# INNOVATIVE CLUSTER MODEL FOR IMPROVING THE QUALITY OF EDUCATION

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## ABSTRACT

The purpose of this article is to provide some major benefits of using ICT in educational clusters. Information Communication Technology (ICT) breakthroughs have brought new opportunities to restructure the pedagogical learning/teaching settings. Nowadays, cluster methods of ICT has opened new avenues and brought new challenges to learners as well as teachers. The responsibility of learning tasks has shifted towards the learners and this had dramatically changed the roles of teachers

**Keywords:** system of continuous pedagogical education; educational cluster; training of future teachers.

## INTRODUCTION

The issue of assessing the quality of education has always been a priority in the work of the administrative staff of a general education institution. The need to assess the quality of education is obvious. This is what makes it possible to identify the weak and strong sides of the educational system of the institution, to analyze the corresponding systems to modern trends, to ensure continuous monitoring of the functioning and development of the educational process. In addition, its individual elements in order to make timely adequate management decisions based on the analysis of the collected information and pedagogical forecast.

Currently, there is an intensive penetration of computer technology and modern information technology in all areas of activity, including education.

Various methods of using computers in various educational activities are being developed and tested.

There are various computer tools for assessing the level of knowledge. Methods for determining knowledge on a discrete or continuous scale are called testing methods, the tools used for this kind of measurements are called level tests.

## METHODOLOGY

The use of computers in education allows not only to improve the organizational aspect of education, but also to use new psychological theories and mathematical apparatus for creating and processing learning outcomes. To the advantage of computer education: standardization of assignments and testing; protection of information; reducing the time for preparing tests and processing results; the possibility of centralized storage and distribution of tests, as well as statistical processing of results.

When drawing up tasks for automated control of knowledge, it is necessary to be guided by the methodology for diagnosing the content side of the development of intelligence, based on an activity-based approach to learning. According to her, they must work according to the form of action. If it is impossible to perform the action as a whole, it is necessary to diagnose individual operations in the reverse order of formation (i.e., in the reverse of the volume that is used when teaching the action). This avoids the learning effect in the control of knowledge. Sweat for the same reason, the opposite effect should be observed when conducting tasks to perform actions, according to the subject content of the task from less familiar to familiar. If you want to achieve a learning effect in the process of knowledge control, you need to choose a task in terms of the form of performance, subject content and conditions for performing the action in the same sequence that was selected during training. The concept of control and assessment of knowledge is a process that begins with the issuance of one or more tasks to the student and ends with an assessment of the result.

Modern society has joined the general historical process called informatization. This process includes the availability of any information citizen, the penetration of information technologies into scientific, industrial, public spheres, and a high level of information services. The processes taking place in connection with the informatization of society contribute not only to the acceleration of scientific and technological progress, contribute to the development of all types of activity, but also to the creation of a qualitatively new environment of society, ensuring the development of human creative potential.

One of the priority directions of informatization of modern society is informatization of education. It is not just about an educational institution with computer technology and access to the Internet, methods and formal formal educational work, which are caused by the need to prepare the younger generation for life in an information society - about the process of informatization.

**RESULTS**

Today, new technologies, including information and communication technologies, are becoming an essential tool for modernizing schools as a whole - from management to teaching and ensuring accessibility.

In conclusion, it should be noted that quality does not appear suddenly. It needs to be planned. planning the quality of education is associated with the development of a long-term direction of the educational institution. Strategic planning is one of the main success factors for any institution in the educational system. Strategic planning is undoubtedly embedded in the cluster model through a system of indicators and a technological mechanism for their application.

The market of professional educational services has recently acquired a pronounced regional orientation, since it is the regions that are interested in a high level of provision of the territories with professional educational services. The relevance of the idea of regionalization is determined by global trends in the socio-cultural development of mankind, aimed at recognizing the value itself, the uniqueness of national and regional variants of cultures, their unity, integrity and significance as an integral part of human culture. The development of regional education systems that are adequate to the characteristics of the educational needs and interests of students and the specifics of the region is a step forward in the development of Russian education, its movement towards democratization and modernization. It is known that an education system that is focused on the educational needs of the citizens of the region is the most promising. This necessitates a timely solution of a number of problems in the vocational education system at the regional level, including pedagogical. Moreover, the need to improve the quality of training of future teachers is currently acquiring the status of a global problem of professional pedagogy; therefore, modern pedagogical science requires new approaches to the training of future specialists.

From the point of view of the content of the activity, the educational cluster is considered as a system of training and self-learning tools in the innovation chain science - technology - business, based mainly on horizontal links within the chain.

The literature highlights the following specific features of clusters, which are today considered as:

uniform dynamic structures; a stable core of dissemination of new knowledge, technologies, products; innovation centers; interdisciplinary; high degree of informatization; have no clear boundaries.

The educational cluster is being created with the aim of streamlining and coordinating the training and advanced training of teaching staff, finding optimal ways to manage the system of professional teacher education. The ultimate goal of creating a cluster is the organic merger of all interested organizations into a single complex of lifelong pedagogical education.

Positive conditions conducive to the development of clusters, including educational ones, include:

• the existence of appropriate technological and scientific infrastructures (D. A. Yalov); psychological readiness of the participants for cooperation (D. A. Yalov, V. P. Tretyak); availability of a sustainable regional cluster development strategy; possibility of successful application of the project management method; sustainable development of information technologies that ensure the exchange of information between the subjects of the cluster (A. A. Migranyan).

**DISCUSSION**

The factors hindering the development of clusters include the low level of development of associative structures that cannot cope with the task of developing and promoting regional development priorities, a short-term planning horizon, since real benefits from cluster development appear only after 5-7 years. The latter fact compels attention to the issue of the scale of regional development management. If the scale of governance is limited to 4 years (pre-election cycle), then it is difficult to talk about any long-term strategy. The successful implementation of projects on special incentives for clusters is possible only if there is an appropriate long-term regional strategy.

The most important components of the scientific and pedagogical direction "educational cluster" are also:

- management of the quality of education, understood as a purposeful resource, a secured process of interaction between the controlled and managing subsystems to achieve the quality of programmed results by the individual and society

- continuity of the content of pedagogical education and professional training of pedagogical personnel;

- development of the subject of pedagogical activity as an important condition for the continuity of the content of pedagogical education in the system "pedagogical college - pedagogical university";

- systemic organization of level pedagogical education.

The theoretical basis for the formation of an educational cluster is the concept of lifelong education, which contributes to the definition of the structure, content, forms of activity of each of the cluster members, the unity and interconnection of all links of education. The most important property in this regard is its integrity. An educational cluster is a collection of educational organizations that develops in the structure of lifelong pedagogical education as an integral pedagogical object that streamlines numerous connections both within it and with the external social environment. The goals and objectives of each stage of cluster formation should be successively linked not only to the goal of the entire system, but also to the goals and objectives of the previous and future stages.

The second important property of the concept of lifelong education, implemented within the educational cluster, is the continuity of all links of this system. Each previous link should be a full-fledged anticipation of the next one. This is achieved by introducing cross-cutting curricula and adapted programs, as a result of which duplication of educational material becomes impossible. As a result of the end-to-end vertical integration of the stages of continuing education and the horizontal coordination of structures, a high level of organizational unification of various aspects of the activities of the subjects of the pedagogical process is ensured.

The educational cluster provides the opportunity for continuous "immersion" of students in the sphere of their future professional activities, allows them to study, summarize and accumulate innovative experience, quickly test the achievements of pedagogical science, update and generalize the organization and content of professional pedagogical training, including by attracting experienced teachers and teachers at the university.

The following strategies for the development of the educational cluster within the framework of lifelong professional and pedagogical education can be distinguished:

• economic, ensuring the creation of a sphere of effective educational services, timely meeting the demand for training of teaching staff in a short time;

• social, related to the provision of guarantees of employment for graduates of organizations of professional pedagogical education through the conclusion of contracts with employers; marketing, generalizing and disseminating innovative educational technologies, new opportunities for organizing teaching and educational work in specialized and pre-profile classes of a comprehensive school;

• legal, ensuring the development of a regulatory framework for partnerships in the cluster, including in the context of a change in the type of educational organizations (transition to autonomy);

• pedagogical, aimed at the joint design of educational activities in the context of the continuous training of pedagogical personnel in the "school" - "secondary school" - "university" system, ensuring the content and technological side of relations between all participants in the educational cluster.

The organization of an educational cluster also provides a solution to the most important task of professional training of a modern teacher - the transition from mass-reproductive production of specialists to their individual and creative training, to the formation of a creative competitive personality of a teacher. In the context of a cluster, it becomes possible to solve the problem of variability of professional training, the opening of new promising specialties, the introduction of new disciplines, modern teaching technologies.

## CONCLUSION

Thus, the educational cluster as a system-forming component and the most important condition for the functioning of the regional model of continuous training of pedagogical personnel is a holistic education, including organizational, managerial, technological, content levels, allowing to ensure a purposeful process of development of lifelong pedagogical education.

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