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Digital Inclusion in Philosophical Discourse: An Analysis of Government Programs in Kazakhstan and Belarus

Ainur Abdina✉[a], Anar Uyzbayeva[a], Elena Kuchko[b]

[a]*Astana IT University, Astana, Kazakhstan*
[b]*Belarusian State University, Minsk, Belarus*

✉*ainur.abdina@astanait.edu.kz*

Abstract. This article aims to analyze government programs in digitization and digital technologies in the Republic of Kazakhstan and the Republic of Belarus. This analysis examines the alignment of these programs with contemporary philosophical and ethical concepts. The study explores digital inclusion from a philosophical perspective, considering its significance for both individuals and society. It critically analyzes the government programs of Kazakhstan and Belarus designed to bridge the digital divide and ensure equal access to digital technologies as a key aspect of social justice and sustainable development. The study employs hermeneutic, comparative, and historical methods, along with an anthropocentric approach. The analysis reveals disproportions in addressing digital development and inclusivity within state programs, including Kazakhstan's *Digital Kazakhstan and Digital Transformation Concept, and Belarus's State Program for the Development of the Digital Economy and Information Society and Digital Development of Belarus.* These discrepancies present challenges for the educational and social sectors. Authors emphasize the need to revise digital transformation strategies to balance technological progress with human needs. This highlights the importance of a human-centered approach in both digital development strategies and societal progress.

Keywords: digital inclusion; digital exclusion; digitalization; digital divide; philosophical discourse; government programs.

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Introduction

Digital inclusion, defined as ensuring equal access to digital technologies, knowledge, and skills necessary for full participation in society, is becoming an increasingly relevant issue in modern times. In the era of information technology, digital inclusion is shaped by global digital transformation, which affects nearly all aspects of social interactions. The philosophical discourse on digitalization and the role of technology in societal modernization covers a broad spectrum of topics, including its impact on social, cultural, and ethical aspects of life. This discourse reflects an ongoing dialogue between optimistic views on technological potential and critical assessments of its risks.

Given the rapid advancement of digital technologies and their growing impact on individuals and society, both in terms of expanding opportunities and deepening existing social inequalities, philosophical reflection necessitates addressing numerous issues arising from these processes. One of the key challenges is the digital divide, which refers to disparities in access to and use of digital technologies across different social groups, regions, or countries. In the context of inclusion, the digital divide hinders certain individuals from fully participating in the digital economy, education, healthcare, and other aspects of life.

The central research question of this article is: How do government programs aimed at digital inclusion align with contemporary philosophical and ethical concepts? This issue is examined through the analysis of public and state initiatives in Kazakhstan and Belarus in the field of digitalization.

Materials and Methods

This study employs a multidisciplinary approach that combines philosophical analysis with policy evaluation to examine digital inclusion strategies in Kazakhstan and Belarus. The research is based on hermeneutic, comparative, and historical methods, along with an anthropocentric approach, content analysis of government programs, statistical data, and philosophical discourse on digital inclusion. The study relies on official government documents, legislative acts, and national digitalization programs of Kazakhstan and Belarus, including: Digital Kazakhstan (2018–2022) and Digital Transformation Concept (2023-2029); Belarus's State Program for the Development of the Digital Economy and Information Society (2016-2020) and Digital Development of Belarus (2021–2025); National reports and assessments on digital transformation progress published by ministries and governmental agencies; Statistical data from international organizations, assessing digital development indicators, and digital literacy levels. Additionally, the study incorporates academic literature on digital transformation, inclusivity, and human-

centered approaches in digital policy. Articles from peer-reviewed journals, research reports, and expert analyses provide insights into the social and ethical implications of digitalization.

Philosophical Discourse

Until the mid-20th century, the issue of inclusion, both in education and other social constructs, was not on the agenda. Researchers note that ancient philosophy, "whether consciously or unconsciously, proclaimed ideas of exclusion and social inequality as the foundation of an ideal world for centuries to come. This not only influenced the course of human history, where every 'Other' was automatically given the status of a *persona non grata*, but also restructured all sociocultural processes" (Sudakova, 2019: URL).

The concept of "inclusion" was introduced into academic discourse at the *World Conference on Education for Persons with Special Needs: Access and Quality* in Salamanca, Spain, in 1994, where the *Declaration on Principles, Policies, and Practices for the Education of Persons with Special Needs* was adopted (Salamanca Declaration, 1994). As a humanistic idea, inclusion has gained traction both in academia and in social policies worldwide. Prominent philosophers have laid the groundwork for bridging these two spheres to address pressing issues for people with disabilities.

In one of their previous studies, the authors of this article (Abdina et. al., 2023) highlighted Julia Kristeva's approach to this issue, which emphasizes bringing together individuals with disabilities and those without. This approach aims to end the marginalization and isolation of people with disabilities. Kristeva's perspective is particularly evident in her letter to the President of France on the rights of people with disabilities (Kristeva, 2003) and in her article *Liberty, Equality, Fraternity, and… Vulnerability* (Kristeva, 2010).

Philosophical ideas on accepting the Other and combating discrimination are partly based on the works of 20th-century intellectuals. For instance, Michel Foucault, in his critique of dominant societal discourse, illustrates how power imposes its ideology. When discussing the concepts of "impairment" and "disability," Foucault defines the former as the physical and psychological characteristics inherent to an individual, while the latter is a socially constructed concept shaped by societal norms. By imposing this construct on individuals, society begins to perceive any deviations as "disabilities", leading to discrimination against anything that does not conform to accepted standards. Based on this, Foucault argues for the necessity of a discourse on atypicality, which is essential for reconstructing social reality and its practices. In this discourse, cultural diversity is viewed as a prerequisite for development and interaction, and society, along with its institutions, should embrace the atypical, integrating individuals inclusively into social functioning. This, in turn, fosters their growth, development, and self-expression on equal terms (Korshunova, 2016).

The 20th-century philosophical discourse on inclusion, which also addresses digital inclusion and the digital divide, focuses on key issues such as justice, equality, access, ethical concerns in technology use, and human rights in the digital era. Digital technologies seamlessly fit into Martin Heidegger's reflections on technology as a mode of understanding and revealing the world, as a realm of "bringing forth from concealment, the realization of truth" (Heidegger, 1977).

If Heidegger had written in the 21st century, he might have explored artificial intelligence and other technological advancements similarly, contemplating how digital space is "appropriated" and its impact on human existence. He might also have considered the risk of digital inclusion transforming into a tool for control or alienation.

John Rawls' concept of justice (Rawls, 1971) is based on key conditions that ensure the applicability and sustainability of his theory in modern society. These conditions include: every individual acting rationally, selecting options that best align with their interests without considering the interests of others; all individuals possessing equal basic freedoms, which eliminates the possibility of one person dominating another; and the hypothetical "Veil of Ignorance", under which no one knows their innate or social advantages, thus preventing the use of such factors for personal gain at the expense of others. When applied to digital inclusion, the key conditions of John Rawls' concept of justice are essential for modern society to ensure fair access to digital resources and to bridge the digital divide.

Another relevant contemporary concept in the philosophical discourse on digitalization is Amartya Sen's "Equality of Autonomy" theory (Sen, 2010). According to this theory, a just society is one in which every individual, taking into account their unique characteristics and social circumstances, is provided with the opportunities and means necessary to achieve their personal goals. In this context, access to digital technologies can be seen as a tool for expanding individuals' capabilities and achieving equality in autonomy.

Bruno Latour's Actor-Network Theory (ANT) (Latour, 2013) views technologies as equal participants in interactions. In the context of digital inclusion, this perspective helps to understand how technologies either facilitate or hinder access to digital resources. For example, interface design may either simplify or complicate access for people with disabilities, and internet availability may determine whether certain population groups can participate in digital society.

Since ANT examines complex interconnections between humans and technologies, its application to digital inclusion involves analyzing the interactions between users, digital resources, political institutions, state regulations, and economic structures that affect access to digital technologies. For instance, to analyze digital inequality, one could explore how government programs interact with technological infrastructures and users. In other words, ANT provides a framework for considering the multifaceted and complex nature of digital inclusion by analyzing it as the outcome of interactions among various actors and networks.

Literature Review

Continuing the philosophical discourse on digital inclusion, we turn to contemporary research that directly examines the concepts of "digital inclusion", "digital exclusion", "digital divide", and others. Researchers note that the term "digital inclusion" is a categorical synthesis of the concepts of "social inclusion" and "digital inequality" and is defined as: "...a socially advantageous position achieved through the successful adoption of digital technologies, driven by mechanisms of social inclusion that promote greater participation in social life" (Plotichkina, 2020). At the same time, scholars also refer to the concept of "digital exclusion", which characterizes a socially

disadvantaged position (in terms of education, qualifications, employment, etc.) resulting from a lack of access, digital skills, motivation, tangible benefits from ICT use, or specific social status.

The concept of "digital exclusion" is extensively studied by researcher E.J. Helsper. In her article "The Social Relativity of Digital Exclusion: Applying Relative Deprivation Theory to Digital Inequalities" (Helsper, 2016: URL), she highlights the complexity and multidimensional nature of exclusion. Consequently, research on digital inequality cannot be based on an individual and static approach but must consider that assessments of personal circumstances depend on social and temporal contexts and are therefore relative.

In "A Corresponding Fields Model for the Links Between Social and Digital Exclusion" (Helsper, 2012: URL), Helsper proposes a theoretical model suggesting a reciprocal relationship between specific areas of digital and social exclusion. Moreover, Helsper pays attention to the gender aspect of digital exclusion. In the article "The Emergence of a 'Digital Underclass' in Great Britain and Sweden: Changing Reasons for Digital Exclusion" (Helsper, 2017), co-authored with another researcher, it is noted that:

1. The influence of social networks on civic engagement varies by gender.

2. Women's positive attitudes towards the personal, rather than social, benefits of social media use are strong predictors of civic participation.

Today, digital inequality is one of the most pressing issues in digital discourse. The theoretical and methodological understanding of digital inequality began in the second half of the 20th century. Initially, this phenomenon was considered solely as an economic disparity between population groups in terms of access to technology. However, over time, it has come to be understood as a more complex and systemic issue, reflecting structural social inequality in the context of the networked society.

Sociologists emphasize that digital inequality is not so much an individual trait as it is a categorical distinction between groups of people. They identify three levels of the digital divide: access to technology (first level), possession of digital skills (second level), and use of technology to improve quality of life (third level).

The focus is placed on the importance of not only technological accessibility but also social capital, motivation, and intellectual and professional skills, which significantly influence societal stratification.

Researchers note that while increasing access to information technology has improved first-level digital inequality indicators, it has also been accompanied by a decline in the average level of digital skills. This suggests a need for active development of educational and motivational programs. Additionally, there is a gradual increase in the number of users who utilize digital technologies to enhance their quality of life. However, to achieve a sustainable reduction in third-level digital inequality, further efforts are needed to develop competencies in the field of digital economy (Yudina, 2020).

A large number of studies have explored the problems of digital inequality and the digital divide. One special thematic issue (Reisdorf, 2020) compiles materials on digital technology implementation initiatives and scientific research from more than 20 countries, covering numerous aspects, including different types of initiatives and the diverse target audiences of these initiatives.

The authors of the thematic issue aim to make these initiatives accessible not only to an academic audience seeking to expand their understanding of digital inclusion and what "can be done" rather than focusing on what "is wrong" but also to policymakers and digital inclusion advocates looking to advance their work in expanding digital access both in the short and long term.

The thematic issue presents research on various aspects of digital inclusion, covering a wide range of countries, initiatives, and population groups. The key research themes include:

1) Factors of digital integration, such as:

Social support and its impact on digital inequality (Belgium);

The role of digital literacy and sustainable programs for low-literacy populations (India, Kenya, Senegal, etc.);

The impact of mobile phones on social capital (Rwanda).

2) Digital integration among vulnerable groups:

Gender aspects of digital literacy and women's time redistribution (Spain);

Barriers to digital learning for people with intellectual disabilities (Germany);

Features of technology use by the elderly and its impact on daily life (Austria).

3) Initiatives and programs:

The maker movement in Europe as a means of democratizing digital knowledge;

Approaches to developing digital skills among schoolchildren (USA);

Youth socialization through digital technologies (Spain);

Multinational Digital Integration Initiatives in North and South America and the Caribbean.

Research shows that successful digital inclusion depends on a combination of technology accessibility, digital literacy, and social support. To effectively address digital inequality, an individualized approach, consideration of the characteristics of specific groups, and the early implementation of digital education programs are essential.

A review of global academic literature also reveals a significant number of studies in the field of digital inclusion. For example, Pérez-Escolar M. and Canet F. (2023) propose a taxonomy describing the phenomenon of vulnerable individuals and digital inclusion. They argue that categorization criteria can facilitate further interdisciplinary research on the relationship between vulnerable populations and their inclusion in digital life.

Lee-Ying Tay, Hen-Toong Tai, and Gek-Siang Tan (2022) highlight the persistent digital gap in developing countries between men and women, the wealthy and the poor, and urban and rural areas in terms of access to and usage of digital financial services.

Some researchers emphasize the different ways people use the Internet, as digital technology adoption is not limited to access (e.g., infrastructure, speed, and cost); these are components of a much broader and more complex concept of what it means to be included. Borg, K., and Smith, L. (2018) examine how Australians use the Internet, employing a detailed approach to measuring online behavioral preferences. Based on telephone interviews with 1,584 respondents assessing online behavioral preferences, attitudes towards the Internet, digital self-efficacy, and access, the researchers conclude useful lessons for adapting digital technology implementation programs to the needs of specific user groups.

Another important topic is the social integration of newly resettled refugees, which is relevant both for the refugees themselves and for the societies hosting them. Andrade, A. D.,

and Doolin, B. D. (2016) argue that information and communication technologies (ICTs) are increasingly viewed as valuable resources in programs that provide resettlement services or promote participation in community life. They go beyond traditional discussions of digital inequality and examine what people can do and achieve with ICTs. Based on an analysis of ICT use for specific purposes by more than 50 resettled refugees, the researchers suggest that ICTs serve as a resource from which five valuable capabilities emerge: participating in the information society, communicating effectively, understanding a new society, maintaining social connections, and expressing cultural identity. By realizing these opportunities through ICTs, refugees demonstrate autonomy and enhance their well-being in ways that enable them to function effectively in a new society and regain control over their disrupted lives.

As evident, research on digital inclusion is diverse and holds both theoretical and practical significance in various spheres of public life. The next part of our work focuses on a critical analysis of government strategies in Kazakhstan and Belarus aimed at overcoming the digital divide and ensuring equal access to digital technologies as a key aspect of social justice and sustainable development.

Analysis of Digitalization Programs in Kazakhstan

In an era of rapid digital technology development, digital inclusion to ensure equal access to these technologies for all citizens is becoming increasingly important for Kazakhstan. A striking example of this is the Asia-Pacific Ministerial Conference on Digital Inclusion and Transformation, held in Astana in September 2024. The conference was organized by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) in collaboration with the Government of Kazakhstan. The main theme of the conference was overcoming the digital divide in the Asia-Pacific region, ensuring quality digital skills training, strengthening trust and security in the digital space, and promoting more inclusive digital economies and societies. A dedicated session focused on empowering women in the IT sector, aiming to overcome digital gender inequality (Governments and IT Experts to Strengthen Digital Inclusion and Transformation, 2024).

Additionally, Kazakhstan's rankings in international IT ratings improve each year (Kazakhstan ranked 24th in the UN E-Government Global Index, 2024; Kazakhstan entered the top three Central and South Asian countries in the Global Innovation Index-2024). Today, Kazakhstan is among the world's top 30 digitalized countries and ranks 8th in online services. Such high achievements result from the country's consistent policy in information technology and digitalization programs.

In December 2017, the State Program “Digital Kazakhstan” (2018–2022) was adopted (hereinafter SP DK). After its implementation, the Digital Transformation Concept for the Development of the ICT Sector and Cybersecurity (2023–2029) was approved in March 2023 (hereinafter DTC). Numerous reports and publications on the outcomes of DK are publicly available online. Until recently, an official website provided updates, events, statistics, and reports on the program's implementation. Next, we will analyze some key aspects of these documents that have not yet been addressed.

As we know, human capital is a crucial component of any society, and Kazakhstan's future depends on its development and quality. However, the wealth of human capital is largely determined by the competitiveness and quality of education received. In the SP DK, human capital development is the fourth priority, following the digitalization of economic sectors, the transition to a digital government, and the development of data transmission, storage, and processing infrastructure. Human capital development is associated with "transformations that include the creation of a so-called creative society to ensure the transition to new realities - the knowledge economy" (State Program "Digital Kazakhstan" (hereinafter SP DK), 2017: 4). However, the document does not clarify what is meant by a creative society or the knowledge economy.

Under the "Human Capital Development" priority, the program aimed to enhance digital literacy through formal (educational institutions) and informal education (training and retraining) (SP DK, 2017: 28, 45). However, these tasks focus solely on Kazakhstan's working-age population, while people with special needs, different age groups, rural residents, or low-income populations are not mentioned.

After SP DK was completed, the DTC was adopted. The concept aims to improve people's quality of life through the adoption of modern technologies (Concept of Digital Transformation (hereinafter DTC), 2023). This program places greater emphasis on human capital development than the previous one and states that human capital is a "key factor in stimulating innovation", designating one of its principles as human-centricity.

In the DTC, the section analyzing the current situation emphasizes that the demand for ICT specialists is increasing every year; there is a significant rise in training costs for employees involved in the development and use of ICT; the level of highly specialized IT professionals remains low; and the need for personnel with modern skills is growing. In this regard, the DTC's target indicators include the support and promotion of programming schools, as well as the training of highly qualified IT personnel. The planned number for each year is the same - 350,000 people - however, the indicators do not specify the target audience groups.

The document also states that "mechanisms will be developed to stimulate the research activities of organizations in the Republic of Kazakhstan, entrepreneurship schools will be opened, and large international IT companies will be attracted to establish their research centers" (DTC, 2023). However, this last aspect is not reflected in the target indicators.

Since the implementation of the DTC, the number of electronic government services for both individuals and legal entities has increased; new digital solutions and platforms have been introduced; and projects such as "Social Wallet", "Registry of Domestic Manufacturers", "Online Notary", the E-Otinish platform for systematizing citizen requests, QazTech, and others have been launched. The Digital Code of the Republic of Kazakhstan has been developed, new regulatory requirements have been introduced to improve communication quality and anti-fraud systems to reduce scam calls, legislative norms on digital transformation have been approved, and the Concept for Artificial Intelligence Development for 2024-2029 has been adopted. Human capital development is supported by the establishment of the Alem. AI Center at the EXPO Nur Alem site, which will become a key hub for training specialists, stimulating scientific initiatives, and developing AI startups (Mid-Year Results, 2024).

However, as in the SP DK, the DTC primarily focuses on youth and the working-age population, indicating an insufficient consideration of inclusivity principles despite the declared anthropocentric approach in these programs.

One of the main goals in these documents is to mitigate digital inequality by improving computer literacy and providing broadband access to rural settlements through fiber-optic communication technology.

The presence of personal gadgets, the internet, and electronic services, as well as the implementation of state programs, is not an indicator of digitalization or digital literacy. With the introduction of the aforementioned programs, there is a sharp increase in the need not only for computer skills training but, more importantly, for digital security education and digital hygiene principles. Certain age groups (children, teenagers, the elderly), socially vulnerable populations, and people with disabilities, as well as emigrants, will be particularly susceptible in this regard. Given the sharp rise in cyber fraud, it is insufficient to focus solely on computer literacy courses. There is an urgent need for digital security and internet hygiene education, particularly among vulnerable populations, rather than merely improving digital (legal) literacy levels among IT specialists, managers, and the general population, as outlined in the DTC (DTC, 2023). This issue is as critical as Kazakhstan's accession to the Convention for the Protection of Individuals with Regard to Automatic Processing of Personal Data (2022).

Despite the reported results of the SP DK implementation, the high indicator figures of the program raise doubts about data transparency and accuracy. Analysis of reports on program implementation reveals discrepancies. For example, regarding digital literacy levels (as a sub-priority of human capital development), according to the Accounts Committee, the digital literacy rate of the population at the end of 2020 was 84.1%, an increase of 4.5% over the past three years (Supreme Audit Chamber of the RK, 2022:URL). However, according to the OECD, "less than 30% have basic ICT skills" (Insights on the Business Climate in Kazakhstan, 2022:53) [14, p. 53]. One source states that in 2019, 43% of rural areas were provided with internet (Digital Kazakhstan: What has changed in the country over the year, 2020: URL), whereas another source claims that as of 2024, this figure was 41% (Senate of Parliament news, 2024: URL).

Experts studying internet content, websites, and mobile applications highlight their low accessibility for people with special needs. They also note that Kazakhstan's digitalization program is not inclusive and that the design of e-government services and banking mobile applications does not comply with national and international regulatory documents, particularly the WCAG 2.0 and WCAG 2.1 international standards. Kazakhstan's policy on protecting the rights of people with disabilities does not take into account their right to access digital products (Abdykaimov, 2022: URL; Alayev, 2022: URL).

Additionally, in September 2024, Senate Deputy S.T. Aldashev recognized the "Information Kazakhstan 2020" and "Digital Kazakhstan" programs as unsuccessful, as their implementation did not bring the expected results to Kazakhstan (Senate of Parliament news, 2024: URL).

Fragmented data indicate that the program's target indicators are not specific, and a unified system for assessing achieved results and planned activities is lacking. Such data may suggest insufficient transparency, systemic issues, lack of coordination between agencies, and possibly difficulty accessing information. They may also indicate deliberate data distortion or misinterpretation to portray program implementation as successful.

All of this signals the need to revise the criteria for measuring and evaluating program implementation, improving assessment methodology, monitoring systems, and considering these aspects when developing government programs. Despite efforts to develop infrastructure, there is

still a need to ensure equal access to digital services for all segments of the population, including rural and remote regions. Digital literacy levels among the population, particularly among the elderly and socially vulnerable groups, need improvement. There is a growing necessity to strengthen measures for protecting citizens' personal information, increasing trust in digital services, popularizing internet hygiene, and promoting digital security. It is important not only to highlight "success zones" but also to identify "failure points", analyzing which require additional efforts and solutions, ultimately contributing to the country's further digital development.

Overall, Kazakhstan demonstrates significant progress in digital transformation aimed at improving citizens' quality of life. However, to achieve a fully anthropocentric approach in the implementation of government initiatives, continuous work is required to enhance accessibility, education, and security in the digital sphere.

Analysis of State Digitalization Programs in Belarus

Like Kazakhstan, Belarus has chosen digitalization as one of the key directions for national development. The country is actively advancing digital transformation, focusing on creating digital infrastructure, improving digital literacy among the population, and implementing modern technologies in the economy, education, public administration, and other sectors to enhance accessibility and efficiency.

An analysis of key indicators in international digitalization rankings shows that Belarus is a promising country in terms of digital transformation of the economy and society (Kalinovskaya, 2023). The country's ranking is determined by several indicators, including broadband internet access and data transmission speed, the level of digital literacy among the population, availability of digital public services, the use of digital technologies across industries, investment in the development of the digital economy and infrastructure, and cybersecurity measures. In some aspects, Belarus ranks higher than Kazakhstan and Russia (Kalinovskaya, 2023).

The foundation for digital transformation and achieving high rankings was laid by previously adopted programs. From 2016 to 2020, the state program for developing the digital economy and information society was implemented. This program helped establish the necessary information and communication infrastructure, facilitating the development of modern e-government technologies and related services, as well as digital transformation across various economic sectors (State Program "Digital Development of Belarus" for 2021–2025, 2021:URL).

The program's main objectives included developing IT infrastructure, implementing electronic public services, creating an innovation ecosystem, and improving digital literacy. Based on these objectives, several initiatives were planned and executed:

Expanding access to broadband internet;

Modernizing telecommunications networks and creating a unified digital space for public and private organizations;

Developing and launching the Unified Electronic Services Portal, providing access to administrative processes and services for citizens and businesses;

Establishing and expanding the High-Tech Park (HTP) as a hub for IT innovation;

Supporting startups and attracting investment into the IT sector;

Launching the *Electronic School* project, which developed software and methodological resources for the National Information and Educational Environment. (Information on the Implementation of the State Program in 2019: URL).

The implementation of these initiatives had a positive impact on Belarus's economic and social development. By 2018, IT service exports exceeded imports fourfold, the creation of an IT ecosystem stimulated startup growth and attracted international investment, and the Unified Electronic Services Portal provided citizens with access to over 300 services, simplifying document processing and registration, which improved transparency in public services (Ermakova, 2020: URL).

However, several shortcomings were identified in the state program, particularly the lack of a human-centered approach. The program primarily focused on technological development but did not sufficiently consider the needs of various population groups, including the elderly, people with disabilities, and rural residents. Not all online platforms were adapted for users with special needs. Despite efforts to bridge the digital divide and the high level of internet penetration in settlements, disparities between urban and rural regions persisted. Digital literacy training programs mainly target young people, neglecting older adults and other vulnerable groups. Additionally, there were no effective mechanisms for collecting and analyzing public feedback on provided services, leading to inadequate adaptation of electronic services to real user needs.

In February 2021, Belarus adopted a new state program, *Digital Development of Belarus* for 2021-2025, aiming to implement information and communication technologies and advanced manufacturing technologies across various industries and aspects of society. By 2023, 71 initiatives had been implemented under this program. Key achievements from 2021 to 2023 include the creation of specialized information systems to support data digitization, business process automation, and the development of electronic services for citizens and organizations. Examples include the Automated Information Systems (AIS) *Humanitarian Activities, Awards,* and *Confiscated Goods* (Belarus Summarizes the Results of the State Program for 2023, 2024: URL).

In 2024, the program was expanded with new initiatives, including the digitization of residency registration and driver's license renewal, as well as the modernization of the state system for processing citizen and legal entity appeals. Additionally, in November 2023, Decree No. 381 *on Digital Development* was adopted, outlining digitalization priorities until 2030, covering industries such as manufacturing, education, healthcare, and transportation.

Between 2021 and 2023, Belarus made significant strides in digitalization, implementing key projects and laying the groundwork for digital inclusion. Notable improvements include:

Modernization of the *Legal Forum of Belarus* website for enhanced accessibility and usability;

The creation of a benefits tracking platform, easing access to information for citizens in need of support;

Upgrades to the system for processing citizen and legal entity appeals, simplifying application submission and tracking (Reports on the Implementation of the State Program, 2024: URL).

Most digital projects within the state program cater to the general population, limiting opportunities for personalization. Systems insufficiently address the needs of vulnerable groups, such as people with disabilities, rural residents, and the elderly. Uneven infrastructure development across different regions (urban vs. rural) complicates access to digital services. Some Automated Information Systems (AIS), such as *Confiscated Goods* and drone registration, primarily serve administrative rather than citizen-oriented objectives.

The *2016-2020 Digital Economy and Information Society Development Program* was an important step toward Belarus's digital transformation. It strengthened the IT sector, introduced digital public services, and modernized infrastructure. However, the lack of a human-centered approach limited its impact on improving the quality of life for all population groups.

Notably, a fully human-centric approach was also not embedded in the subsequent 2021-2025 digitalization program. To enhance digital inclusivity, it is not enough to merely automate processes; it is essential to consider the diverse needs of individuals, ensuring accessibility, usability, and security in digital solutions. Achieving greater success in the future will require the active integration of a human-centered approach in the development and implementation of such initiatives.

Conclusion

This article analyzes digital inclusion within a philosophical context, with a focus on the state strategies of Kazakhstan and Belarus. The research findings demonstrate that, despite differences in the political and socio-economic contexts of these two countries, both actively develop programs aimed at reducing digital inequality and ensuring the inclusion of all population groups in digital transformation.

An analysis of the philosophical discourse on digital inclusion in the context of these programs shows that both countries view digital inclusion not only as a tool for social justice but also as a crucial factor in sustainable development and human capital enhancement. Integrating a philosophical perspective into digital inclusion enriches the understanding of its ethical and social foundations, highlighting the importance of balancing technological advancements with humanistic values.

Undoubtedly, information technologies simplify people's lives, and the implementation of state digitalization programs provides societies with these opportunities. However, an analysis of these programs reveals several shortcomings and challenges:

The unique characteristics of different regions, age groups, or social demographics are often not considered;

Measures for the inclusion of vulnerable groups (people with disabilities, the elderly, rural residents, and migrants) are either insufficiently developed or entirely absent;

Digital platforms are not adequately adapted to diverse cognitive and physical needs;

Citizens are not actively involved in the development and evaluation of digital programs, and there is a lack of an effective feedback mechanism to account for user needs;

These programs primarily focus on infrastructure and technology implementation (such as 5G networks and electronic portals), but they do not sufficiently analyze how these changes are perceived and utilized by the public.

As a result, these programs do not effectively contribute to reducing digital inequality, and the absence of a human-centered approach in state digitalization strategies diminishes their effectiveness and hinders the achievement of inclusivity.

To enhance digital inclusion, the following recommendations can be proposed:

Development of adaptive interfaces for e-government services, digital platforms, and mobile applications;

Creation of educational courses and programs to improve digital literacy, tailored to different population groups based on age, social status, economic conditions, prior IT experience, gender, regional factors, and specific needs;

Expansion of digital literacy programs to reach the elderly, rural residents, and individuals with special needs;

Establishment of platforms for regular citizen surveys on the quality and usability of digital services, with results taken into account when revising and modernizing programs;

Strengthening measures for personal data protection and ensuring transparency in the operation of state digital platforms;

Increasing public awareness of how their data is used;

Boosting investment in internet infrastructure development in rural areas;

Creating local digital literacy centers to ensure accessibility in small towns and villages.

For further improvement of state digital inclusion strategies, more in-depth research is needed to explore the relationship between digital technology development, cultural context, and social needs. This will help formulate more effective and equitable approaches to digitalization, ensuring equal opportunities for all citizens, regardless of their social status or place of residence.

Thus, a philosophical understanding of digital inclusion strengthens the theoretical foundations for state policy development, making it more human-centered and aligned with the principles of social justice.

Authors' contributions

Abdina A.K. – writing the article text, literature review, and text editing.

Uyzbayeva A.A. – writing the article text, analysis of state programs in Kazakhstan, technical design.

Kuchko E. – writing the article text, analysis of state programs in Belarus, text editing.

CONFLICT OF INTERESTS

The authors declare no relevant conflict of interest.

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Айнур Абдина[a], Анар Уызбаева[a], Елена Кучко[b]

[a]Astana IT University, Астана, Қазақстан

[b]БМУ, Минск, Беларусь

Философиялық дискурстағы сандық инклюзия: Қазақстан мен Беларусьтегі мемлекеттік бағдарламаларды талдау

Аңдатпа. Мақала Қазақстан Республикасы мен Беларусь Республикасындағы цифрландыру және цифрлық технологиялар саласындағы мемлекеттік бағдарламаларды талдауға және олардың қазіргі заманның философиялық және этикалық тұжырымдамаларымен арақатынасын зерттеуге бағытталған. Мақаланың мақсаты жеке адам мен бүкіл қоғам үшін осы тұжырымдаманың мағынасын философиялық тұрғыдан түсіну контекстіндегі цифрлық инклюзияны зерттеу және цифрлық алшақтықты жоюға және әлеуметтік әділеттілік пен тұрақты дамудың негізгі аспектілерінің бірі ретінде цифрлық технологияларға тең қолжетімділікті қамтамасыз етуге бағытталған Қазақстан мен Беларусьтің мемлекеттік бағдарламаларын сыни талдау болып табылады. Бұл зерттеуде герменевтикалық, компаративистік, тарихи әдістер, және антропоцентристік тәсіл қолданады. Зерттеу нәтижесінде Қазақстанның мемлекеттік бағдарламалары – "Цифрлық Қазақстан" және Цифрлық трансформация тұжырымдамасы, сонымен қатар Беларусьтің Цифрлық экономика мен ақпараттық қоғамды дамытудың мемлекеттік бағдарламасы және "Беларусьтің цифрлық дамуы" мысалында білім беру және әлеуметтік секторларүшін белгілібірсын-қатерлер туғызатын цифрлық дамужәне инклюзивтілік мәселелерін шешудегі диспропорциялар анықталды. Мақалада технологиялық прогресс пен адам қажеттіліктері арасындағы тепе-теңдікке қол жеткізу үшін цифрлық трансформация стратегияларын қайта қараудың маңыздылығы және цифрлық даму бағдарламаларындағы екі елдің қоғамын дамытуда адамға бағытталған тәсілдің басымдығы көрсетілген.

Түйін сөздер: цифрлық инклюзия, цифрлық эксклюзия, цифрландыру, цифрлық алшақтық, философиялық дискурс, мемлекеттік бағдарламалар.

Айнур Абдина[a], Анар Уызбаева[a], Елена Кучко[b]
[a]Astana IT University, Астана, Казахстан
[b]БМУ, Минск, Беларусь

Цифровая инклюзия в философском дискурсе: анализ государственных программ в Казахстане и Беларуси

Аннотация. Статья направлена на анализ государственных программ в области цифровизации и цифровых технологий в Республике Казахстан и Республике Беларусь и их соотнесенность с философскими и этическими концепциями современности. Целью статьи является исследование цифровой инклюзии в контексте философского осмысления значения данного концепта для отдельного человека и всего общества, и критический анализ государственных программ Казахстана и Беларуси, направленных на преодоление цифрового разрыва и обеспечение равного доступа к цифровым технологиям как одного из ключевых аспектов социальной справедливости и устойчивого развития. В данном исследовании применялись герменевтический, компаративистский, исторический методы и антропоцентрический подход. В результате исследования выявились диспропорции в решении вопросов цифрового развития и инклюзивности на примере государственных программ Казахстана – «Цифровой Казахстан» и Концепция цифровой трансформации – и Беларуси – Государственная программа развития цифровой экономики и информационного общества и ««Цифровое развитие Беларуси»», которые создают определенные вызовы для образовательного и социального секторов. В статье подчеркивается важность пересмотра стратегий цифровой трансформации для достижения баланса между технологическим прогрессом и человеческими потребностями и приоритетность человекоориентированного подхода как в стратегиях цифрового развития, так и в развитии общества двух стран.

Ключевые слова: цифровая инклюзия, цифровая эксклюзия, цифровизация, цифровой разрыв, философский дискурс, государственные программы.

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Авторлар туралы мәлімет Сведения об авторах / Information about authors:

Абдина Айнұр Қанапиянқызы – философия ғылымдарының докторы, қауымд. проф, Astana IT University, Мәңгілік Ел даңғылы, 55/11, 010000, Астана, Қазақстан, ainur.abdina@astanait.edu.kz, https://orcid.org/0000-0002-1819-7492

Уызбаева Анар Асанқызы – PhD, қауымд. проф, Astana IT University, Мәңгілік Ел даңғылы, 55/11, 010000, Астана, Қазақстан, anar.uyzbayeva@astanait.edu.kz, https://orcid.org/0000-0003-4354-705X.

Кучко Елена Евгеньевна – әлеуметтану ғылымдарының докторы, профессор, Беларусь мемлекеттік университеті, Тәуелсіздік даңғылы 4, 220030, Минск, Беларусь, avesol@yandex.ru, https://orcid.org/0000-0003-2376-4639

Abdina Ainur Kanapiyanovna – Doctor of Philosophical Sciences, Astana IT University, 55/11 Mangilik El avenue, 010000, Astana, Kazakhstan, ainur.abdina@astanait.edu.kz, https://orcid.org/0000-0002-1819-7492.

Uyzbayeva Anar Assanovna – PhD, Associate Professor, Astana IT University, 55/11 Mangilik El avenue, 010000, Astana, Kazakhstan, anar.uyzbayeva@astanait.edu.kz, https://orcid.org/0000-0003-4354-705X.

Kuchko Elena Evgenievna – Doctor of Sociological Sciences, Professor, Belarusian State University, 4 Nezavisimosti Avenue, 220030, Minsk, Belarus avesol@yandex.ru, https://orcid.org/0000-0003-2376-4639.

Абдина Айнур Канапияновна – доктор философских наук, ассоциированный профессор, Astana IT University, пр. Мангилик Ел, 55/11, 010000, Астана, Казахстан, ainur.abdina@astanait.edu.kz, https://orcid.org/0000-0002-1819-7492.

Уызбаева Анар Асановна – PhD, ассоциированный профессор, Astana IT University, пр. Мангилик Ел, 55/11, 010000, Астана, Казахстан, anar.uyzbayeva@astanait.edu.kz, https://orcid.org/0000-0003-4354-705X.

Кучко Елена Евгеньевна – доктор социологических наук, профессор, Белорусский государственный университет, пр. Независимости, 4, 220030, Минск, Беларусь, avesol@yandex.ru, https://orcid.org/0000-0003-2376-4639

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