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The digitalization era: philosophical aspects of technological civilization in modern Kazakhstan

This article delves into the philosophical implications of digitalization in contemporary Kazakhstan, focusing on its transformative impact on education, societal structures, and the aspirations of youth. As the nation navigates the complexities of technological civilization, the interplay between digitalization and cultural identity becomes increasingly critical. The study examines how digital technologies are reshaping educational paradigms, altering social dynamics, and influencing the behaviors and goals of younger generations, reflecting both the challenges and opportunities presented by this digital shift. The research employs a qualitative methodology, integrating philosophical analysis and thematic exploration. It includes a review of relevant literature, case studies, and an interpretative approach to assess the ethical, social, and cultural dimensions of digitalization. Key examples from Kazakhstan's educational and social contexts illustrate how digital transformation is affecting the nation. By highlighting the philosophical underpinnings of digitalization, the study emphasizes the necessity for a framework that addresses the moral and cultural implications of technological progress. It argues that digitalization not only facilitates modernization but also fosters inclusivity and progressiveness. Ultimately, this article positions digitalization as a vital force in shaping a civilization that harmonizes technology with Kazakhstan's traditional values and evolving modern needs.

Keywords: Kazakhstan, education, society, youth, digitalization, technology, civilization.

Introduction

Knowledge is always an idealized image of truth, as to know something means to have an idealized understanding of it. Thus, we should view cognition as a complex process and knowledge as a certain outcome.

Before historical scientific knowledge emerged, simple, everyday knowledge, born from daily life experiences, came into existence. This type of knowledge arises not from professional cognitive activity but from the necessities of everyday life. It includes proverbs, moral norms, customs, etc., which embody folk wisdom distilled from daily life experiences. Based on this practical knowledge, people reach a level where they can orient themselves in the surrounding environment. As for scientific knowledge, it arises from mastering specialized knowledge and developing it creatively. Its origins lie in the later separation of intellectual labor from physical labor.

Becoming a nation is a broad road opened to the future. If we learn to walk this road through national education, it's clear we will not fall behind anyone. National education is a component of the educational system aimed at nurturing future professionals with a strong sense of national identity. Its goal is to cultivate mature, patriotic individuals who embody national values, contribute to the advancement of national interests, and harmonize national and universal values. The mission of national education is to establish that the foundation of national values in a changing cultural-social environment is the native language; to develop young people's national intellectual character rooted in respect for the Kazakh language, history, culture, traditions, and beliefs; to encourage active engagement in actions that support the development of Kazakhstan's industrial-innovative system with a high moral and national spirit; to foster competitiveness in knowledge, cultural, and spiritual realms alongside other civilizations; and to shape a civilized awareness of relationships between society and individuals, and individuals and nature, in the spirit of national identity [1]. The primary objective of this upbringing is to develop a sense of national consciousness, to lay the foundation for national spirit and patriotism, and to combat rootlessness. Every citizen who regards Kazakhstan as their homeland should contribute to this effort in their own way, which is one of its core principles. From time immemorial, our Kazakh ancestors have said, "The knowledgeable will defeat the strong", reminding us that today's world relies not on physical strength but on intellect. We have arrived at a time when a nation's

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strength lies first and foremost in knowledge and science in the modern world. We can only be valued by applying this knowledge for practical and societal benefit. Like digging a well with a needle, a life without knowledge requiring great perseverance, determination, and will is incomplete.

A knowledgeable person understands well that true belief in the future and cherished hope, as well as respect and dignity toward their people, are at the foundation of knowledge. They view education and upbringing as inseparable, recognizing that knowledge imparted through education will always have a lasting future. We would not be mistaken to say that knowledge is the main driving force of scientific, technological, and economic progress, which forms the foundation for numerous efforts aimed at joining the path of civilization. The primary goal of education in the Republic of Kazakhstan is to foster a sense of citizenship and Kazakhstani patriotism in youth, to cultivate respect for national symbols, to honor folk traditions, to learn about global and national cultural achievements, and to instill intolerance toward actions that contradict the Constitution and society [2]. Upbringing is built upon spiritual values and is aimed at the development of an individual capable of adapting to today's dynamic, multifaceted, multicultural, and multi-ethnic world.

Guiding youth onto the path of knowledge, ensuring they stay on a righteous path, and empowering them with the reins of enlightenment and education is considered a duty of the state and society. Regardless of how powerful a country may be, it places great emphasis on the education and enlightenment of its youth. In order to lay the foundation for the future, the first priority must be to nurture the young generation of that country into a conscious, well-informed population. As the world's second teacher, Abu Nasr Al-Farabi, once said, "To be knowledgeable is to uncover the unknown and to possess the ability to do so" [3, 256]. In line with this, the primary goal of our educators is not merely to teach students who passively absorb predetermined knowledge but to develop well-rounded, innovative individuals who are adaptable to life, enthusiastic about discovering new insights in every unexplored circumstance around them.

Methodology, methods and data collection

This study employs a qualitative approach to explore the philosophical significance of digitalization in contemporary Kazakhstan. The research integrates critical analysis and interpretative frameworks, drawing on multidisciplinary perspectives to examine the impact of digital technologies on education, society, and youth. An extensive review of literature on digitalization, cultural identity, and technological advancements provides the foundation for the analysis. The study incorporates examples and case studies from Kazakhstan's educational and social contexts to illustrate practical effects and shifts in youth behavior. Ethical and cultural dimensions are emphasized, with a focus on aligning technological integration with Kazakhstan's traditional values and modern aspirations. Thematic analysis is used to highlight key concepts such as inclusivity, progressiveness, and the balance between tradition and modernity, offering insights into how digitalization shapes an inclusive, culturally harmonious society.

Discussion of the problem and the results of the study

In today's era of globalization, the Republic of Kazakhstan expects its youth to strive for knowledge and skills, to work hard, and to grow. The support of an educated generation is the backbone of our independent nation. The 21st century will be the era of the knowledgeable. Transitioning into this new stage is no easy task. Our society is now moving into a new phase of development — the information era — where computer technology and all related information and communication technologies are becoming an integral part of the pedagogical sphere. The concept of "ICT in education" is closely associated with terms such as "new information technologies in teaching", "modern information teaching technologies", "computer-based teaching technologies", and others [4].

Only those countries that have mastered knowledge and science at the proper level stand at the forefront of global development, leading the way. Currently, the education system in our country is characterized by deep structural changes due to ongoing reforms in the field of education. In this era of scientific and technological advancement, providing high-quality education is one of the most fundamental issues. Schools are the place to provide children with a high level of education, instill a strong work ethic, ignite their ambition, and motivate them to take action. In today's civilized society, the primary issue within the education system is elevating the quality of education to an international level.

Today, the effective path to integrating into the global information-based educational sphere is to fully digitize the education sector. In the Republic of Kazakhstan's "Education" Law, the digitization of the education system is defined based on the principles of state policy in this sector, making it one of the primary tasks. The "Kazakhstan-2030" strategic program emphasizes developing a national model of education and

integrating Kazakhstan's education system into the global education space. Since the 21st century is the information age, digital literacy is essential for humanity. This literacy begins at school, as students must acquire not only theoretical knowledge but also the foundational practical skills. For integrating theoretical knowledge with real life, computers are undoubtedly necessary [5].

Improving the quality of educational content, as well as transitioning society towards an information-based era, is one of the primary indicators of societal development. Today, it has become clear that further advancement of scientific and technological progress can only be achieved through the effective use of information, as information itself is becoming the driving force behind the economy, technology, science, politics, and general societal development within an information society. The main characteristic of introducing new information technology widely into the current education process, along with developing students' information literacy, is finding ways that clearly outline the practical orientation of learning, harmonizing interdisciplinary connections, and specifying the content and purpose of education [6].

In today's world, providing students with a quality education is essential to keeping pace with global challenges and ensuring economic growth. The primary goal of higher education institutions is to prepare future specialists who are knowledgeable and equipped with new ideas. This involves not only professional and technological training but also ensuring that students have broad knowledge and high information literacy — being proficient with computers, using internet resources effectively, mastering new computer technologies in education, conducting interactive lessons, and more. To achieve these educational objectives, it has become necessary to transition from traditional teaching methods to innovative ones. This type of teaching nurtures the individual abilities of students and enables them to adapt quickly to socio-economic changes. Higher education institutions must implement these approaches to further improve the quality of education. Training qualified specialists is a specific goal of higher education [7].

Integrating new technologies and enhancing information technology within the education system, as well as fostering students' information literacy, are closely interlinked tasks, requiring the introduction of modern technology and technical teaching tools into the educational process. Meeting these requirements is directly related to scientifically addressing the issues of preparing highly qualified specialists within the education system.

Effectively addressing the issue of informatization in education is closely tied to the development of informational literacy among educational staff. A teacher's informational literacy is an essential part of their overall pedagogical culture. We know that information systems are rapidly advancing in the 21st century, becoming a key component in the development of industry and society. Modern information technologies, which are continually expanding and evolving, offer significant opportunities for individual corporations and society at large to organize work and create new forms of employment. The introduction of these opportunities is impacting all aspects of life, including family, education, work, and all areas within the geographic boundaries of human society. Today, information technology can play a crucial role in strengthening the relationships between labor productivity, production volume, investment, and employment. New types of online services have shown a potential to create numerous job opportunities, as recent experiences have confirmed.

In the process of using new technologies, the teacher takes on an intermediary and consulting role between traditional teaching and innovative methods, influencing the quality of education by acting as a project manager in the learning process. Experience shows that the use of new technologies, particularly information technologies, requires teachers to be psychologically prepared. However, many experienced teachers may face challenges in undergoing retraining. Here, it is essential to possess informational knowledge, master scientific methods of cognition, and be able to coordinate various activities. Additionally, teachers must be capable of finding and processing supplementary information and presenting it in a suitable format for students. By fostering an information society, we inevitably stimulate development across various fields without having to exert force in every sector [8].

There is likely no area of contemporary society untouched by information technology. In the information society, information is understood as the primary resource, equating to knowledge, and consequently, education. Ensuring and using information correctly in all aspects of our lives enhances our knowledge and allows us to apply it effectively. Proper management of this information is also essential.

In examining the features of governance within the information society, we believe analyzing the role and characteristics of the governing subject is crucial, as it continues the inquiry posed in Daniel Bell's work "*The Coming of Post-Industrial Society"* regarding "Who will govern?" [9].

D. Bell addresses the question posed regarding the establishment of political control over the post-industrial society and the effective management of social processes by trying to find the roots of social stratification issues in post-industrial society through a group of capable individuals. D. Bell based his question about governance on M. Young's fantastical novella titled "The Renewal of Meritocracy". The content of the novella broadly discusses the mechanisms of societal influence, emphasizing individuals who possess personal merits, culminating in a portrayal of a community of scholars who face negative consequences. Meritocracy (from "merit" — to achieve) refers to a social class of individuals grounded in intellectual capabilities and the ability to accumulate new knowledge [10].

According to V.L. Inozemtsev, "the issue of meritocracy is very important, and D. Bell's attention to it is entirely understandable. The essence of the issue lies in the fact that although the principles of meritocracy are a natural phenomenon for post-industrial society, it reveals an inescapable inequality in terms of hereditary status, where the essence lies in the subordination and processing of knowledge by individuals". We will examine the works of scholars who advocate for the concept of post-industrial and informational societies [11].

J. Galbraith, по-другому написано в литературе in his book "The New Industrial Society", published in 1967, considers the new industrial society as a consequence of the fundamental transformation of capitalism based on new factors of labor. In his opinion, production becomes increasingly complex due to scientific and technological progress, requiring social organization that incorporates individual property management [12]. Accordingly, the subject of management transitions from capitalist property owners to a group of individuals managing the operations of enterprises — referred to as a technostructure. The "technostructure" is composed of specialists in management and scientific-technical fields. E. Toffler, in his work "The Third Wave", did not explicitly state who would manage the new society, but clearly indicated that the political regime, power institutions, and leadership qualities would be of higher quality compared to those of the "second wave".

Firstly, industrial informatization is an inseparable part of informatization, as a result of which a person gained freedom in their labor activity. They do not experience physical constraints at work and have less interaction with psychological processes. According to E. Toffler, "new freedom arises from the consequences of new technology. If the technology of early industrialism required workers capable of repeating certain tasks in a rote manner, the technology of the future will require individuals capable of making decisions, implementing actions that demand internal flexibility and creativity" [13]. Super-industrialism demands and produces "ordinary people" who distinguish themselves from one another, and they are not robots but individuals. Indeed, today's person must possess high intellectual abilities and psychophysiological characteristics to perform their labor activities. For many professions, physical strength and health are not of utmost importance. Informational connections do not require physical movements. A person needs to think of, generate, and aggregate ideas and solutions at their workplace. In a modern information society, a laborer does not need to be physically strong. Intellectual capability is crucial as it opens wide opportunities for individuals with limited physical capacities. A person's health is of great importance as a foundation for psychological well-being.

Secondly, the structure of the professional-qualification system will change. The number of professions requiring intellectual labor will increase, while the number of physical labor professions will decrease. The share of workers in production will diminish, and the share of administrative management and non-material service employees will grow. As E. Toffler stated: "In wealthy countries, the fewer workers engaged in material production, the more people are needed to devise new ideas" [13]. Alongside this, it is necessary for workers to have a certain level of education. Toffler noted that in wealthy, developed countries, the number of highly educated and intellectually prepared individuals among the local population is exceedingly high. However, there are still sectors of societal need for labor that do not require high qualifications and specialized education, such as cleaning jobs. Thus, in developed countries, there are no individuals who perform the aforementioned essential labor other than immigrants. Consequently, it is possible that the issue of "intellectual slavery", grounded in the level of accessibility of education within the global division of labor, may arise.

Thirdly, the transformation of the nature of labor will be influenced by informatization. By the nature of labor, we mean the totality of the relationship between the labor subject and production tools. While previously labor tools expanded the physical capabilities of a person, now information technologies enhance the intellectual abilities of a person in labor. The intellectualization of labor activity ensures an increase in the degree of freedom in the participation of an individual in technological processes and opens up opportunities

for the individual's creative realization. The nature of labor becomes a different form of creative activity, a method for the individual to realize themselves, and a source for developing human abilities. In an information society, the work of individuals is not carried out by endlessly operating devices and cannot be managed to that extent. Intellectual work has replaced mechanical work. Work is a phenomenon realized in people's minds while at desks, on airplanes, during meetings, and while eating. This pertains to how they interact with their clients, the issues they write in service letters, and what they discuss in official meetings.

In the 21st century, a new management culture is being established in Kazakhstan. Its main essence is information, knowledge, scientific planning, and social modeling. As a result, media culture plays a mediating role between society and the state, and between individuals and power. As an independent country, Kazakhstan has now entered the global information space, and the theoretical and practical perspectives on mass media tools have changed. Alongside this, our emergence in international relations has created opportunities for a closer understanding of the way of life in other countries through our mass media tools [14].

The United Nations has termed the 21st century as the "Era of Informatization" [15]. The Republic of Kazakhstan is also entering a new phase where the primary indicator of scientific and technical progress will be the informatization of society.

At present, the process of informatization is actively ongoing in all sectors of Kazakhstani society, including politics, where efforts are being made to modernize state services and administrative governance in accordance with global standards by using new information and communication technologies. One of the most important factors in Kazakhstan's political renewal is the establishment and development of information management. Stopping the tide of Western culture and standing against it is achievable primarily by elevating national consciousness, effectively utilizing the historical heritage and national values passed down through generations, and conveying these to the public consciousness [16].

In this regard, significant responsibility and obligation are placed on public information tools in our country. This means that public information tools not only shape public opinion but also safeguard our information space and influence societal consciousness by highlighting and promoting both positive and negative aspects of life.

To ensure that Kazakhstan does not fall behind global trends and to enhance its technological, cultural, and civilizational quality, one direction is to renew the political system according to modern requirements and to establish and develop information management.

The current media plays a major role in strengthening and enhancing state independence. Especially in promoting and protecting the idea of national independence through the national language and economy, it has a significant role in the ongoing struggle in the ideological arena. The emergence of new threats related to the protection of national security and freedom of speech has been facilitated by cable television and the Internet. Kazakhstan is a country that respects the national characteristics preserved by other nations, and every nation contributes to a unified culture. In the current situation, these distinctions raise various opinions about the need to keep certain information confidential to protect national interests. However, the publication of some questions in the media can create important disagreements. "If information that poses a threat to national security can be readily accessed through the global system, to what extent should restrictions be imposed on such information? This matter requires resolution by lawmakers". This remains one of the unresolved issues [17].

Any state, including the government of the Republic of Kazakhstan, is connected to ensuring the effectiveness of information management. The positive functioning of the political structure, the development of political consciousness, and the interaction between the subject and object of politics are impossible without information. Today, the formation and development of electronic governance in Kazakhstan has found its place in political life, where electronic governance encompasses the social structure, vertical relationships, and political communication in our society in a broad and profound concept. Therefore, it is necessary to research this relevant issue from a social-philosophical perspective, to conduct a comparative political analysis by referring to global experiences in building electronic governance, to search for its new paths, to evaluate its achievements, and to assess its current state and needs, which ultimately requires making political forecasts about its development processes and future.

Thus, administrative reforms are fundamentally important — without the establishment of information management, it is impossible to create a stable and flourishing society, which in turn is capable of building a sustainable political system. Today, our society has transformed into a free communication space through television (broadcast, cable, satellite), press, radio, electronic mail, mobile communication, and the Internet. All of this indicates that we are building a society based on information.

According to Kazakhstan's Strategic Development Plan until 2020, the rapid development and adaptation of information and communication technologies not only impact economic indicators but also significantly influence human life, making them a key factor in societal development. To create a modern information and communication environment, it is essential to encourage the development of telecommunications, establish infrastructure, disseminate telecommunications and electronic services, and continue building the foundations of a dynamic informational society [18].

As Kazakhstan enters the informational age, one direction for enhancing its technological, cultural, and civilizational quality while not lagging behind global trends is to renew the political system according to contemporary demands, ensuring the establishment and development of e-government.

In order to accelerate the formation of the information society in Kazakhstan, taking into account global experiences, the establishment of electronic governance and the implementation of its projects will continue in the Republic of Kazakhstan. The primary objective of electronic governance in the upcoming phase is to ensure rapid and high-quality access for the public and businesses to the services of state organizations.

The policies being implemented in the field of information technologies during the 21st century take into account the needs of the most vulnerable members of our society and create conditions for every individual to develop their capabilities. The issues of human values as the main focus of the economy and the public needs are among the most important aspects of social and political philosophy in the information age. Information policy involves the regulatory activities of state bodies aimed at developing the flow of information in society. This encompasses not only telecommunications and information systems or mass media but also the entire range of production processes and relationships related to the creation, preservation, processing, display, and dissemination of all types of information — commercial, scientific-educational, informational, etc. Explaining information policy means eliminating barriers between the various sectors of the information industry while fostering the rapid development of telecommunications, updating computer technologies, and establishing a foundation for digitizing information.

The state maintains an information policy that aligns with its economic, social-political, and national interests. Based on the fundamental reform changes in the history of the state, a correctly chosen information policy paves the way for the interests of society, preserving its unique material and spiritual values while contributing to its elevation to the level of world civilization. The development of digital technologies is referred to as a priority for the entire Eurasian Economic Space. In Kazakhstan, the "Digital Kazakhstan" program has been developed, which should become the basis for the rapid growth of technologies and the reorientation of services to electronic formats. As noted by the developers of the concept, the goal of the "Digital Kazakhstan" state program is to create conditions for accelerating the pace of economic development through the use of digital technologies in the medium term, as well as to ensure a transition to a fundamentally new development trajectory that will create a digital economy in the long term and improve the quality of life for the population [19].

Transitioning to a digital state is a direction for restructuring the functions of the state as a service infrastructure for the population and businesses, anticipating their needs. The implementation of the Digital Silk Road involves the development of a high-speed and secure infrastructure for the transmission, storage, and processing of data. New technologies are advancing at an increasingly rapid pace, making it seem unreachable over time. The most important aspect is to improve the quality of education. In today's age of information, it is impossible to imagine modern life without information technologies. As a result of the vigorous development of the information revolution, information has become the main resource of public administration. A new term, "information state", has even emerged. By the decree of the first president, the State Program "Information Kazakhstan — 2020" was approved on January 8, 2013. In this article, we will attempt to fully define its main tasks and directions [20].

The development of the information society aims to achieve a high standard of living for the population through a developed and accessible infrastructure of innovative and informational technologies. Kazakhstan, in turn, is contributing significantly to the formation of a global information society. Therefore, the State Program "Information Kazakhstan — 2020" has been developed to create all the necessary conditions. This program enables our country to fully transition to an information society. The main objectives of the program are: ensuring the effectiveness of the state management system; providing access to information and communication infrastructure; improving the quality of life and conditions through the implementation of ICT; and developing the domestic information space.

Information and communication technologies (ICT) are crucial factors in modernizing society, impacting people's lifestyles and economic indicators. ICT's significance for the lives and economy of modern Ka-

zakhstan's citizens highlights the importance of its development. In recent years, Kazakhstan has made significant progress in the ICT sector. Postal services, telecommunications, and internet access have actively developed. Extensive work has been done to improve the quality of services offered to the public and businesses through the efforts of the "Government for Citizens" Corporation. Mechanisms for feedback and dialogue between the public and the state have been implemented through government internet resources, virtual receptions, and internet conferences. However, building an information society does not stop there; continuous efforts are underway [21].

The program aims to provide conditions for citizens to access electronic healthcare services, work remotely, engage in lifelong learning and training, and acquire skills in using information technologies through electronic education. Additionally, the program seeks to introduce more intellectual systems in foundational sectors of the economy to create a more open, accessible, and competitive economy.

When we observe this development of an information society, we see that it drives progress in every field, often without deliberate effort. There might not be a single area in modern society that hasn't integrated information technology. In an information society, the main resource is understood to be information, which means knowledge. The process of providing information and informatization enhances our knowledge in every aspect of life, ensuring it is applied and used correctly. And it's not just about utilization — it's essential to understand it as proper management [22].

The use of information technology at all levels of government ensures control procedures, eliminates data redundancy, allows for a reduction in budget expenditures, and enhances the quality of services provided.

Since gaining sovereignty, the Republic of Kazakhstan has engaged in political, economic, and social relations on the global stage and is establishing its position. In this context, it is well known that the main goal of any country or nation is to preserve its religion, culture, and traditions. To continuously renew these values in the national consciousness, the role of mass media is crucial.

You may wonder, "Why?" The answer lies in the fact that various mass media outlets are actively working to highlight the essence, national characteristics, and values of the Kazakh people on a global scale. The 21st century is not an era of armed conflict and division; instead, it is a battlefield of information. By working effectively with these mass media outlets, we could hold the world in our hands. However, that is not our main objective. At this moment, our primary concern is to guide the consciousness of our youth in the right direction and to preserve national values within them. Therefore, the consistent, systematic, and vigorous operation of mass media should be the main task of the media.

The main goal of the "Digital Kazakhstan" state program is to improve the quality of life for citizens of Kazakhstan and ensure the digitization of the national economy. This program is an important step aimed at implementing the tasks outlined in documents such as the President's "Strategy 2050", "100 Concrete Steps", and "Nurly Zhol" [23].

The implementation of information technologies into the state system within the framework of the program has started successfully, and significant achievements have been made to date. Currently, the level of digitization in Kazakhstan has significantly increased, positively influencing the development of online services and e-commerce. For example, residents of Kazakhstan can perform various operations online, including paying taxes and utility services, and processing fines.

The education system has also undergone digital transformations through the installation of interactive boards and computers in schools, which facilitates the learning process for students and enhances its quality.

In developing the "Digital Kazakhstan" program, the experiences of countries such as Austria, Denmark, Australia, Canada, and Singapore in implementing digital technologies were utilized. These countries have achieved great successes in the field of digitization, and Kazakhstan is also developing its potential in this direction.

The 21st century is the era of informatization, and new goals and objectives have been set for the education and science system. To address these issues, a new state program for the development of education and science for 2020–2025 has been developed under the direction of the President of the Republic of Kazakhstan. This program aims to improve the quality of education, develop digital infrastructure, and introduce new technologies into the educational process.

Particular emphasis is placed on improving the quality of education and automating the education system through the introduction of digital educational resources, open online courses, and IT infrastructure in educational organizations. The goal of digitization in Kazakhstan is to enhance the quality of education and

simplify the teaching and management processes. These processes help improve the quality of life for the population and increase the country's economic competitiveness.

For example, global experience shows that digitization has a positive impact on the quality of education. Some countries, like Grange School in England, equip school infrastructure with technology to help students understand the real world. It is also important to foster digital literacy among students in Kazakhstan by implementing similar practices. Through digitization, the teaching process in schools becomes more effective, and students' interest in learning is increasing.

Kazakhstan is making significant strides in digitizing the national economy and society by implementing the "Digital Kazakhstan" program. This program aims to modernize not only the economic sectors but also the education system. The main objectives of the program are to enhance competitiveness, develop human capital, and enable the country to enter the ranks of the top thirty advanced countries.

As highlighted in "New Opportunities for Development in the Context of the Fourth Industrial Revolution", digitization is a crucial tool for enhancing Kazakhstan's competitiveness on the international stage [24].

The main goal of the "Digital Kazakhstan" state program is to accelerate the development of the Republic of Kazakhstan's economy and improve the quality of life for the population through the use of digital technologies. In the medium term, this goal will be achieved by digitizing the current economy and, in the long term, by creating the digital industry of the future.

The program will develop in two main directions: Digitizing the current economy involves implementing specific economic projects, digitizing various sectors of the economy, government structures, and technological re-equipment. Developing digital infrastructure is also part of this direction. This aims to enhance the efficiency of the current economic sectors.

Building the digital industry of the future is aimed at developing human capital, establishing institutions for innovative development, and intensively advancing the digital ecosystem. The main goal here is to ensure the country's digital transformation and establish the stability of the future economy.

The program was implemented from 2018 to 2022, providing additional momentum for the technological modernization of Kazakhstan's leading sectors. As a result, conditions for long-term and sustainable growth in labor productivity were created, contributing to enhancing Kazakhstan's global competitiveness.

The program's implementation focuses on five main areas:

"Digitalization of Economic Sectors" — aiming to diversify the traditional sectors of the Republic of Kazakhstan's economy by utilizing advanced technologies and opportunities that lead to increased labor productivity and capital growth.

"Transition to a Digital State" — transforming the functions of the state into a service infrastructure for the population and businesses by anticipating their needs in advance.

"Implementation of the Digital Silk Road" — developing a high-speed, secure infrastructure for data transfer, storage, and processing to realize Kazakhstan's transit potential, as well as for domestic use.

"Development of Human Capital" — Including the creation of a so-called creative society to ensure the transition to a new environment—the knowledge economy.

"Creation of an Innovative Ecosystem" — establishing conditions for the development of technological entrepreneurship and innovation through sustainable horizontal connections between business, the scientific sector, and the state. The state acts as a catalyst for an ecosystem capable of producing, adapting, and implementing innovations [25].

Within the framework of the "Digital Kazakhstan" program, 17 initiatives and more than 100 events are planned across these five areas. The implementation of these measures will lead to results visible in the coming years and will contribute to the formation of a new digital sector in Kazakhstan's economy in the long term [26].

The current level of digitalization in Kazakhstan's economy allows for a qualitative leap in development. The implementation of the program is expected to help Kazakhstan emerge among the leading countries on the global stage. The planned measures under the program's five directions will ensure the digital development of all sectors of the country, incorporating necessary flexible changes. Currently, digitalization significantly facilitates our daily lives and work processes. Purchasing goods online, ordering services through the internet, and exchanging information are among the main advantages of digitalization. These new technologies not only increase the efficiency of the economy but also simplify living.

The scope of digitalization is very broad. For example, the use of digital technologies in daily life is a familiar phenomenon for us. Many people use security systems or "smart" devices at home. Automatically activated alarm systems are one example of digitalization in everyday life.

It is clear how digitalization affects the acceleration of work processes. The development of digitalization plays an important role in various sectors today, contributing to making the economy efficient, safe, and fast. For example:

Kaspi.kz application: The most popular financial application in Kazakhstan, where payments, transfers, loans, and deposits are all managed in digital format.

Egov.kz: The electronic government portal that provides citizens with the opportunity to access public services online (for example, obtaining certificates, paying taxes).

Halyk Homebank: The mobile application of Halyk Bank, enabling online management of banking services.

Sergak system: A system of intelligent cameras installed to monitor traffic, automatically recording fines and processing them digitally.

E-Salyq Azamat: This application allows users to obtain information about taxes and make tax payments in digital format.

Electronic labor exchange: A digital platform for job searching and connecting with employers, where the job placement process is conducted online.

Payments via QR code: The option to make payments using QR codes is widely available in many retail outlets, cafes, and restaurants across Kazakhstan.

Kazakhstan Railways: Online ticket purchasing and seat reservation services create convenient conditions for passengers.

Smart Astana and Smart Almaty: These projects involve the implementation of a digital payment system for public transport and the digital management of traffic.

E-commerce and marketplaces: E-commerce platforms like Wildberries, OLX, and Lamoda in Kazakhstan contribute to the development of the digital economy, creating convenient conditions for entrepreneurs and consumers.

Astana Hub: A major IT startup center in Kazakhstan, aimed at supporting technological entrepreneurs and developing innovations. Astana Hub is becoming an essential part of the digital ecosystem.

Electronic health passports: Information about the health status of each citizen is stored in digital format in Kazakhstan, allowing doctors to quickly review a patient's health history and make informed decisions.

Open Data Kazakhstan: Kazakhstan's open data platform, where citizens can access data from government agencies in an open format and use it for various purposes.

National education database: Digital education platforms have been introduced for schools and universities. The education processes are being optimized through online classes, digital learning materials, and testing systems.

Digitalization of housing and communal services: Through the "Smart Home" projects, residents can manage their homes remotely, pay for communal services online, and conduct calculations.

We can confirm through data that the foundations of digitization in society began in Kazakhstan about ten years ago. Currently, the necessary infrastructure for a successful start has been established in Kazakhstan. It can be said that the basic level of digitization exists in all sectors of the economy. An electronic government has been created and is functioning successfully. With the help of the eGov system, developed based on the South Korean model, it has become possible to carry out hundreds of operations without going anywhere, simply sitting in front of a computer. Today, any citizen can process documents, obtain various certificates, and pay for utility services, taxes, fines, insurance, and other services from the comfort of their home. Digitization plays a significant role in the development of modern society and offers considerable opportunities to enhance its efficiency. However, like any technological process, digitization has its own risks and downsides, which are important to consider.

Kazakhstan presents itself as a social state where the highest values are human life, rights, and freedoms. During the years of independence, our country has developed a unique model of social welfare and made significant steps towards achieving sustainable development goals. These steps are aimed at improving the quality of life for the population, creating a competitive education system, enhancing healthcare, and increasing job opportunities.

The role of digitization in these processes is very important. By introducing new technologies, significant impacts have been made to increase labor productivity in production and secure work processes. The development of electronic government has made the provision of public services faster, more transparent, and accessible. One of the achievements in this direction is Kazakhstan's ranking 28th out of 193 countries in the 2022 United Nations e-government ranking [27].

The Electronic Government Development Index (EGDI) is based on three main indicators:

Quality and Coverage of the Internet (Online Service Index) — assesses the online accessibility and quality of public services.

Level of Development of Information and Communication Technologies (Telecommunication Infrastructure Index) — evaluates the level of telecommunication infrastructure development, internet access, and communication systems.

Human Capital (Human Capital Index) — measures the education level and technological skills of the population.

This ranking demonstrates that Kazakhstan has achieved significant progress in developing electronic government and is striving to improve the quality of life of its citizens through the implementation of digital technologies. Digitization is also enhancing efficiency in the production sector and contributing significantly to ensuring labor safety. However, digitization raises issues such as invasion of personal space, influence on subconsciousness, cybercrime, and information warfare. Additionally, the impact of digital media may aggressively promote kitsch culture and increase the risk of misinformation spreading within society. To manage these risks, it is crucial to strengthen the legal and technical protection of the digital space and to develop digital hygiene and digital competencies.

There is a growing need to study how digitization processes affect social justice within society in Kazakhstan. Digital technologies must be properly utilized to enhance the effectiveness of political governance and to develop new forms of public structures. This requires a deep understanding of the political, social, and cultural impacts of digitization. As noted by Degtyareva, Sozaeva, and Zhao, the introduction of digital technologies has dramatically changed communication and may have slowed down managerial decision-making. Decision-making and managing via social networks, for example, takes on average three times the time compared to face-to-face brainstorming sessions, although this is not linearly related to the presence or absence of a leader [28].

In technologically advanced countries, the influence of digitization on social and political spheres presents various challenges and risks. Therefore, it is essential to study these processes and manage their potential negative impacts on society. As the authors emphasize, the social issues of digitalization, such as changes in the structure of the labor market, professions, and the transformation of established social groups and classes, require more time-intensive and thorough study. This study can be considerably adjusted by a sample of the urban population, especially in megacities, where shifts will be more noticeable, and in small cities, where it may be less clear-cut for making reliable conclusions.

Mass media is a mirror of society. It is clear that the materials presented to the public are prepared to influence public consciousness. Therefore, it is evident that the information presented to the public will have some impact at its level.

Conclusion

In conclusion, the development of the digital system brings many advantages through the introduction of new technologies. However, to use them responsibly, it is necessary to make strategically tested decisions. This will allow for the creation of optimal future scenarios and requires consideration of the sociocultural, political, and humanitarian aspects of technological revolutions.

The process of digitalization marks a new phase in human history. In this phase, technology plays a leading role, and the role of humans as initiators and drivers of progress is gradually changing, with an increasing dependence on technology. In new socio-technical conditions, people are encountering new issues and facing digital realities, necessitating a deep understanding of these complex changes.

The primary goal of digitalization is to convert information into a digital format and utilize it effectively across various sectors. This process expands communication and cognitive opportunities and creates new digital environments that are different from the real world. As a result, an electronic form of culture has emerged, closely related to the current global changes.

All leading countries are transitioning to a digital system, effectively leveraging the advantages of digitalization to improve their economies and the well-being of their populations. In Kazakhstan, digitalization

policy also plays an important role. The country has adopted state programs such as “Information Kazakhstan — 2020”, “Digital Kazakhstan”, and “Technological Leap through Digitalization, Science, and Innovations”. These programs aim to enhance the country’s socio-economic development, promote the advancement of science, and improve the quality of life for the population through digital transformation.

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Цифрландыру дәуірі: заманауи Қазақстандағы технологиялық өркениеттің философиялық аспектілері

Мақалада қазіргі Қазақстандағы цифрландырудың философиялық қырлары қарастырылған, оның білім беру, қоғамдық құрылымдар және жастардың мақсат-мұраттарына тигізетін өзгерістері талданған. Еліміз технологиялық өркениеттің күрделі үдерістерін игеру үстінде болғандықтан, цифрландыру мен мәдени болмыстың өзара әрекеттестігі барған сайын маңызды болуда. Зерттеуде цифрлық технологиялардың білім беру парадигмаларын қалай өзгертетіні, әлеуметтік динамикаға қалай әсер ететіні және жастардың мінез-құлқы мен мақсаттарын қалай қалыптастыратыны қарастырылып, цифрлық өзгерістердің әкелетін сын-қатерлері мен мүмкіндіктері зерделенген. Зерттеу философиялық талдау мен тақырыптық зерттеуді біріктіретін сапалы әдістемеге негізделген. Жұмыс тиісті әдебиеттерді шолуды, нақты жағдайларды талдауды және цифрландырудың этикалық, әлеуметтік және мәдени қырларын түсіндіруді қамтиды. Қазақстанның білім беру және әлеуметтік салаларындағы мысалдар цифрлық өзгерістердің елге қалай әсер етіп жатқанын көрсетеді. Цифрландырудың философиялық негіздерін айқындай отырып, зерттеу технологиялық прогрестің моральдық және мәдени салдарын қарастыратын құрылымның қажеттілігін атап өтеді. Мақалада цифрландыру тек модернизацияға ғана емес, сондай-ақ инклюзивтілік пен прогрессивтілікке ықпал ететін маңызды күш ретінде көрсетіліп, технологияларды Қазақстанның дәстүрлі құндылықтары мен қазіргі заманғы қажеттіліктерімен үйлестіретін өркениетті қалыптастыруда маңызды рөл атқаратыны айтылған.

Кілт сөздер: Қазақстан, білім, қоғам, жастар, цифрландыру, технология, өркениет.

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Эпоха цифровизации: философские аспекты технологической цивилизации в современном Казахстане

В данной статье рассмотрены философские аспекты цифровизации в современном Казахстане с акцентом на её преобразующее влияние на образование, общественные структуры и устремления молодёжи. В условиях, когда страна осваивает сложную реальность технологической цивилизации, взаимодействие между цифровизацией и культурной идентичностью становится всё более актуальным. Исследование анализирует, как цифровые технологии трансформируют образовательные подходы, меняют социальные динамики и влияют на поведение и цели молодого поколения, отражая как вызовы, так и возможности, связанные с этой цифровой трансформацией. Исследование опирается на качественную методологию, сочетающую философский анализ и тематическое исследование. Работа включает обзор релевантной литературы, анализ кейсов и интерпретацию этических, социальных и культурных аспектов цифровизации. Примеры из образовательного и социального контекста Казахстана иллюстрируют, как цифровая трансформация влияет на страну. Выделяя философские основы цифровизации, исследование подчёркивает необходимость разработки структуры, которая учитывает моральные и культурные последствия технологического прогресса. В статье утверждается, что цифровизация способствует не только модернизации, но и инклюзивности и прогрессивности, выступая важным фактором, способствующим гармоничному сочетанию технологий с традиционными ценностями и современными потребностями Казахстана.

*Ключевые слова***:** Казахстан, образование, общество, молодёжь, цифровизация, технологии, цивилизация.

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