

BASES OF COOPERATION ORGANIZATION BETWEEN EDUCATIONAL INSTITUTIONS THROUGH CLUSTERS

(On the example of the education system of Uzbekistan)

Saidaxon Mavlanova

Samarkand VMI Tashkent branch

Teacher of the Department “Languages”, Uzbekistan

E-mail address: mavlanova2020@gmail.com

Abstract: The goal of innovations introduced in all spheres of rapid development of science and technology is ultimately aimed at increasing the economic and social potential of the country. Introducing industry innovations requires new approaches to existing business methods. However, in the laws of the development of society there are general aspects and patterns that it is sometimes better to take ready-made and existing in developed countries, use their laws creatively than to look for new ways. Based on this, today in the sectors of the economy serious attention is paid to the application of innovative practices that have been tested in international practice and play an important role in the development of productive sectors of the economy. One of these innovations is the “cluster model”, which today is widely used in Uzbekistan in agriculture, textile and light industry. In the short term, the cluster model has been recognized as a promising innovation in the economy. New experiments began to be applied in other fields. This article discusses the organization of cooperation between educational institutions based on a cluster model.

Keywords: the integration, literary education, the student, the process of globalization, cluster of pedagogical education, cluster strategy, goals, functions, principles and directions of development of the cluster of pedagogical education.

INTRODUCTION

Currently, there are several models in Uzbekistan that reflect the relationship between higher education and schools: the organization of specialized schools (classes), the preparation of high school students for higher education, academic lyceums, etc. But the disadvantage of such models is that they work in one

direction, according to which schools are seen as customers, and higher education as performers. In general, the basis for cooperation (interaction) is the joint solution by all participants of the task, the equality of their statuses in this regard, as well as the coordination of the efforts of all entities with the interests and needs of other entities.

Currently, professional development of education based on integration is very relevant. Students of pedagogical universities must have modern knowledge in the field of pedagogy and psychology, get acquainted with modern schools, kindergartens, academic lyceums and professional colleges, and simultaneously be a leader and researcher. In other words, the student will have to perform the knowledge and skills acquired in the learning process, taking into account the measures of the schools. In addition, the future teacher must have during the training period not only practical functions that are performed in relation to his profession, but also social and practical experience. This will later help them successfully integrate into the practice and corporate environment of the educational institution, as well as reduce and facilitate the period of social and industrial adaptation

REVIEW LITERATURE

The problem of clusters, in particular the problem of educational clusters, has been widely studied by foreign researchers. In the course of research, the cluster concept has been given many definitions and descriptions. We will look at some of them below (table 1):

№	Researcher Full Name	Definitions of the cluster concept
1	M.Porter	A cluster is a group of interconnected companies, specialized suppliers, and firms in related industries, as well as a combined group of organizations that are

		geographically related.
2	G.A.Yashevoy	A cluster is a set of network organizations based on cooperative relationships between enterprises (including suppliers, as well as producers and consumers, including special services), United around a research and education center.
3	A.G.Granberg	A cluster is a group of enterprises United in a single sphere and intertwined with each other.
4	M.Galushkina	A cluster is a group of firms located in the same geographical area and forming a single network.
5	N.V.Gorodnova	A cluster is a group of companies and institutions that operate in the same geographical area, are interconnected and complement each other in specific areas.

1-table. Definitions given by foreign researchers to the concept of a cluster. [1]

Russian scientists studied the theoretical foundations of the formation and development of educational clusters in the following areas:

- a) cluster approach to professional education (B. Pugacheva, A.V. Leontiev);
- b) theory of activity and pedagogical design (V. V. Davydov, V. p. Bepalko, G. I. Ibragimov, B. TS Lednev, M. I. Maksmutov, A. A. Slasten);
- c) the concept of continuing education (B. S. Gershunsky, G. V. mukhametzyanova, a.m. rock-candy);
- d) research that reveals the problems of social partnership and education management in professional educational institutions (P. F. Anisimov, G. V. mukhametzyanova, G. I. Ibragimov, E. A. Korchagin, V. P. Panasyuk, A. S. Subetta). [2]

There is also confusion in some of the conclusions of Russian scientists. In particular, N. N. Davydova and B. M. Igoshev have fixed seven main strategies for cluster development. [2] in our view, it would be appropriate to classify the cluster strategies that they have fixed as cluster forms. Because they prioritize the goals of cluster implementation-what is the strategy in which it manifests itself, in what forms and types it is expressed. A systematic study of foreign experiments on the problem under study shows that cluster-based training was conducted in Europe in the 1990s. It all started as a result of the theory of clusters developed by Porter and the development of clusters. [3] he analyzed the Massachusetts education cluster, comparing it with other States and other States, showing the role and significance of the cluster. Clusters in teacher education are a set of geographically localized organizations that interact on the basis of agreements and participate in the implementation of scientific, educational and innovative goals of training specialists in the field of education.

MATERIALS AND METHODS

As the research material, the existing education system in the Republic of Uzbekistan, the state of integration processes, problems in the system and the scientific, methodological and educational literature, as well as research work on the educational clusters of foreign researchers are used.

The study used a set of methods to ensure adequate training: foreign experience in creating educational clusters, aspects related to the analysis of the results of projects tested at the School-Laboratory experimental sites using theoretical (statistical-statistical, comparative, model) methods; identification of existing problems in the education system, in particular in interviews, questionnaires, monitoring, design techniques) using methods; experience-forecasting and forecasting of the results of projects put forward for test work as predictive (expert evaluation, generalization of independent evaluation) using methods, the work of generalizing and analyzing the results obtained was studied

using a mathematical and pedagogical experiment (statistical data processing, graphical representation of the results, etc.) using methods.

RESULTS AND FINDINGS

Currently, there are a number of shortcomings in the education system associated with the mismatch between the requirements of the state and society, and provide educational services, lack of investments for modernization of the educational institutions, dependence on labor market and educational services market, which suggests that it is time to bring the interaction of educational, scientific and educational organizations in accordance with the requirements of the legislation.

Educational clusters are considered as an innovative mechanism for interaction of subjects related to education. When creating training clusters, you should adhere to the following principles::

- the principle of regional regionalization taking into account educational potential;
- the principle of leadership based on the managerial role of public authorities at the appropriate level;
- the principle of interdependence based on the common interest of uniting participants with each other;
- the principle of specialization based on the distribution of powers and responsibilities related to various aspects of the cluster's activities;
- the principle of subordination, which is based on a clear set of goals and objectives.

Based on the principles associated with creating a cluster, it is necessary to re-examine the following aspects in terms of improving its efficiency::

- formation of responsibility of each participant for the results of their activities ; ;

- maintain close communication and long-term collaboration to ensure constant exchange of resources and data;
- monitoring of dynamics in order to ensure continuous development in the specified directions;
- work comprehensively in several directions that correspond to the integrative nature of the cluster, that is, the interests of all participants.

Create the cluster and its directions means that justification of a scientific point of view on the peculiarities of interaction in the innovation cluster of teacher education is one of the most important moments of his proper flow and research.

Preparatory work in Higher education plays an important role in shaping the professionalism of a modern teacher. In order for this preparatory work to be effective and for education to meet the requirements of the labour market, it is necessary that cooperation between higher education institutions and schools be properly established.

The main idea in the training of teachers should be the idea of harmonizing teacher education with practice. Based on the above, we can say that the integration of higher pedagogical education and school practice should be considered as a process of harmonization of theory and practice, aimed at developing the student's readiness for professional pedagogical activity

Education is a rather complex system consisting of many complementary and interconnected parts. Any system works effectively only in the presence of a reverse reaction. Therefore, it is important to find rational forms of cooperation between higher education and the school and study them from the point of view of their development. We propose using the cluster model of the educational process organization for the implementation of such cooperation based on the scientific results obtained as a result of our research.

Cluster approaches aimed at the development of education should be focused on mutual and self-development based on the principles of social partnership of cluster subjects. This is considered an advantage of the cluster. From

the cluster definitions provided so far, the following two characteristics can be distinguished. First, in a cluster, businesses must connect in some way, and this connection has vertical and horizontal forms, and must include social relationships that benefit businesses that are drawn into the cluster. Secondly, clusters are groups of enterprises and organizations that are geographically interconnected, and this cooperation contributes to the formation and increase of benefits.

Given the role of higher education in the cluster, it will be possible to distinguish the type of educational cluster that integrates on the basis of networks and partnerships of interconnected educational institutions.

The main objectives of the educational cluster are:

- ✓ creating a market for services that timely meets the needs of the industry;
- ✓ creation of guarantees for graduates of higher educational institutions;
- ✓ improvement of modern educational technologies, organization of career guidance;
- ✓ development of the necessary legal framework for cooperation;
- ✓ joint design of educational activities in the field of bachelor's and master's programs.

One of the separate directions of the educational cluster is the cluster of pedagogical education, the distinctive features of which are:

- ✓ creating conditions for the formation of teaching staff; ensuring the integration of education with production;
- ✓ increasing the prestige of the teaching profession.

The cluster model of teacher education is an integrated education that includes organizational, managerial, technological and content levels, which allows you to clearly demonstrate the target process of developing cooperation in order to improve the quality of training graduates of higher educational institutions.

Russian scientists E.I. Chuchkalova and O.G. Mosunova classify the interaction of subjects in the educational cluster as follows:

1. By the nature of relations in the field of economic activity:

- vertically oriented;
- horizontally oriented;
- mixed.

2. According to the level of concentration of objects:

- within the network;
- interbranch. [4]

Vertically oriented relations in the educational cluster are determined by the direction of economic activity. Such clusters are diversified structures that unite educational institutions (universities), organizations, fundamental science and business partnerships that form the basis of the association.

Clusters based on horizontally oriented relationships represent the same level structure in the same field of study and include various educational institutions with the same professional orientations.

A mixed relations education cluster is a two-dimensional and multi-level structure of this professional field, which includes various educational institutions and partner enterprises that finance the cluster and contribute to its fundamental development.

Today, the creation of a new space for teacher education in the Tashkent region - the creation of a cluster of teacher education based on the network principle of cooperation, has its own objective reasons. The educational complex of the Chirchik State Pedagogical Institute "Laboratory Schools", aimed at the scientific and practical solution of existing problems in schools in the region, arose as a form of introducing innovative clusters of teacher education in our national pedagogy. The system and mechanisms of training at the institute are focused on a cluster approach.

In fact, the nature of the cluster of teacher education is determined by the presence of a teacher training university. It unites scientific, methodological, educational and informational and analytical partners. The Chirchik State Pedagogical Institute also created a regional center for innovative clusters of teacher education as a network of vocational education institutions. The activity of this center determines the system of training regional teachers and improves the cluster system of training specialists, taking into account the needs of the labor market in Tashkent region.

To date, the innovative cluster of teacher education in the Tashkent region includes the following objects:

- ✓ Chirchik State Pedagogical Institute;
- ✓ Tashkent regional department of public education;
- ✓ Chirchik city department of public education;
- ✓ 21 comprehensive schools;
- ✓ 5 preschool educational institutions;
- ✓ 1 academic lyceum.

The aim of the regional cluster of teacher education is:

- ✓ improving the quality of teacher training;
- ✓ identify the innovative development of higher education institutions

and schools in the region.

The created innovative cluster on the basis of the Chirchik State Pedagogical Institute implements the following interaction models of subjects:

1. A model of informational and cognitive social activity. According to this model, organizational services are developed: competitions, round tables, lectures, scientific conferences, consultations, excursions, etc.

2. A model of problem-analytical or conflicting activities. This model includes the preparation and conduct of workshops, problem solving seminars, round tables, research and project activities.

3. Social-role model of activity. This model combines social events (such as competitions, conferences, project events, a school for young psychologists) aimed at preparing high school students for the profession.

4. The model of game activity. It includes the development and implementation of various forms of extracurricular activities.

The areas of cooperation within the cluster include:

- ✓ educational and methodological cooperation;
- ✓ scientific and methodological cooperation;
- ✓ collaboration with staff. Includes retraining through the organization of teacher training courses.
- ✓ career guidance.

This type of cluster form of cooperation between organizations leads to the creation of innovative products and training with the necessary professional skills.

Since the cluster of teacher education is a combination of subjects directly and indirectly participating in teacher education based on a common goal and private interest, in this process the issue of increasing the effectiveness of their cooperation is a priority. Naturally, the effectiveness of cooperation is based on private interest, but this is not enough in the cluster. Adding a common goal to this ensures that the cluster is complete. In this sense, the concepts of private interest and a common goal are important at the level of the principle of the cluster of teacher education. [5]

The cluster can be called a specific system based on cooperation, but it differs from a simple system. This is a special, unique system, the performance of which is improved by adding elements, but there are no catastrophic consequences

during removal. As a result of our study, the following conclusions were drawn about the differences between the cluster and the system:

1. Although each of the elements of the system performs a separate function, but they differ from each other depending on the level of importance. Cluster elements are made up of equal components.

2. Failure of one of the elements of the system will lead to failures or inoperability of the entire system. Failure of one of the elements in the cluster can reduce efficiency, but does not stop the activity of the remaining elements.

3. The system can also be organized on the basis of mechanical communication, but the elements in the cluster must have a conscious, natural and purposeful connection.

4. Elements that make up the system do not always require private interest, but elements without private interest do not work in a cluster.

5. There is one goal in the system, and each element is subordinate to this goal. In a cluster, in addition to a single goal (common goal), each element also has a specific goal. Specific goals are no less important than general goals.

6. The system is an integrity consisting of separate parts. A cluster is a unity consisting of separate entities. [6]

Cluster systems are sufficiently suitable for production, impact resistant, and at the same time they are easy to upgrade and expand in various ways. The most important benefits of the cluster are openness, flexibility and ease of management on a global scale.

The cluster of pedagogical education of the Chirchik state pedagogical Institute is formed on the basis of the region's needs for qualified personnel and taking into account the Institute's interdisciplinary education system. In addition, the Institute is the only one in the region that can train teachers at three levels: bachelors, masters and doctoral students. In addition, the variability of state standards in General education creates additional problems in the professional

flexibility of teachers who are just starting out. The "school of young teachers", organized within the cluster, provides psychological and pedagogical support for the professional adaptation of young teachers.

This area of cluster activity includes measures to improve the skills of young teachers to the level of ability to model their professional activities taking into account the requirements of state standards. This project is one of the key teachers in the system of continuing education to modernize local teacher education and is a priority for the teacher education cluster of the Chirchik State Pedagogical Institute. The school of young teachers is supported by an innovative cluster of teacher education and the regional department of public education.

RECOMMENDATIONS

Within the framework of the "School of Young Teachers", the following areas can traditionally be distinguished:

1. A series of events for educators of preschool educational institutions. For them, master classes are offered and topics of lessons are formed taking into account the questions most often asked by young teachers. For example, "Preschool education as a psychological and pedagogical problem", "The content of psychological and pedagogical work on the development of children's education in accordance with the requirements of state educational standards of preschool education", "Interactive games used in preschool education"

2. A cycle of classes for teachers. The school for young teachers organizes master classes for teachers on the following topics: "How to cope with stress?", "Work with child aggression and auto-aggression", "Conflicts in the work of a teacher", "From the requirements of professional standards of teachers." problem areas of an emerging school "and so on.

3. Open lessons of leading teachers of the region and teachers and methodologists of the Chirchik State Pedagogical Institute.

4. The solution of urgent problems in the field of education. For example, in this regard, the issues of prevention of various negative disorders in schoolchildren

and ensuring the safety of children are relevant. Therefore, measures are effective on such topics as “Prevention of juvenile delinquency”, “Prevention of extremism in the school environment”, “Prevention of suicide among minors”, “Cyber security of students as active Internet users”.

The faster and more successful the period of professional development of a teacher will be, the more successful his professional career will be.

In our opinion, the following factors are important for the implementation of the cluster of teacher education as a means of interaction between the institute and the school:

- ✓ Strengthening work on the model “School - higher education - school”, expanding the number of participants through innovative educational institutions of the Tashkent region, wider use of various forms of interaction within the cluster;
- ✓ methodological assistance and support for young teachers;
- ✓ creating conditions for the successful preparation of students for professional activities at the institute;
- ✓ improving the professional abilities of students through the development of their creative potential at the institute;
- ✓ establishment of relations between teachers and students based on the principles of mutual respect and cooperation;
- ✓ development of student self-government at the institute level;
- ✓ involve students in the implementation of important social projects;
- ✓ formation of active citizenship among students.

CONCLUSION

The innovative cluster of teacher education demonstrates a high level of content and the importance of integration between the school and the institute. The cluster will expand the general sphere of education related to the interaction of higher and secondary schools and improve the quality of education. All areas of

education, the disciplines that are associated with it, will win. The institute will have a clear idea of the level of training of students and the opportunity to participate in this process. Thus, the essence and practical application of the cluster approach to education creates the necessary conditions for the development of the education system, the search for new sources and opportunities to improve its quality and competitiveness. The established partnership will create a learning environment aimed at increasing the competitiveness of all cluster structures; provides training of highly qualified specialists in optimal conditions; allows you to create individual educational areas of professional identity.

REFERENCES

[1]. Abidov R. Features of cost accounting for storage, processing and sale of agricultural products in a cluster system. Scientific electronic journal of international finance and accounting. 2018; 3: 3-9. Available at <https://www.interfinance.uz/files/301B8.pdf>. (in Russian)

[2]. Davydova NN, Igoshev B.M. other. The educational cluster as the main component of the regional model of continuing teacher education. Teacher education in Russia. 2014; 10:75. Available at <https://cyberleninka.ru/article/n/obrazovatelnyy-klaster-kak-sistemoobrazuyuschiy-komponent-regionalnoy-modeli-nepreryvnogo-pedagogicheskogo-obrazovaniya>. (in Russian)

[3]. Porter M.E. Competitive strategy: methods for analyzing industries and competitors. New York: Free Press. 1980: 79. Available at: https://www.academia.edu/11498170/COMPETITIVE_STRATEGY_Techniques_for_Analyzing_Industries_and_Competitors. (in English.)

[4]. Chuchkalova EI, Mosunova OG Theoretical aspects of the creation and development of educational clusters. Theory and practice of social development.

2013; 8: 362-363. Available at <https://cyberleninka.ru/article/n/teoreticheskie-aspekty-sozdaniya-i-razvitiya-obrazovatelnyh-klasterov>. (in Russian)

[5]. U. N. Khojamkulov. The need and conditions for the formation of a cluster of teacher education (for example, the educational system of Uzbekistan) // European Journal of Research and Reflection in the Educational Sciences, vol. 8 No. 4, 2020, part II. ISSN 2056-5852. <http://www.idpublications.org/ejrres-vol-8-no-4-2020-part-ii/>

[6]. Mukhamedov G.I., Khodzhamkulov Yu.N., Shofkorov A.M., Makhmudov K.S. (2020). The cluster of teacher education: content and form. // ISJ Theoretical and Applied Sciences, 01 (81), 250-257. <http://t-science.org/axivDOI/2020/01-81/PDF/01-81-46.pdf>

[7]. Zakhidov G.E. The method of organizing and managing production by the cluster method. Tashkent: Science. 2016: 160 (in Uzbek)

[8]. Bespalova L. What is a cluster? Available at <http://siok.rightside.ru/siok/2009-12-01-06-24-41>. (in Russian)

[9]. Freeman S., Soete L. New research in the economics of technological change. Pinter. 1990: 471. Available at: <https://www.amazon.com/New-Explorations-Economics-Technological-Change/dp/0861871286>. (in English.)

[10]. Osechkina L.I. The cluster approach as a condition for increasing the effectiveness of the university. Higher education in Russia. 2012; 8-9: 75. Available at: <https://cyberleninka.ru/article/n/klasternyy-podhod-kak-usloviye-povysheniya-effektivnosti-deyatelnosti-vuza>. (in Russian)

[11]. Krivykh S.V. Cluster approach in vocational education. Academy of vocational education. 2014; 3-4: 7-13. Available at http://inov.su/d/42292/d/monografiya_klasternyy_podkhod.pdf. (in Russian)

[12]. Shamova T.I. Cluster approach to the development of educational systems. The interaction of educational and social institutions in ensuring the effectiveness, accessibility and quality of education in the region: materials of the 10th International Educational Forum. 2006; Part 1:25. (in Russian)

[13]. Sidorin A.V. The system of formation of the personnel potential of high-tech industries based on the cluster approach. Online Journal of Scientific Research. 2012; 4: 3. Available at: <https://cyberleninka.ru/article/n/sistema-formirovaniya-kadrovogo-potentsiala-vysokotekhnologichnyh-otrasley-promyshlennosti-na-osnove-klaster-nogo-podhoda>. (in Russian)

[14]. Arutyunov Yu.A. Formation of a regional innovation system based on a cluster model of the region's economy. Corporate governance and innovative development of the economy of the North. Bulletin of the Research Center for Corporate Law, Management and Venture Investments, Syktyvkar State University. Available at <http://koet.syktsu.ru/vestnik/index.htm>. (in Russian)

[15]. Kudryashov V.S. Methodological support for the formation of cluster formations in the region: St. Petersburg, 2013: 7. Available at: <https://www.dissercat.com/content/metodicheskoe-obespechenie-formirovaniya-klasternykh-obrazovaniy-v-regione>. (in Russian)

[16]. Aachenbach Yu.A. Formation and development of scientific and production clusters in the region: theory, methodology, practice. Tambov. 2015: 24 Available at: <https://www.dissercat.com/content/formirovanie-i-razvitiye-nauchno-proizvodstvennykh-klasterov-v-regione>. (in Russian)

[17]. Khasaev G.R. Clusters are modern tools to increase the competitiveness of a region (through partnership in the future). Scientific journal Bulletin of the South Ural State University. 2010; 20: 101-105. Available at <https://cyberleninka.ru/article/n/klaster-kak-instrument-povysheniya-konkurentosposobnosti-regiona-v-usloviyah-sovremennogo-mirovogo-hozyaystva>. (in Russian)

[18]. Krysin L.P. Explanatory Dictionary of Foreign Words. M.: Eksmo, 2008: 944. Available at: <https://www.twirpx.com/file/1384374/>. (in Russian)

[19]. Tarasenko V.V. Sociological definition of territorial clusters. Bulletin of the Adygea State University. 2011; 3: 243-248. Available at

<https://cyberleninka.ru/article/n/sotsiologicheskoe-opredelenie-territorialnyh-klasterov>. (in Russian)

[20]. Tsikhan T.V. Cluster theory of economic development. Theory and practice of management. 2003; 5: 48-56. Available at http://www.subcontract.ru/Docum/DocumShow_DocumID_168.html. (in Russian)

[21]. Kleiner G.B., Kachalov P.M., Lapel N.B. Synthesis of cluster strategy based on the theory of system integration. Science - Education - Innovation. 2008; 7: 9-39. Available at <https://cyberleninka.ru/article/n/sintez-strategii-klastera-na-osnove-sistemno-integratsionnoy-teorii>. (in Russian)

[22]. Usmanov B., Bakhodyrov Zh. Development of a cluster system in the Republic of Uzbekistan: foreign experience. Business Expert. 2018; 4: 29-27. (in Uzbek)

[23]. Demidov A.A., Komarova I.I. Creative clusters for St. Petersburg Modern productive forces. Theory and practice of cluster politics and science. 2014; 4: 149. Available at: http://elar.urfu.ru/bitstream/10995/60517/1/978-5-7996-2407-1_02_18.pdf. (in Russian)

[24]. Barabolina A.I. Formation of an automotive cluster in China. Problems of the modern economy. 2008; 4:24. Available at <http://www.m-economy.ru/art.php?nArtId=1672>. (in Russian)