

DEVELOPMENT OF HIGHER EDUCATION SYSTEMS ON THE BASIS OF DIGITIZATION AND CLUSTERING

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Abstract: *the article discusses a promising direction for the development of higher education - the construction of educational clusters. The essence of a private-state partnership is revealed, the possibilities of building an educational cluster, the characteristics of the positioning of the head institution in a cluster, the ways of interaction between educational structures and production are studied.*

Keywords: *cluster, educational cluster, higher education, concept, theory.*

Today, the new era of Web 3.0 technology and the 4th industrial revolution "Industry 4.0" have created new digital technologies. The development of various mobile applications, the emergence of the Internet of Things, 3D printers, robots and the ability to store and process large amounts of information all affect the education system. Artificial intelligence, robotics, the popularity of additive technologies, nanotechnology, biotechnology and many other things are becoming an integral part of everyday life. Many universities today are developing digital education strategies to accelerate the adoption of big data, cloud computing, IoT and smart technologies. They are focused on the organization of "smart education."

The major direction of improvement of higher education is to implement a competency approach to learning. This direction ensures the development of professional competence. Professional competence includes the integral characteristic of an expert and his ability to solve professional problems and common professional problems that arise in real situations, professional work. Professional competence is a set of key, basic and special competencies. Improvement of higher education at the present stage is associated with its modernization. This modernization is aimed at overcoming the stagnation of higher education, and transformation of its content, forms and methods of organization.

The process of modernization helps to create fundamentally new technologies in the educational process. Education is becoming a real resource of development. The literal translation of the Latin word "modern" means "new". The meaningful applications and semantic interpretations of modernization are rather broad. The most common are the notions of "innovation", "novelty" and "new". Effectiveness of professional instructors in higher education makes it necessary to search for new technologies of modernization.

An effective market for educational services in accordance with the needs of the economy for qualified personnel based on continuous monitoring of the labor market can be formed on the basis of a system of continuing professional education. Continuing education should provide each person with an institutional opportunity to form their own individual educational trajectory and receive the training they need for further professional, career and personal growth. The development of a lifelong education system will allow for greater susceptibility of education to external demands, including from the labor market.

The published works discuss various problems related to the subjects of social partnership of educational institutions: employers, representatives of regional and municipal authorities, parents of students, secondary schools, universities, the system of postgraduate education, etc.

However, the works devoted to the interaction of educational institutions with the social partners, is practically not considered the possibility of applying new approaches in the development of professional education, including the cluster approach, which involves mutuality, continuity, cooperation, reciprocal participation, etc. The study of the theory of the subject, not sufficiently studied the production of pedagogical management professional training of students in conditions of social partnership secondary professional schools with socio-economic institutions; the model of educational cluster as a form of social partnership is not developed.

The priority areas for the modernization of higher professional education in the region can be considered: the creation of an innovative educational environment that provides training for specialists of the new formation, integration with academic science, production and systemic transformation of university complexes into regional economic development centers, the social sphere, the implementation of a system of continuous professional education.

The acute problems of the present stage include:

- the lack of formation of the system of state order for the training of qualified personnel for the regional economy;
- lack of quality monitoring of the labor market on a solid permanent basis;

- presence of an imperfect educator standards, forms, technologies and teaching aids; a timeless vocational education and retraining system frame shots.

This necessitates the timely resolution of a number of problems in the system of vocational education at the regional level, including pedagogical. Moreover, the need to improve the quality of training future teachers is now acquiring the status of a global problem of professional pedagogy, therefore, new approaches to the training of future specialists are required from modern pedagogical science.

The concept of modernization of education involves the provision of adaptation of educational structures to the new system of socio-economic relations, the creation of conditions for the distribution of responsibility in vocational education between the state, employers, civil society, which is directly related to the expansion of opportunities to use the cluster approach in education. In this regard, the main priorities for the formation of educational clusters today are recognized as the quality of education, its continuity, accessibility, competitiveness.

The following strategies for the development of an educational cluster in the framework of continuing professional education can be distinguished:

- *economic*, ensuring the creation of effective education services, timely satisfaction demand for training pedagogical short frames;

- *social*, related to provide employment guarantees for the issuance of screenshots of professional teacher education organizations through contracts with employers;

- *marketing*, generalizing and disseminating innovative products new technologies are possible the organization of educational work in specialized and pre-profile classes of secondary schools;

- *legal*, securing partner regulatory framework relations in a cluster, including in the conditions of changing the type of educational organizations;

- *pedagogical*, aimed at joint design educator activities in a continuous environment training teachers in the "school" system - "university", providing the content and technological side of the relationship between all participants of educational cluster.

The organization of cooperation between partners in this case involves providing multi-level vocational education, improving the material and technical base of the school, college and university, promoting the selection and structuring of the content of teacher education, taking into account the interests of all subjects of the educational cluster, stimulating the professional growth of the teaching staff of educational organizations; guarantying graduates of vocational education institutions employment in their chosen specialty with a clear career prospects, contributing to the formation and improvement of their professional competence.

The developed organizational and pedagogical conditions for building a model of educational cluster as a form of social partnership can be used by the heads of both state and non-state institutions of secondary vocational education in order to optimize the quality of training of the future specialist that meets the modern requirements of employers. The mechanisms of activity of the educational cluster developed in the study can be used in the preparation of: a package of local normative documentation between secondary and higher professional education institutions and enterprises; manuals and recommendations for the heads of vocational education institutions on the organization of social partnership on the basis of the cluster approach.

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