

## PRINCIPLES OF PREPARING STUDENTS FOR INNOVATIVE ACTIVITIES IN THE EDUCATIONAL CLUSTER ENVIRONMENT

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### ABSTRACT

Every change or problem that occurs in the life of society, without a doubt, affects the place and state of education, but also sets before it a specific task, such as creating a scientific basis for solving the problem. The "Education and Society" system, in turn, relies on the spiritual wealth created by mankind, and requires a new attitude of a person to himself and the people around him, that is, an innovative approach. Therefore, this article focuses on researching the impact of innovative activities on the development of society from the point of view of scientific and pedagogical discourse. In addition, the article describes the practical aspects of education and training from the point of view of innovative activities in preparing them for real professional life, treating the student as the main subject and object of the educational system, with a comparative analysis of theoretical approaches.

**Keywords:** Cluster, educational cluster, integration, innovative education, innovative activity.

### INTRODUCTION

The introduction of the "cluster" system in education, its purpose and effective use is aimed at changing the worldview of teachers and students, training specialists who meet the needs of the state and society, and cooperating with partner organizations in this regard. based on the demand and supply of the labor market, it is carried out within the framework of targeted and targeted projects. That is, it is required that each higher education institution should pay attention to the quality of personnel, organize the scope of scientific and practical research on the issues of coordination and implementation of dynamic characteristic cluster activities of educational systems on the basis of special programs.

In this, the main focus is on organizing the activities of educational institutions in cooperation with the real sector of the economy, creating the necessary conditions for the implementation of horizontal and vertical aspects of educational services by coordinating systematic, targeted, targeted and multi-level innovative technological factors in the cluster will be directed.

It reflects the priority of creating an educational cluster environment, implementing combined activities aimed at ensuring the integration of educational fields, ensuring the harmony of theoretical and practical knowledge, and implementing targeted and targeted projects within the framework of the system.

Organization of the educational cluster, implementation of its goals and tasks, continuity of the educational process and interdependence of the innovative educational program, organizational, educational, methodological, among all elements and subjects of the cluster it is required to be based on the principles of dynamic nature of scientific and informational communication.

From this point of view, in the environment of the educational cluster, students should acquire preliminary skills and competences in the use of interactive methods, pedagogical and

information and communication technologies in teaching in keeping with the times. This requires future teachers to have high professional competence in organizing high-quality and effective education and training with students.

This process, of course, is directly related to students' innovative ability, professional pedagogical characteristics and cognitive processes, and requires the formation of an innovative database of science and the need for constant research. Therefore, it is necessary to fully implement an innovative approach in this process, realizing the professional responsibility of students.

## LITERATURE ANALYSIS

The term cluster was first introduced to science at the end of the 20th century by Michael Eugene Porter, an American economist and professor of business administration at Harvard Business School. A cluster is a group of geographically interconnected companies, specialized suppliers, service providers, firms in related fields, as well as organizations related to their activities, competing, but at the same time leading joint activity [23, 7, 26, 16, 12, 8, 11].

A number of scientific-theoretical views have been formed regarding the educational cluster and its essence, and a number of opinions have been expressed regarding its importance and place in society. In particular, according to M. Yu. Porter, the cluster is the connection between strong competition in the domestic market and the creation and maintenance of high competitiveness in the industry [24.2]. G.A. Yasheva suggested that a cluster is a set of network organizations based on cooperative relations between companies united around one scientific and educational center, while researcher A.G. Granberg believes that a cluster is a group united in one field and in close contact with each other. supports the view that it is a group of enterprises. According to N.V. Gorodnova, a cluster is a group of related and complementary companies and institutions operating in one geographical area in special fields, N.Ye. Yegorov cluster is a collective, If it is defined as a group of related and complementary firms, research and development institutes in a private and semi-collective form, according to N.A. Mishura, a cluster is a group of commercial and non-commercial organizations is, it serves to ensure the competitiveness of each firm operating in the group [27.12].

According to Yu.P.Sadchenkova, the main approach to organizing student education within the cluster is to combine professional, practical, educational and research activities of future specialists and ensure unity of professional and personal development [21].

Famous pedagogues G.I.Muhamedov, U.N.Khojamkulov admit that one of the modern methods of the integration process is undoubtedly the cluster approach. Researching it as a scientific-pedagogical problem, substantiating its effectiveness and developing scientifically based suggestions on the mechanisms of its implementation is one of the main issues of our national pedagogy [17]. U.N. Khodjamkulov researched the pedagogical innovative educational cluster, its social and economic possibilities and scientific theoretical aspects in our republic. As subjects of the pedagogical education cluster, it is possible to understand the cooperation of all state and non-state organizations that serve to increase the efficiency of educational, scientific, methodical activity of educational institutions. The cluster model unites entities that are each operating separately around a common goal, and at the same time, each entity works in private interest based on a common goal. Subjects of the cluster model support and control each other, each creates the spiritual and intellectual space of a separate cluster, expands the social influence and importance of each other[28].

Researcher S.A. Toshtemirova spoke about the pedagogical education cluster and said that its purposeful non-use has a negative effect on the quality of education and the potential of personnel, and ultimately creates existing problems in the economic and social spheres. admits that it will cause a decrease. As a result of the lack of full consideration of the socio-economic specificity of the regions, their demands and needs, as well as the lack of in-depth study of the demand and supply in the labor market, there is an imbalance in the distribution of personnel across the regions. This causes the need for pedagogic personnel to be unmet for years in some regions [18.22].

According to N. Yu. Maksimova and T. I. Kuznetsova, it is important for the society to establish and develop an educational cluster, to harmonize the activities of interacting educational institutions improves the quality of education services [15.43].

In this sense, researcher V.S. Lazarev's opinion that "since innovative activity is a special type of activity, it is necessary to understand its motives, goals, tasks and specific features" [14.5] corresponds to the principles of our scientific research.

In our scientific research [1, 2, 3, 4, 5, 19, 20, 30], as an organic continuation of the above-mentioned research works, a cluster is a combination of activities from the lowest level to the highest level in society. It is integrated on the basis of purposeful and targeted projects, the innovative approach is connected to the chain ring and is directed to the research of the combined activity of educational organizations within the framework of the realized activity. This process requires an innovative approach to education. First of all, the need to introduce modern pedagogical technologies into the educational process, and for this, the integration of traditional methods of teaching, which served the development of human society, with innovative technology and methodology is analyzed from the point of view of speech.

## **RESEARCH METHODOLOGY**

Retrospective analysis, contextual analysis, scientific-pedagogical, methodical literature, educational-regulatory documents study, analysis, synthesis, comparison methods were used in the research process.

## **ANALYSIS AND RESULTS**

The functional role of education is increasing in a time when informational and psychological struggles with the help of various methods and tools to conquer the heart and mind of a person are intensifying. The development of the social, economic, political and cultural spheres of society, more precisely, the social demand and needs that arise in the way of their development, shows the increasing demand for innovations, i.e. for ensuring the effectiveness of innovation and innovative activities. . After all, as a result of incomplete satisfaction of needs and requirements in time, an imbalance between the society and the educational environment may arise. Although, the disparity is directly related to the application of the results of scientific and technical development in production, education, culture and household life. Based on the dynamic analysis of socio-cultural, economic and political processes taking place in the world, it should be noted that one of the main tasks of any sovereign state is to ensure the development of the country. Progress is ensured by individual human-experts at different levels. Therefore, the issue of preparing students for innovative activities is becoming more urgent. A cluster approach to education is required.

According to the researcher G.N. Sharipova, the main goal of the educational cluster is to coordinate educational systems for the training of modern specialists, to achieve a qualitative

improvement of the pedagogical educational innovation cluster to a new level. At the same time, the following is provided for the formation of self-development competence of future teachers:

- implementation of educational practice based on the competence approach;
- improvement of effective mechanisms that ensure the integrity and continuity of education and training, and development of logical thinking of students based on the educational motive and orientation to pedagogical education [29.91].

According to the analysis, the following can be included in the educational cluster and its functional tasks organized in HEIs:

- organization of quality education with partner organizations that serves to ensure the economic growth and social stability of the society;
- based on the economic needs of society, creation of effective educational services, taking into account the demand and supply of the labor market;
- transition to an educational system that guarantees the competitiveness and mobility of graduates of higher education institutions in the labor market;
- coordination of educational technologies with the innovative system;
- development of the necessary and mandatory regulatory and legal basis for carrying out targeted and targeted activities with partner organizations within the cluster;
- creation of a program of a perspective and long-term concept of personnel training and their practical guidance;
- implementation of the project of technoparks that serve to form practical professional competence of students.

According to N.Ye.Stenyakova and O.G.Gruzdova, the activity of educational clusters should become a stable mechanism of economic, social and cultural development based on the needs of individuals, society and the state, ensuring the availability, high quality and efficiency of science and professional education. , it should be constantly updated, taking into account social and economic needs. Understanding the essence of the cluster approach and its implementation creates the necessary conditions for the development of the educational system and the search for new resources and opportunities to improve its quality. Organized partnership, together with the creation of an educational environment aimed at ensuring the competitiveness of subjects of the educational cluster, also allows for the creation of individual educational trajectories of professional self-awareness [25.7].

According to the researcher A.F. Ismailov, innovative activity is a force that moves, initiates and develops the pedagogical team. Innovative activity is an activity aimed at solving problems that arise as a result of the incompatibility of traditional norms with new social requirements, or the conflict of the newly applied norm with the existing norm [10], according to S. Sulaymanova, "The essence of the teacher's professional development process is to solve individual educational deficiencies that arise during his professional development. This process includes the enrichment of the teacher's knowledge and skills, the formation of professional competence necessary for the successful implementation of innovative activities through the preparation and implementation of individual educational programs" [6.395-399]. In our opinion, we can express the theoretical model of this process as follows: "Educator's knowledge + competence + skills + experience + creativity + professional dedication + professional skills + educational environment + work team + incentive to work = Innovative activity." Of course, this theoretical model has a relative character and does not claim to be true.

In the approaches of S.G. Grigoreva, innovative activity is considered as a purposeful pedagogical activity based on understanding one's own practical pedagogical experience by

comparing, learning, changing and developing the educational process, achieving better results, gaining new knowledge and qualitatively different [9.53]. In our opinion, in the process of innovative activities, students should strive to develop non-standard methods of independent and creative use of pedagogical technologies necessary for mastering scientific knowledge, becoming an active person in society, and self-development.

M.A. Kuprina distinguishes four levels of innovative activity formation:

- first, flexibility, it is characterized by a stable attitude of the teacher to the news, the news is absorbed only under the influence of the social environment;
  - the second, a stable attitude towards reproductive pedagogical innovations, which is characterized by a slight change and copying of ready-made methodological developments. The teacher knows the need for self-improvement;
  - the third, great goal of the heuristic level, which is stability, characterized by knowing the methods of introducing innovations. The teacher always seeks and implements new methods of pedagogical solutions;
  - the fourth, creative level is characterized by high efficiency of innovative activity, high sensitivity to problems and creative activity. The teacher purposefully searches for new information, creates author programs, shares his pedagogical experience. Intuition, creative imagination, and improvisation play an important role in the activities of such teachers [13.26].
- Based on the comments of M.A. Kuprina, the teacher's search for novelty in his innovative activity is seen in more creative risk-taking and in the search and implementation of effective methods among alternative options.

According to I.V. Safronov, innovative activity consists of the implementation of activities integrated into a series of logical chains, and each stage of this activity is subject to the logic of development, and has its own order and content [22].

Therefore, the innovative activity of the future teacher is aimed at positively solving the educational and educational problems that have arisen as a result of the incompatibility of traditional standards with the new social requirements in education, as well as the clash of meaning and content. increases the demand for a professional approach and makes a significant contribution to the development of education. That is, based on the future history teacher's level of creativity, logical thinking, and the desire and ability to master the skills of professional professionalism, innovative activity depends on the competence of self-development.

In the innovative environment of pedagogical education, the creativity of the future history teacher can be evaluated by their level of flexibility, assimilation of innovative knowledge under the influence of the social environment, and critical approach in practical activities, reaching the essence of knowledge and concepts.

The level of productivity can be considered as relying on alternative options of professional and creative activities, creating a healthy educational environment, increasing student activity, and directing student personality development and self-improvement.

It is envisaged that the teacher of the heuristic level should apply a creative approach as a means of solving pedagogical problems and assigned tasks, and develop the skills of purposeful use of step-by-step methods.

As a creative level of the future teacher, it involves the purposeful use of creative imagination in the professional activity, works on new views and approaches in the course of the lesson, and transfers them from the specific to the general, from the general to the specific, develops

and implements them based on the individual characteristics of the students. . This process plays an important role in education and upbringing of young people in educational practice and serves as the main source for meeting their spiritual and ideological needs.

## CONCLUSION

In conclusion:

- the process of preparing students for innovative activities is a part of the educational strategy, in which it is necessary to direct students to creative activities and take into account their individual characteristics in this process;
- to achieve the quality of education by forming innovative and scientific awareness competence of students and developing fundamental pedagogical support, providing optimal options of pedagogical technologies in education and liberalizing the process;
- Pedagogically-psychological preparation of students for their intellectual and self-development, wide use of innovative pedagogical technologies to make students realize that they are the owners of socially important professions;
- it is advisable to teach students to evaluate the essence of innovative activity and its content as an activity aimed at solving problems arising as a result of the clash of the newly used norm with the existing norm in the innovative method of education.

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