



**Transformation of vocational education services and innovative
management mechanisms in the digital economy**

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Abstract. This thesis analyzes the theoretical foundations of the transformation of vocational education services in the digital economy and the issues of improving innovative management mechanisms. In the context of modern economic development, the widespread introduction of digital technologies requires new approaches to the organization and management of vocational education services at all stages of the education system, in particular, in this regard. In this regard, the thesis scientifically substantiates the relevance of digitizing educational services, their platformization and integrating innovative technologies into management processes.

Keywords: digital economy, vocational education, educational services, transformation, innovative management, EduTech, artificial intelligence, big data, digital platform, education quality, management efficiency.

Introduction. Currently, the rapid development of the digital economy is bringing fundamental changes to all spheres of society, including the education system. As a result of the widespread introduction of digital technologies, artificial intelligence, "big data" and elements of the platform economy, the labor market requirements are changing dramatically, and new professions and competencies are being formed. This creates the need to transform the vocational education system in accordance with the requirements of the modern economy, and to reorganize educational services on an innovative basis.

In the Republic of Uzbekistan, as part of the strategy for transition to a digital economy, special attention is paid to modernizing the education system, increasing its efficiency and accelerating the processes of digitization. In particular, a number of reforms are being implemented in the vocational education system to organize the educational process on the basis of digital platforms, transfer educational services to an electronic form, and automate the management system. These processes expand the possibilities for more open, transparent and efficient organization of educational services.



At the same time, problems remain in the current system, such as the lack of sufficiently innovative mechanisms for managing vocational education services, the lack of systematic use of digital technologies, and limited cooperation between the public and private sectors. As a result, certain imbalances arise in the quality of educational services, their compliance with labor market requirements, and management efficiency.

Main part. The process of transforming vocational education services in the digital economy requires the formation of new paradigms for managing the education system. International experience shows that through the digitalization and platformization of educational services, the opportunities for improving the quality of education, strengthening management efficiency, and rational use of resources expand. In particular, as of 2024, more than 80 percent of vocational and higher education institutions in developed countries are using digital platforms to manage educational services, and the volume of the EduTech market is estimated to exceed 400 billion US dollars.

In Uzbekistan, as part of the transition to a digital economy, special attention is being paid to the transformation of vocational education services. In recent years, as a result of the development of digital infrastructure in vocational education institutions, the level of Internet coverage has approached 90 percent, and the level of use of electronic educational resources has exceeded 65 percent. At the same time, the use of electronic systems in the management of educational services is expanding, and the processes of planning, monitoring and evaluating the educational process are gradually being digitized. The introduction of innovative management mechanisms is of great importance in the transformation of vocational education services. Statistical analyses show that in educational institutions where digital management systems have been introduced, management efficiency has increased by an average of 20–30 percent, and administrative costs have been reduced by 15–20 percent. This allows for the effective use of resources and the improvement of the quality of educational services. The use of “big data” and artificial intelligence technologies is also emerging as an important tool in the management of educational services. According to empirical research, in educational institutions where data-based decision-making systems have been introduced, student learning indicators have increased by 15–20 percent, and the speed of identifying and eliminating shortcomings in the educational process has improved by 25 percent. This confirms the effectiveness of innovative management mechanisms.



However, there are a number of problems in the current system. In particular, approximately 35-40 percent of vocational education institutions have not fully implemented digital management systems, and about 45 percent of teaching and administrative staff do not have sufficient competence in the effective use of digital technologies. In addition, the lack of a single integrated system in the process of platforming educational services limits management efficiency.

Based on the above analysis, it is advisable to implement the transformation of vocational education services and the development of innovative management mechanisms through the following priority areas: first, the integration of educational services on a single digital platform; second, the introduction of management systems based on artificial intelligence and big data technologies; third, the development of the EduTech ecosystem by expanding public-private sector cooperation; fourth, increasing the digital competencies of management and teaching staff.

Conclusion. The results of this study show that in the context of the digital economy, the transformation of vocational education services and the introduction of innovative management mechanisms are an important factor in the modernization of the education system. Educational services organized on the basis of digital technologies not only increase the efficiency of the educational process, but also ensure the transparency, speed and flexibility of the management system.

The analysis revealed that the platformization of educational services, the use of artificial intelligence and "big data" technologies will expand the possibilities for effective management of the educational process, improving the quality of education, and rational use of resources. At the same time, the introduction of innovative management mechanisms will optimize the decision-making process and increase the overall efficiency of educational institutions. However, existing problems, including the insufficient development of digital infrastructure, low digital competencies of pedagogical and managerial staff, and the lack of a single integrated platform, are hindering the complete transformation of vocational education services. Therefore, the application of an integrated approach in this area, the widespread introduction of digital technologies, and the development of innovative management systems remain urgent tasks.

In general, the transformation of vocational education services in accordance with the requirements of the digital economy and the improvement of innovative management mechanisms are of great importance in increasing the competitiveness of the education system, training highly qualified personnel in accordance with the



requirements of the labor market, and having a positive impact on the economic development of the country.

List of used literature

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