенту. Мета дослідження – теоретичні і практичні аспекти розвитку індустрії цифрової культури у середовищі загроз та нових викликів. Завдання дослідження: 1) проаналізувати умови формування цифрової культури як чинник розвитку проривних цифрових технологій; 2) з'ясувати процес розвитку культурної цифровізації та цифрової культуралізації; 3) розкрити напрями модернізації цифрового культурного управління як чинника формування цифрової культури; 4) обґрунтувати формування комплексної системи управління мережею як умови цифрового розвитку в умовах нових загроз і викликів. Об'єкт дослідження – індустрія цифрової культури як соціальний і культурний феномен. **Предмет дослідження** – розвиток індустрії цифрової культури в середовищі загроз та нових викликів. Розвиток індустрії цифрової культури поглибився і зазнав глибоких змін у багатьох країнах. Оцифрування сприяє приведенню цифрових технологій у систему для надання культурних продуктів і послуг, таких як цифрові бібліотеки, цифрові музеї, онлайн-читання, онлайн-аудіовізуальні засоби, публічні культурні хмари тощо. **Результати дослідження.** Формування цифрового простору цифрової культури пов'язане з використанням технологій програмного забезпечення, таких як штучний інтелект, блокчейн технології графіки та зображень, які дозволяють людям отримати глибший досвід занурення в цифровий простір і сприяють швидкому розвитку цифрової культури. Цифрова культура повинна відповідати тенденціям розвитку цифрової індустріалізації та промислової

цифровізації, реалізувати цифрову стратегію індустрії культури, прискорювати розвиток нових культурних підприємств, культурних форматів і моделей культурного споживання, трансформувати та модернізувати традиційні формати, покращувати якість, ефективність і основну конкурентоспроможність та покращити систему сучасної індустрії культури.

**Ключові слова:** цифрова культура, цифровий простір, цифрова індустрія культури, цифрові технології, мережеве спілкування, індустрія цифрового контенту.

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