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IMPROVING EDUCATIONAL STRATEGIES FOR CAREER GUIDANCE IN INFORMATION AND COMMUNICATION TECHNOLOGIES BASED ON DIGITAL ECONOMY INDICES

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Abstract. This article analyzes the issues of modernizing the education system and effectively guiding students toward careers in information and communication technologies (ICT) in the context of the rapid development of the digital economy. The study uses digital economy indices as the main analytical criteria and develops mechanisms for improving educational strategies based on these indicators. The results demonstrate that aligning the education system with real economic indicators contributes to enhancing students' professional competencies.
Keywords: digital economy, ICT, educational strategy, career guidance, indices, digital competencies.

In the context of globalization, the global economy is undergoing profound transformational processes. In particular, the emergence and rapid development of the digital economy are leading to fundamental changes in production, service delivery, management, and education systems. Advanced technologies such as artificial intelligence, big data, cloud computing, blockchain, and the Internet of Things (IoT) play a crucial role as key drivers of modern economic growth. These technologies not only increase economic efficiency but also fundamentally transform the structure of the labor market.

According to international analyses, the majority of new jobs in the coming years will be created in sectors related to digital technologies. In this regard, the training of highly qualified specialists in the field of information and communication technologies (ICT) has become a strategic priority.

In the Republic of Uzbekistan, the development of the digital economy has also been identified as one of the priority directions of state policy. In particular, based on Presidential Decree No. PF-6079 dated October 5, 2020, the "Digital Uzbekistan – 2030" strategy was adopted, outlining comprehensive measures for the digitalization of economic sectors, expansion of IT service exports, and development of digital infrastructure.

In accordance with this strategy, the following objectives have been set:

- to significantly increase the share of the digital economy in GDP by 2030;
- to multiply the volume of IT service exports;
- to expand high-speed internet coverage across all regions.

As a result of reforms implemented in recent years, the ICT sector in the country has been developing rapidly. In particular:

- as of 2024, the number of internet users exceeded 30 million;
- the volume of IT service exports surpassed USD 500 million;

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- the number of residents in IT Park Uzbekistan exceeded 2,000, creating thousands of new jobs;
- more than 70% of public services have been digitized.

In addition, based on Resolution No. PQ-4851, important measures have been introduced to develop education in the field of information technologies, implement modern curricula, and expand systems for training youth in IT professions.

Furthermore, Resolution No. PQ-5099 focuses on improving mechanisms for training young people in programming, artificial intelligence, and other advanced technologies, as well as facilitating their integration into the labor market.

Despite these large-scale reforms, certain mismatches between the education system and the labor market persist in practice. In particular:

- curricula are not fully aligned with modern ICT requirements;
- there is a lack of practical skills and real project-based experience;
- career guidance systems for students remain underdeveloped;
- forecasting mechanisms based on digital economy indicators are insufficient.

As a result, there is both a shortage of qualified specialists in the IT sector and a situation in which some graduates remain unemployed in their field of specialization.

From this perspective, improving educational strategies based on digital economy indices represents a relevant scientific and practical challenge. This approach makes it possible to:

- accurately assess the needs of the economy;
- forecast future demand for professions;
- adapt the content of education;
- effectively guide students toward ICT-related careers.

The main objective of this study is to develop theoretical foundations and propose practical mechanisms for optimizing the education system based on digital economy indices.

In this research, a range of scientific methods was employed to examine the improvement of educational strategies in the context of the digital economy. In particular, system analysis was used to examine the interrelationship between the education system and the digital economy as a unified system. Comparative analysis was applied to study international experiences and existing approaches based on global indices.

Additionally, statistical analysis was conducted to evaluate the development indicators of the ICT sector and labor market trends in Uzbekistan. The modeling approach was used to develop a conceptual model for optimizing educational strategies. Within the framework of the study, the following system of key indicators was selected to assess the relationship between the digital economy and the education system:

First, the level of digital infrastructure — this indicator reflects the coverage of internet networks, broadband speed, and the level of development of information and communication networks. This factor constitutes the technological foundation of the digital economy.

Second, digital competencies — this indicator reflects the level of knowledge and skills in information technologies among the population, particularly students. It includes fundamental programming skills, data processing capabilities, cybersecurity awareness, and overall digital literacy.

Third, the share of the ICT sector in the economy — this indicator is assessed through the contribution of the information technology sector to gross domestic product (GDP), the

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volume of IT service exports, and the number of professionals employed in this sector. It reflects the level of digital transformation of the economy.

Fourth, indicators of innovation activity — these are determined by the number of startups in the country, the volume of research and development (R&D) activities, and the level of implementation of new technologies. This indicator reflects the innovative capacity of the economy.

Fifth, the level of e-government development — this is measured by the degree of digitalization of public services, the quality of online services, and the level of their usage by the population. This factor indicates the overall development of the digital environment.

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