



Research Article

IMPROVING THE INTERNATIONAL COMPETITIVENESS MECHANISMS OF EDUCATION CLUSTER ENTITIES

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ABSTRACT

This article examines the issues of improving mechanisms of educational cluster subjects. Educational clusters are an innovative system that combines education, scientific research and production sectors, increasing their efficiency greatly contributes to the country's economy and social development. In Magola, recommendations are given on strengthening cooperation between cluster subjects, effective use of resources, introduction of modern technologies and development of organizational and financial mechanisms. Also, measures within the framework of the state policy of improving the legal foundations of educational clusters and supporting them are analyzed.

KEYWORDS

Educational cluster, improvement of mechanisms, cooperation, innovative technologies, use of resources, financial support, organizational mechanisms, legal framework, educational system, scientific research.

INTRODUCTION

The education cluster is one of the crucial components of the modern economy. It is an effective system that integrates educational institutions, manufacturing enterprises, research centers, and other stakeholders. The development of the global economy, rapid implementation of innovative technologies, and the swift changes in the labor market are further

increasing the importance of education clusters. The main task of education clusters is to enhance the quality and effectiveness of workforce training, meet the needs of production, and implement scientific research into practice.

However, there are several challenges in establishing and developing education clusters. Firstly, the lack of



effective collaboration mechanisms among stakeholders limits the activities of the cluster. Secondly, insufficient financial resources hinder the strengthening of ties between educational institutions and manufacturing enterprises. Thirdly, the low level of innovation technology adoption diminishes the quality of the educational process.

To address these issues, the following measures are proposed: improving the legal frameworks aimed at supporting education clusters, attracting financial resources by developing public-private partnership mechanisms, and enhancing strategic collaboration between research centers, higher educational institutions, and manufacturing enterprises. Additionally, responding to the demands of the modern labor market through digitalizing the education process, developing integrated curricula, and improving systems for retraining and upskilling is of significant importance.

Studying and implementing international experience is considered an essential aspect of developing education clusters. The cluster education models of developed countries create substantial opportunities for integrating innovative technologies into the educational process and ensuring the continuity between practical and theoretical education.

In the decree of the President of the Republic of Uzbekistan, dated October 8, 2019, "On approving the Concept for the Development of Higher Education in the Republic of Uzbekistan until 2030" (Decree No. 5847), the following priorities for the systemic reform of higher education in Uzbekistan are outlined:

- Establishing systematic reforms in higher education, ensuring that the process of training highly qualified personnel, equipped with modern knowledge and high moral and ethical virtues, is raised to a new level.

- Modernizing higher education and developing social sectors and economic industries through advanced educational technologies.

- Developing public-private partnerships in higher education, creating a competitive environment in the field, and increasing the coverage of higher education to over 50%.

- Transforming the National University of Uzbekistan and Samarkand State University into flagships of the country's higher education system.

- Agreeing to the establishment of a Republic Higher Education Council in the form of a non-governmental nonprofit organization based on the Council of Rectors of Higher Educational Institutions of Uzbekistan.

Furthermore, improving the mechanisms of supporting education clusters is one of the significant drivers of economic and social development. In this process, the alignment of all stakeholders, support from state policy, and the application of innovative approaches are crucial. Achieving high effectiveness through systemic measures for developing education clusters and the role of social partnership in the workforce training process within the clusters is of particular importance. Integrating manufacturing enterprises into the educational process is vital to ensure alignment between labor market demands and the qualifications of students. Utilizing mechanisms such as industrial practices, professional development programs, and joint educational programs can increase the effectiveness of this integration.

Another crucial aspect is the use of innovative pedagogical technologies in the educational process. Distance learning platforms, virtual laboratories, simulation technologies, and artificial intelligence-based tools can further enhance the effectiveness of education clusters. These technologies provide additional opportunities for developing students' theoretical and practical skills.



Overall, international cooperation plays a significant role in the development of education clusters. Establishing partnerships with foreign educational institutions and manufacturing companies allows for the implementation of modern standards and practices. Specifically, joint educational programs and international scientific research enable the development of education clusters in line with global requirements.

Financial support for education clusters remains an urgent task. Grant allocations from the government, encouraging private sector participation, and introducing tax incentives can ensure the sustainable development of clusters. Additionally, attracting venture investments for innovative projects is an effective way to finance education clusters.

While the concept of education clusters is relatively new, its practical significance and strategic opportunities are continuously growing. These clusters serve as an effective platform for integrating knowledge into practice, applying innovative solutions in various fields, and improving the workforce training system. From this perspective, developing and expanding the fields of application for education clusters is of utmost importance.

Education clusters are one of the pillars that ensure the continuity between education and production. In this process, attention should be paid to the following additional aspects:

1. Coordination of workforce training between educational institutions and manufacturing:

Developing curricula tailored to the labor market demands of each region or industry helps improve the efficiency of education clusters. For example, special programs can be developed for specific sectors such as agriculture or industry.

2. Implementation of scientific research into practice: Integrating scientific research from higher educational institutions into manufacturing processes

is a key component of cluster activities. To achieve this, mechanisms for transferring scientific developments between research centers and manufacturing enterprises should be introduced.

3. Professional development system within the education cluster: The rapidly changing labor market requires continuous adaptation of the knowledge and skills of current specialists to modern demands. Therefore, implementing continuous professional development programs and retraining courses within education clusters is essential.

4. Use of international standards and experiences: In the process of forming modern education clusters, the opportunity to use internationally recognized standards is of particular importance. Adapting the educational process to global standards ensures the competitiveness of local specialists in the international labor market.

5. Use of digital technologies and information systems: The use of digital tools such as artificial intelligence, robotics, and virtual reality in education not only improves the quality of education but also enhances the attractiveness of the learning process. Special platforms and software should be developed for this purpose.

6. Role of education clusters in regional economies: Regional clusters contribute to the development of specific areas. They create new jobs, develop local human resources, and implement innovations. Education clusters should be formed taking into account the economic characteristics of each region.

7. Developing social partnership mechanisms: Collaboration between government bodies, the private sector, educational institutions, and public organizations is crucial for the success of education clusters. Therefore, a system for supporting and encouraging social partnerships should be implemented.



From this perspective, education clusters can be considered not only as a platform in the education sector but also as a key component for ensuring sustainable development in various sectors of the economy and social life. Strategic planning, efficient resource allocation, and the implementation of innovative approaches are the main factors for the success of education clusters.

Research-based innovative approaches:

- **Integrated Models:** A tripartite model based on cooperation between businesses, universities, and the state will be introduced.
- **Cross-Sector Collaboration:** Flexible educational mechanisms will be developed for various sectors of the economy.
- **Digital Leadership:** Separate educational platforms will be created for the effective delivery of knowledge through digital networks.
- **Social Impact in Education:** Widespread participation in the educational process will be ensured through projects involving the public.

This table not only analyzes problems but also defines strategic solutions for addressing them. It presents clear approaches and innovative steps that can stimulate the development of educational clusters.

Educational clusters are systems that elevate the training of specialists, engaging scientific research in practical processes, and meeting production needs in society and the economy. Such clusters ensure close cooperation between educational institutions, research centers, and producers, which helps align the educational process with production.

To fully realize the potential of educational clusters, attention should be paid to the following directions:

1. **Regional Development:** Clusters must be developed in line with the specialization of the region where they are located. This is crucial for training qualified specialists for local businesses.
2. **State Support:** It is necessary to form and coordinate national policies that support educational

clusters. Financial assistance programs and tax incentives for cluster participants are essential.

3. **Economic Efficiency:** The activity of clusters should aim to benefit various sectors of the economy. Special attention should be given to creating innovation-based products and expanding job opportunities.

4. **Educational Collaboration:** Extensive collaboration between universities, vocational colleges, and the private sector can elevate the educational process to a new level. Educational programs should be aligned with the requirements of the production process.

CONCLUSION

In conclusion, it is important to emphasize that, in addition to implementing digital technologies in educational clusters, the widespread use of artificial intelligence and distance learning tools is crucial. These technologies will accelerate the educational process, apply innovative approaches, and create solutions that respond to the needs of modern economies and societies. Through these mechanisms, the alignment between the education system and production processes will be improved, speeding up the preparation of specialists and contributing to sustainable and effective long-term innovation.

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