**World Bulletin of Social Sciences (WBSS)**
**Available Online at:** https://www.scholarexpress.net
Vol. 24, July 2023
**ISSN:** 2749-361X

# THE VALIDITY OF CLUSTER METHODS IN PEDAGOGICAL EDUCATION IN THE DUNA COUNTRIES

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**Article history:**

**Received:** 26th May 2023
**Accepted:** 26th June 2023
**Published:** 28th July 2023

**Abstract:**

The article discusses the main approaches to the creation of educational clusters, provides an analytical review of the activities of clusters in the CIS countries and abroad. From these positions, the essence and features of the republican educational-scientific-innovative cluster of continuous pedagogical education are revealed.

**Keywords:** cluster, cluster development of continuous pedagogical education, educational-scientific-innovative cluster, interaction, innovative development.

**INTRODUCTION.** Expanding the forms of integration is one of the main trends in the development of continuous pedagogical education. The modern system of continuous pedagogical education in the Republic of Belarus is characterized by working in the development mode; It is characterized by openness, gradation, multi-level and multi-functionality. At the same time, the analysis of educational practice made it possible to identify a number of problems in the field of continuous pedagogical education: disparity in determining the strategy and tactics of training, retraining and professional development of educational specialists of educational institutions; lack of sufficient integration of educational and scientific-methodological institutions to improve the quality of continuous pedagogical education; underestimating the possibilities of creating conditions for the advanced personal and professional development of pedagogues in pre-school education, special, general secondary educational institutions, branches of departments in additional educational institutions for children and youth, experimental and innovative areas[1].

An effective mechanism for ensuring the continuity of teacher education and effective cooperation of all subjects participating in this process has become the transition to cluster organization of cooperation. The concept of pedagogical education development in 2015-2020 envisages "the use of clusters as the main elements of the professional training, retraining and development of the system of professional development of professors and teachers"[5]

**ANALYSIS AND RESULTS.** A cluster in the field of pedagogical education is a territorially localized set of institutions and organizations that cooperate on the basis of agreements and participate in the implementation of scientific, educational and innovative goals of training specialists in the field of education.

Cluster development of teacher education is a conceptual approach that implies the use of clusters as the main elements for the development of a system of professional training, retraining and professional development of education specialists[6].

A systematic analysis of foreign experience on the issue showed that the development of education based on the cluster approach began in Europe in the 1990s as a result of the extrapolation of the theory of clusters and cluster development developed by M. Porter. Over the past 20-30 years, universities in both Europe and the United States have expanded through mergers. As a result of the merger, new subjects are being formed, which will save administrative costs and improve the performance of the national education system in international rankings.

Higher education institutions are steadily developing in this direction in Finland, where the number of universities has decreased from 20 to 15 in recent years. Out of 25 universities and research centers in Denmark, 8 universities and 3 research centers have been established. As a result of the merger of three universities in France, the largest university in the country, Strasbourg, was established. As part of the creation of educational clusters, it is planned to reduce the number of universities from 87 to 10. Among the most actively developing clusters in the country are state educational institutions, scientific laboratories, business companies, and clusters focused on improving ecosystems[7].

In 2006, the Union of Technical Universities TU9 was established in Germany in order to improve cooperation with the real sector of economy, production and business. In 2012, another 15 universities with a good reputation in the educational services market joined the

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alliance called U15. Integration processes have been ongoing in Norway since 1994. The unique feature of integration in this country is that universities that decide to merge can return to their previous organizational and legal format within a few years. In the UK, education clusters operate in the health sector.

An important role in the development of clusters and the regional economy of the United States belongs to universities. M. Porter analyzes the Massachusetts educational cluster, the leaders of which are Massachusetts and Harvard universities, and shows in detail the role of the cluster in the country's education sector in comparison with other states (first of all, California) and other countries.

Examples of innovative educational clusters are the Swedish educational cluster created on the basis of Uppsala University and the research triangle cluster in North Carolina (USA). These clusters include innovative companies from the same regions. At the same time, the superiority in educational activities remains in local universities[8].

China has established 1,300 industrial and innovation clusters. Currently, more than 560,000 scientific and engineering workers (including more than 52,000 masters, more than 9,000 candidates of science), as well as a third of college graduates (1.33 million out of 4 million) work in this system.

Based on the analysis of scientific literature, the cluster approach to the development of education in the Russian Federation is based on the mutual and self-development of cluster subjects, which is carried out on the basis of social partnership, which brings out the unique advantages of both individual participants and clusters as a whole. increases (TI Shamova, EI Pavlova, EI Pavlova). Researchers NA Sharay, LN Nikolaeva, TV Vdovina consider the educational cluster as an integrative system of organizing educational resources. VL Chudov, LM Perminova summarized the experience of creating a system of integrating lyceum, university and production in the interest of sustainable development of the quality of education[9]. The same typological description of models of educational clusters M. Yu. Proposed by Baryshnikov, II Chinnova, AV Simonov. Scientific-educational cluster LV Ovsienko, IV Zimina, NN Klintsova's research in the framework of social partnership, including universities, enterprises, secondary vocational education and training organizations, general education schools. is considered as the most promising structure for increasing[10].

In a sense, the cluster is similar to organizational forms such as concern, consortium, corporation. An example of cluster relations in the field of education is the interaction of schools and kindergartens with the creation of educational and multidisciplinary complexes. In the Soviet era, there were scientific-production complexes, regional production cooperation and production-regional complexes. Clusters are often identified with the above complexes[20].

A systematic analysis of the experience of creating clusters in the CIS showed that the use of the cluster approach occupies one of the main places in the strategies of socio-economic development of a number of entities of the Russian Federation and municipalities where projects on the creation of territorial production clusters are implemented. Organizational, economic and socio-pedagogical mechanisms are being developed that can combine education, science, business and production by creating regional innovative educational clusters[11].

According to VA Bolotov, it is economically beneficial to cluster "consecutive" levels of education - high school and college, kindergarten and junior school, which allows college teachers to teach in specialized school classes. The system of educational clusters helps the child to find his own development vector from an early age and to become a highly qualified specialist in the future.

A university-school cluster of 33 educational complexes, including 220 schools and kindergartens, operates in an experimental mode in Moscow microdistricts – Nekrasovka[21], Kapotnya and Maryino; teachers work in a new paradigm of activity learning. In Tatarstan, in 2007-2008, the cluster approach was recognized as the main prospective means of increasing the efficiency of the republic's economy; The concept of formation of educational clusters was developed and approved[12].

On the basis of Omsk State Pedagogical University, a regional professional-pedagogical cluster is being established as a network association of professional-pedagogical educational organizations. It is assumed that the activity of this cluster will allow the introduction of a regional system of training of teachers facing the consumer, forming a distribution system for the training of educational specialists taking into account the needs of the labor market in the Omsk region[13].

The experience of creating an innovative educational cluster in Kazakhstan shows that it provides an opportunity to constantly "absorb" students in the field of their future professional activity, to learn, generalize and collect best practices, to quickly test scientific achievements, allows to update and generalize the organization and content of professional training[22].

The innovative educational cluster operates on the basis of Nazarboyev University in two directions: transfer and

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commercialization of technologies by distributing the results of its research to the market; attracting business entities, including foreign enterprises, to the establishment of scientific departments, pilot plants, high-tech companies at the industrial site of the university[14].

The cluster policy in Ukraine includes the formation of modern educational centers focused on the training of highly qualified specialists and the creation of intelligent educational technologies. Scientific-educational cluster of Ukraine introduces innovations and advanced world experience into the Ukrainian education system, attracts a wide range of partners for effective development of the scientific and educational sphere, develops, prepares and develops socially significant projects in the field of education. aims to help in implementation.

The analysis of the cluster development experience showed that different types of clusters are operating in the space of the CIS: according to the direction of activity (competency-oriented; scientific-innovative; innovative education; social-cultural); by level of organization (regional, republican, city, institutional, international); etc. by branches of education. Organizational clusters of different and different levels are seen as complementary rather than mutually exclusive[15].

By type, clusters can be conditionally divided into educational, such as "lyceum - college - university" and mixed, for example, "scientific-educational" and "production-educational". The goal of forming production and educational clusters is to eliminate barriers to mutually beneficial cooperation between business and universities, to accelerate the transfer of innovations.

The most important from the point of view of innovative development are mixed clusters, because it promotes the interaction between the producer of educational services and the final consumer, including the involvement of practitioners, as well as the use of employers' funds and the production base. provides This allows for effective transfer of innovations to educational practice[16].

In 2015, educational, scientific and innovative cluster of continuous pedagogical education (UNIC NPO) was established in the Republic of Belarus as a collection of educational institutions, scientific, scientific, methodical, public organizations of various levels of education. Conceptual and theoretical-methodological approaches to the creation of UNIC NGO are based on the researches of well-known Belarusian scientists A. IJuk, AVTorkhova.

The main advantages of UNIC NGOs are: quality, modernity, convenience, continuity, succession. This allows to obtain a number of practical and economic benefits: to combine intellectual resources around the main issues, to organize network cooperation of all participants; eliminating the shortage of applicants for pedagogical specialties, attracting the best students; strengthening practice-oriented training, retraining and professional development of pedagogic personnel; creating an advanced development environment, reducing the time for professional training and adaptation of an educational specialist[17].

Due to cooperation, mutual trust and communication with educational institutions at the stage of opening public specialties, discussion and preparation of curricula and training programs, practical training of young professionals and placement in workplaces, the participation of personnel customers in the UNIC of the NGO is possible.

Educational and methodical cooperation is effectively implemented in UNIK NPO, design of educational and programming documents in the institutions included in the cluster; joint development of training manuals, their examination; summarizing the innovative experience of educational, educational, scientific and scientific-methodical works; master classes are held on the methodology of teaching academic subjects, which ensures the improvement of the quality of training of future teachers, the sustainable development of educational institutions, the competitiveness and mobility of teachers and students[18].

UNIC NGOs organize scientific cooperation to determine the priority directions of psychological and pedagogical research in the field of education, coordinate joint work on scientific innovative projects; on the organization of scientific-research activities of students of pedagogical classes, students, graduate students, it helps to unite the intellectual resources of all subjects of the cluster around current scientific-pedagogical problems[19].

**CONCLUSION.** Cooperation organized in this way allows to create a practice-oriented educational environment that increases the competitiveness of all subjects of the cluster; provides training of highly qualified specialists in optimal terms; allows building individual learning trajectories of professional self-awareness. Thus, it can be said that clusters and the cluster approach are primarily for innovative education, and educational clusters are one of the forms of organizing innovative education. The cluster form of the organization leads to the creation of a concentrated innovation specialist.

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Vol. 24, July 2023
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**REFERENCES:**

1. 2015–2020 yillarda pedagogik ta'limni rivojlantirish konsepsiyasi: tasdiqlandi. Respublika ta'lim vazirligining buyrug'i bilan. Belarus, 25 fevral. 2015 yil, № 156. [Elektron resurs].- Kirish rejimi: http://bspu.by/admin-panel/vendor/kcfinder/upload/files/klaster/O'qituvchi ta'limi konsepsiyasi.pdf
2. Galichin, V. A. Ta'lim xizmatlarining xalqaro bozori: asosiy xususiyatlar va rivojlanish tendentsiyalari / V. A. Galichin // Globallashuv asri. - 2013. - No 2. - B.101-112.
3. Sokolova, E. I. Zamonaviy pedagogikaning kontseptual sohasidagi "Ta'lim klasteri" atamasi / E. I. Sokolova // Uzluksiz ta'lim: XXI asr. - 2014. - No 2 (6). - B.153-160.
4. Zaporojye viloyatining raqobatbardoshligini oshirish maqsadida iqtisodiyotni klasterlash usullari / Sokolenko S. I. [va boshq.]. // Bozorga ko'maklashish xalqaro jamg'armasi; Ukraina iqtisodchilar ittifoqi; Ukraina Savdo-sanoat palatasi; "Ukrimpeks" OAJ [Elektron resurs]. - Kiev. - 2010. - Kirish rejimi: http://litcey.ru/ekonomika/9155/index.html?page=8.
5. Abdusamatov, A. S. (2021). Methodological innovations in primary education and their organizational-active and purposeful implementation. Asian Journal of Multidimensional Research, 10(8), 53-58.
6. Abdusamatov, A. S., & Ibragimova, K. (2021). SYSTEMS OF INNOVATIVE DEVELOPMENT OF MATHEMATICAL EDUCATION IN PRIMARY SCHOOLS. CURRENT RESEARCH JOURNAL OF PEDAGOGICS, 2(05), 120-123.
7. Abdusamatov, A. S. (2021). MODELING METHODS AIMED AT THE FORMATION OF UNIVERSAL TRAINING IN THE INITIAL EDUCATION. CURRENT RESEARCH JOURNAL OF PEDAGOGICS, 2(08), 34-38.
8. Sobirovich, A. A. (2023). USING A VISUAL-CONSTRUCTIVE MODEL IN INTRODUCING SEMIOTIC EDUCATION TO PRIMARY CLASS STUDENTS. World Bulletin of Social Sciences, 24, 27-29.
9. Salokhitdinova, N. M. (2020). PROVIDING MEMBERSHIP BETWEEN TESTING AND INTERNATIONAL ASSESSMENT PROGRAMS FROM PRIMARY SCHOOL MATHEMATICS (An example of elementary school math). Scientific and Technical Journal of Namangan Institute of Engineering and Technology, 2(12), 14-19.
10. Салохитдинова, Н. (2021). Development prospects of primary education integration (on the example of exact and natural sciences). Общество и инновации, 2(7/S), 221-225.
11. Салохитдинова, Н. (2022). Aniq va tabiiy fanlar tushunchalarining integratsiyasi (Aniq va tabiiy fanlar misolida). Современные тенденции инновационного развития науки и образования в глобальном мире, 1(3), 368-371.
12. Salohiddinova, N. (2022). INTEGRATION OF EXACT AND NATURAL SCIENCES CONCEPTS (On the example of exact and natural sciences). Emergent: Journal of Educational Discoveries and Lifelong Learning (EJEDL), 3(11), 158-165.
13. Салохитдинова, Н. (2021). Перспективы развития интеграции начального образования (на примере точных и естественных наук). Общество и инновации, 2(7/S), 221-225.
14. Salokhitdinova, N. M. (2021). Current state of science integration in primary education. Asian Journal of Multidimensional Research (AJMR), 10(3), 533-537.
15. Muxlisa, E., & Oysuluv, U. (2022). MAQOL VA MATALLARNING CHOG'ISHTIRMA TADQIQI. IJTIMOIY FANLARDA INNOVASIYA ONLAYN ILMIY JURNALI, 2(2), 102-107.
16. Қодирова, А. Б. (2022). АБУ АБДУЛЛОҲ МУҲАММАД ИБН АЛИ ҲАКИМ ТЕРМИЗИЙНИНГ "ОҚИЛЛАР ВА АЛДАНГАНЛАР" АСАРИДА НАФС ТАРБИЯСИНИНГ ПСИХОЛОГИК ОМИЛЛАРИ. Science and innovation, 1(B3), 119-124.
17. Қодирова, А. Б. (2019). The views of Al Khakim At-Termizi on the theory of cognition. Psixologiya, (1), 88-90.
18. Kodirova, A. B. (2022). ANALYSIS OF PSYCHOLOGICAL VIEWS IN THE WORKS OF AL-HAKIM AT-TERMIZI ACCORDING TO THE SCIENTIFIC CONTENT AND THE THEORY OF SUFISM. Web of Scientist: International Scientific Research Journal, 3(12), 1287-1292.
19. Kodirova, A. B. (2022). PSYCHOLOGICAL AND PEDAGOGICAL ASPECTS OF THE USE OF THE MYSTICAL IDEAS OF AL-HAKIM AT-TERMIZI IN THE EDUCATIONAL PROCESS. Web of

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Vol. 24, July 2023
**ISSN:** 2749-361X

Scientist: International Scientific Research Journal, 3(12), 1281-1286.
20. Qodirova, A. (2022). УЛУҒ МУҲАДДИС ИМОМ АТ-ТЕРМИЗИЙ ФАОЛИЯТИНИНГ ПСИХОЛОГИК ЖИҲАТЛАРИ. Science and innovation, 1(B7), 1086-1090.
21. ALIMARDANOVA, R. (2023). STUDY OF SOCIO-PSYCHOLOGICAL FACTORS OF THE YOUNG BRIDE AND GROOM'S LIFE VISIONS IN ENSURING HEALTHY PSYCHOLOGICAL RELATIONSHIPS OF YOUNG BRIDES AND GROOMS IN UZBEK FAMILIES.
22. ALIMARDANOVA, R. (2023). INTERPERSONAL NORMAL INDICATOR IN ESTABLISHING HEALTHY PSYCHOLOGICAL RELATIONSHIPS BETWEEN YOUNG BRIDE AND GROOM IN UZBEK FAMILIES. World Bulletin of Social Sciences, 18, 11-14.