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TA'LIMNING ZAMONAVIY USULLARI VA INNOVATSION TEXNOLOGIYALAR

MODERN METHODS AND INNOVATION TECHNOLOGIES IN EDUCATION

СОВРЕМЕННЫЕ МЕТОДЫ И ИННОВАЦИОННЫЕ ТЕХНОЛОГИИ В ОБРАЗОВАНИИ

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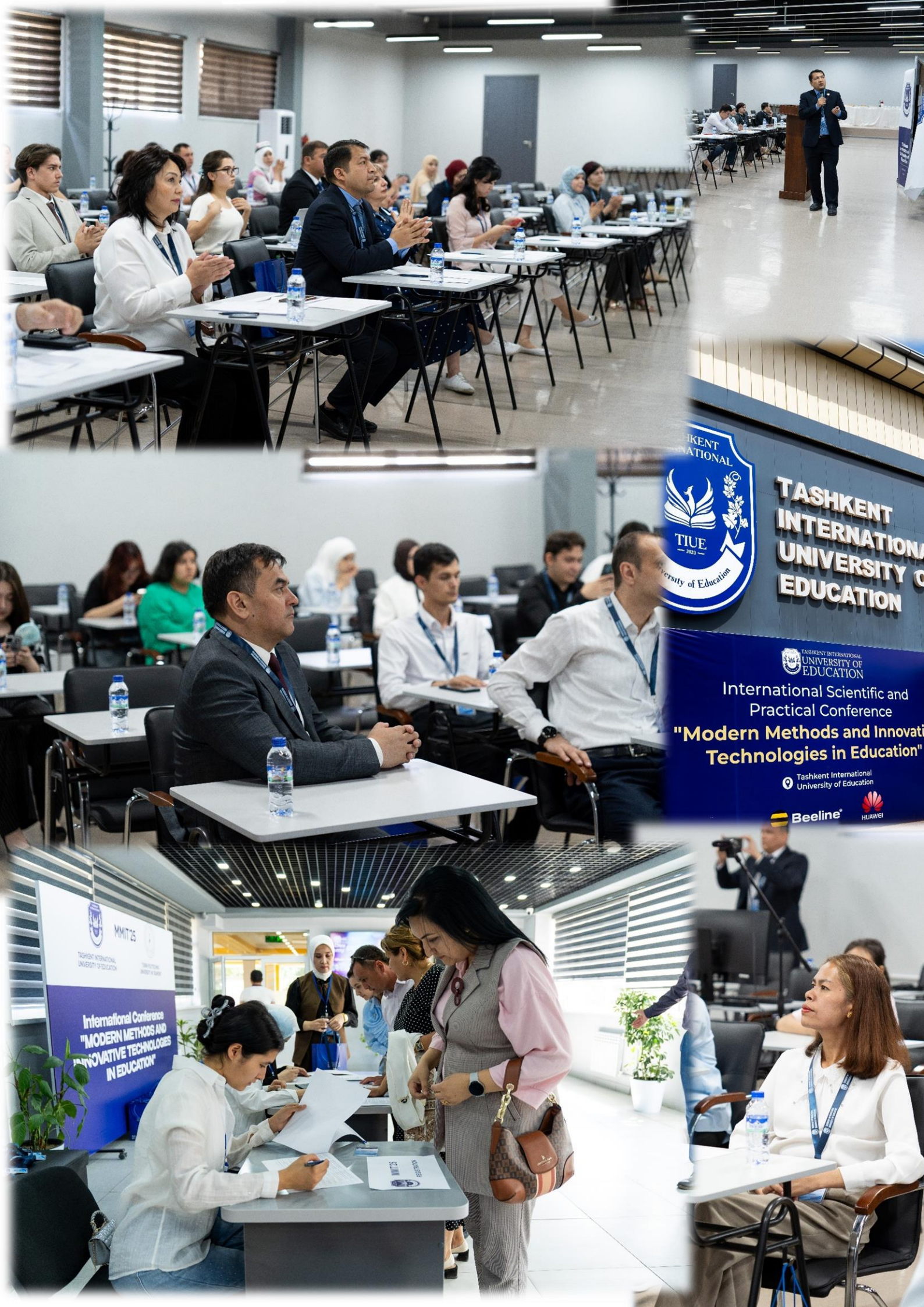
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ОГЛАВЛЕНИЕ

THE IMPACT OF INFORMATION TECHNOLOGIES AND THE DIGITAL ECONOMY ON ECONOMIC DEVELOPMENT

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Abstract. This article analyzes the formation of the digital economy and the impact of information technologies on modern economic processes. The development of the digital economy leads to increased economic efficiency at the global and local levels, changes in market structures, and the emergence of new business models. The role of information technologies in automating economic processes, developing innovations, and increasing international competitiveness will also be studied. The study provides analytical data on the impact of information technologies on economic sectors and the possibilities of future growth.

Keywords: *digital economy, information technology, economic development, automation, innovation, digital transformation, global competitiveness.*

Introduction

In recent years, the digital economy has been rapidly developing on a global scale and plays an important role in the processes of economic growth and modernization. With the development of information technologies, new economic structures are emerging, replacing traditional forms of the economy. These technologies accelerate processes from product manufacturing to service delivery, increase efficiency, and contribute to accelerating economic growth.

Today, information technologies are widely used not only in commercial enterprises and industry, but also in such important sectors as public administration, education, and healthcare. At the same time, the development of the digital economy has also stimulated the emergence of new business models and the formation of new demands and skills in the labor market. This article examines in detail the impact of the digital economy on economic development, the changes made by information technologies in economic processes, and the role of these technologies in economic growth.

The impact of the digital economy and information technologies on society and the economy has grown rapidly in recent years. Today, these concepts are relevant not only for developed countries, but also for developing economies. At the center of the digital economy are information technologies, the Internet, and new generation communication systems, all of which contribute to ensuring economic growth on a global scale. At the same time, innovations implemented in various spheres of the digital economy create new forms of economic processes and increase the efficiency of existing systems.

The influence of digital technologies on the level of social and economic development of society is described. The rating of the largest information technology companies by the volume of business capitalization is also presented. The necessity of digital transformation in managing the socio-economic development of society and organizations is substantiated. The problems of the transition to a digital basis of economic management in the Russian Federation are revealed. A model for the formation of an information technology strategy for the digital transformation of business processes at enterprises has been created. Also, a matrix of possibilities for implementing an information technology strategy has been proposed as a tool for choosing the most preferred information technology strategy for an enterprise in any industry[1].

The impact of the digital economy on economic growth was analyzed in the countries of the Organization for Economic Cooperation and Development (OECD), divided into groups depending on their level of development (transitional and innovative countries). The study used a sample of World Bank panel data for 36 OECD countries covering the period from 2000 to 2019.

Statistical analysis was conducted separately for OECD countries and groups of transitional and innovative countries. Subsequently, a correlation analysis was carried out between the variables, and three models were evaluated using the Generalized Moments Panel Method (GPM) and on a fixed segment [2].

The article considers the digital economy as an effective tool for reducing the economic impact of COVID-19. The study analyzes the impact of the digital economy on economic growth in Belt and Road countries and examines the impact of COVID-19 on digital industries. The results show that the development of the digital economy, despite regional imbalances, has a positive impact on economic growth. COVID-19 has increased demand for digital industries, but has had a negative impact in some countries. The study proposes strategies to reduce the digital divide and strengthen industrial renewal [3].

The article considers the digital economy as a key factor in the development of small and medium-sized businesses. The programs of the digital economy of various foreign countries are explained. Methods of effective development of the digital economy have been studied. The importance of the digital economy in the modernization of traditional industries and services is emphasized. The constant penetration of information technologies and their role in the development of small and medium-sized businesses are highlighted. Issues related to the implementation and spread of the digital economy in the field of small and medium-sized innovative entrepreneurship in Kazakhstan were discussed: the lack of infrastructure to promote domestic development and insufficient attention to innovative activity by local entrepreneurs. The digital economy is characterized as one of the manifestations of the scientific and technological development of Kazakhstan. Digitalization is expected to have a significant positive impact on the development of small and medium innovative entrepreneurship. In the digital economy, attention is paid to the formation of an appropriate institutional environment, which is one of the important conditions for the effective development of leading areas of human activity. The conditions for applying the basic institutions, personnel, and knowledge necessary for the successful development of the digital economy are defined [4].

Technological innovations and high-quality economic development are essential requirements for sustainable development, and the digital economy is gradually serving as a new engine for strengthening technological innovations and high-quality development of the Chinese economy. A thorough analysis of the impact of the digital economy on high-quality economic development and identification of the mechanism behind it can contribute to strengthening China's high-quality development, which has great practical significance for China's sustainable economic development. In this study, the impact of the digital economy on high-quality economic development and its mechanism in 30 regions of China during 2011-2019 was measured and empirically analyzed. The results showed that the digital economy and the level of high-quality development are generally low, there are high and low agglomerations, and there is a clear spatial road connection and spatial "lock-in." The digital economy can help to raise economic development to a higher quality, and the spatial spillover effect has become significant. Also, the influence of the digital economy on high-quality economic development in the eastern, central, and western regions has gradually weakened. Technological innovations are an important transmission route for high-quality economic development of the digital economy. Based on the study, decision-makers are recommended to implement a dynamic and differentiated digital economy development strategy to strengthen the digital economy, reduce the digital divide, and effectively reduce regional development disparities [5].

Information and communication technologies (ICT) are becoming increasingly important for businesses, consumers, and governments in all sectors of the economy and around the world. The importance and possibilities of participation in e-commerce and value chains, distance learning and social networks, smart cities and e-government are limitless. World practice shows that the development of the digital economy can stimulate economic growth and improve the quality of economic growth. The necessity of transitioning to a digital economy stems from the

role played by the world's leading countries. Currently, the share of the digital economy in developed economies is 60-70%. Two-thirds of all financial resources and labor force are involved in this sector. All developed countries of the world community are making strategic investments in the development of information technologies, the creation of information infrastructure, the formation of information resources, and the study of the economic and social features of the new economic system. The digital economy is the subject of software development at the national, international, and regional levels and has been carried out for more than 20 years to maximize the transition to a new economic system [6].

Problem statement

Today, many countries, especially developing economies, face some problems in the widespread use of digital technologies. While the development of software and digital infrastructure, broad access to the Internet, and the effective use of information technologies are necessary for economic development, this process changes depending on the economic, social, and political conditions of each country. There are also legal and economic structures that hinder the development of the digital economy.

There are inter-country and internal divisions, some of which are succeeding in fully utilizing the digital economy, while others are lagging behind in this area. The main reasons for the digital divide are limited access to the Internet, the use of computer technologies, low interest in digital services, as well as insufficient development of information technologies in certain regions. This, in turn, leads to social inequality and exacerbates differences in economic development.

The digital economy and automation are significantly changing the labor market. On the one hand, new jobs are being created, but on the other hand, previous jobs are disappearing. For example, in the production and service sectors, robots and automated systems are replacing human labor. As a result, some professionals are losing their jobs, while the demand for new and modern professions is increasing. For successful operation in the digital economy, there is a need to learn new skills.

With the development of the digital economy, the demand for cybersecurity and data privacy is growing. The exchange of information through Internet networks is accelerating, but the necessary technologies and legal norms to ensure the security of this process are still lacking. Open systems, data theft, and cyberattacks pose a threat to economic development. There are also problems with ensuring the confidentiality of information between companies and users.

Solutions

Education and professional development play a significant role in the successful operation of the digital economy. Training workers in digital skills, developing the ability to apply new technologies and software, is necessary for effective work in the digital economy. At the same time, universities and educational institutions should pay great attention to the training of specialists who have mastered digital technologies. Modernization of curricula and organization of advanced training courses will contribute to the supply of new specialists to the labor market.

For the successful development of the digital economy, the necessary infrastructure must be created. Expanded internet access, high-speed internet connection, cloud services, and digital payment systems are important factors for effective economic management. At the same time, the development of digital infrastructure requires cooperation between the state and the private sector. The state must provide the necessary infrastructure for digital communications and services in its territories.

To strengthen cybersecurity and ensure data confidentiality, it is necessary to develop new laws and technologies. To ensure data security via the Internet and combat hacker attacks, it is necessary to implement advanced cryptography and security protocols. It is also necessary to strengthen privacy policies and implement advanced technologies to protect users' personal data.

The digital economy is creating new forms of jobs, and new professions such as remote work and freelancing are emerging. New approaches and working methods are also developing in the labor market. To achieve success in the digital economy, employees must adapt to the new profession, master remote work, and master the skills of applying modern technologies.

Conclusion

The influence of the digital economy and information technologies on economic development is enormous. They allow for the modernization of society, ensuring economic growth, and creating new jobs. At the same time, the development of the digital economy is also creating new problems. Digital segregation, cybersecurity, labor market changes, and infrastructure development are the main obstacles to this process.

In the future, the growth of the digital economy is expected to continue. However, for its successful development, special attention should be paid to the education system, infrastructure, and security. At the same time, it is necessary to reduce the digital divide so that all social groups and countries have equal access to the digital economy. The effective application of the digital economy contributes to ensuring economic growth and social well-being.

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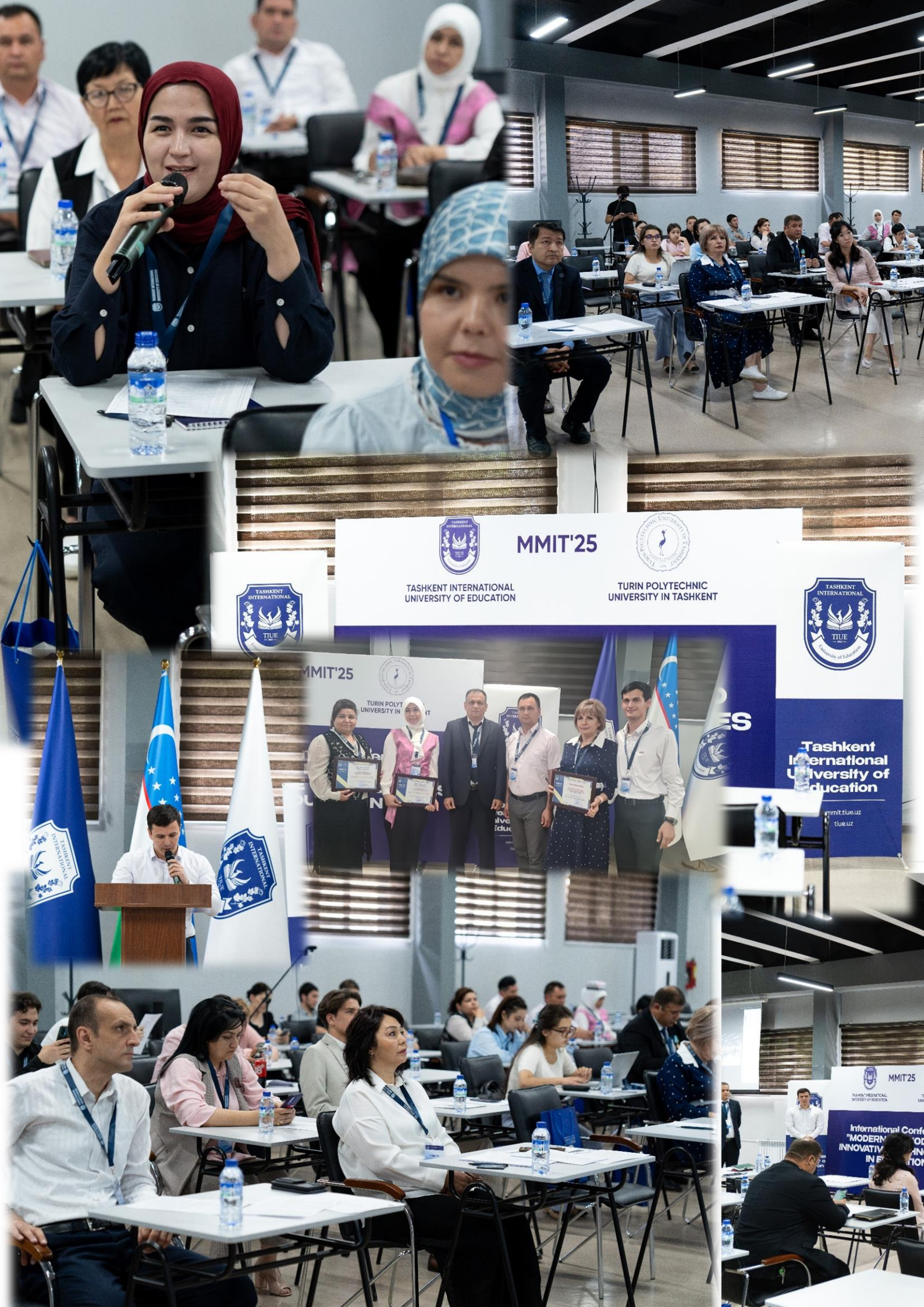
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