

# Cluster Approach to Modeling the Content of Professional Training of Choreographers

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**Abstract—** The article presents the authors’ vision of modeling the content of modern professional training of choreographers in modern sociocultural space using the cluster approach. The multilevel educational cluster considered in the article unites in its structure systems of educational, sociocultural, creative and other various subdivisions and suggests cooperation with the socio cultural sphere and the sphere of labor. The structure of the multilevel educational cluster consists of five blocks in the form of a pyramid, where each block corresponds to certain cluster-forming components, each of which is disclosed in the article. The vector of building an educational cluster is its social demand, which sets the attractors of the development of the content of modern professional training of choreographers and pedagogues. The article presents the principles of clustering the content of modern professional training of teachers and choreographers.

**Keywords:** cluster, education, professional training, cluster approach to modeling educational systems

## I. INTRODUCTION

A cluster approach in science has appeared out of synergetics the founders of which were G. Nicolic , I. Prigogine [1].

The use of a cluster approach to modeling modern professional training develops, in our opinion, a competence approach in education. We consider a cluster approach as a tool with the help of which a social dialog can be established with the social sphere and the sphere of labor, and answer socio-cultural challenges of the modern world.

Currently there are attempts in publications to describe the cluster formation of social systems, its impact on the theory and practice of management and economic system; for example, we can mention works of T.V. Cihan [2], A. A. Ajupov, R. V. Mikhailov, and A. T. Mullanurov [3] discussing education. The new educational technologies are implemented via cooperation of economic clusters of enterprises with scientific and educational centers. The working out of an educational cluster for the development of engineering competences of students on an example of Tomsk Polytechnic University (K. V. Buvakov, O. A. Kazakova, E. S. Vorontsova, S. V. Krivykh [4]; Assessment of the curriculum of a college using cluster aggregation of profiles based on an

intellectual approach to classification of educational data S. A. Priyambada, E. R. Mahendrawathi [5], A. A. Yahya [6]; A. V. Novoklinova, Formation of a cluster of competences of employment of the students of a college in the process of professional training [7], A. V. Kirpichnikova, Development of competences in the sphere of local self-government in students on the basis of a cluster approach [8].

## II. PROBLEM STATEMENT

The modern educational policies of the state determine a social mandate that is a vector of building, an attractor of the development of professional education. The social mandate to professional education means today “an aggregate of objectives the fulfillment of which is expected from this or that actor included into the system of social division of labor. The social mandate addressed to the education system consists of an aggregate of social needs it is called upon to satisfy, these are: the permanent needs the satisfaction of which is a prerequisite for the normal life of society, and the needs in educational services engendered by newly arisen problems and objectives”, according to the «Professional Education» dictionary [9].

In our research professional training of choreographers means an aggregate of educational (and other associated) requirements and requests presented by the community to an educational establishment.

In order to assuredly fulfill the social mandate in implementing modern professional training of choreographers, it is necessary to significantly rebuild the academic activity in the educational system of a college. We see a way out of this situation in the significant rebuilding of the entire learning process: application of modern educational technologies (a creative workshop technology), the implementation of an individual educational route of students, rescheduling and relocation of practices, involvement of creative resources in the professional training process, etc.

### III. RESEARCH QUESTIONS

Many scientists have addressed educational systems, their modeling, technification in education (F. Giambona, E. Vassallo, E. Vassiliadis [10], S.S. Sheveleva [11]; V. Grebneva, M. Sitnikova, S. Moskalenko, T. Sulima, O. Miroshnikova [12]; C. Angeli, S. K. Howard, J. Ma, J. Yang, P. A. Kirschner [13]).

We have implemented our considerations in an educational development model of professional competences in modern professional training of choreographers built on the cluster principle represented as a pyramid. We have designed an educational model of modern professional training of choreographers.

An educational cluster reflects the process of modern professional training of choreographers in the modern socio-cultural space.

The professional aspirations [14], a complex of competences [15] necessary for a young specialist to quickly professionally adapt, get involved in the labor activities constantly changes under the effects of socio-cultural factors, a graduate of a college will have to be constantly improve, enhance his/her qualification. Unfortunately, colleges, despite cooperation with employers, do not fully understand the modern requirements to young specialists, yesterday's graduates of colleges. Often employers are unsatisfied with training of young specialists, especially personal qualities, professional mobility, utilization of modern technologies of society's requirements, S.V. Krivykh, K.V. Buvakov [16] note.

The work of A.Shmarov, A.Andreyevnkova, I.Glinkin states directly that "most colleges have a only a slight idea about the requirements to their graduates of potential employers who focus on mobility, personal qualities of graduates, an ability for self-education, adaptive capacities» [17].

The lack of satisfaction of the social sphere of labor with the training of young specialists in a college can be explained not so much by a misunderstanding of a college, which is necessary to the employer, as by colleges lagging behind the development of science and technologies and having no time to shape them into educational forms.

Our poll of employers coincides with the polls of many other researchers noting the disagreement of professional training and expectations of the labor sphere. According to the employers' poll, the disagreement of expectations from university graduates was identified. Pedagogical employers would give priority to pedagogic competences of graduates (an ability to design and conduct a modern lesson, an ability to compile an educational program, an ability to use modern pedagogical technologies in the educational process and so on). Socio-cultural employers (head of cultural centers, shopping and entertainment parks and complexes) focus on directorial competences, organizational and communicative skills, an ability to work in a team, managerial competences etc. Employers of the sphere of culture and arts value in a young specialist performing, dramatic, and improvisational competences.

The cluster approach is today used everywhere for the setting up and functioning of socio-economic systems, and for organization of activities of production and training complexes. We believe that adaptation of the cluster approach for designing and modeling of an educational system of a college gives undisputed advantages over other approaches.

Educational systems have traditional components: goals, objectives, content of education, including methods, forms and means, subjects of education etc. At the stage of implementation of FSES, however, an educational system of a college should take into account the social mandate, sphere of labor and the socio-cultural environment. The system including such components can be called a cluster – a sophisticated socio-educational system hierarchically built by an aggregate of interrelated and interdependent components: scientific, educational, innovative, socio-cultural, educational establishments united by processes of integration and interpenetration of the spheres of practice, science, and education.

The proposed educational cluster is an open social system that as a result of external impacts on it (to say more correctly, in line with such impacts) fundamentally changes the internal structure, in other words, as a result of external chaotic impacts a new order appears, a new system. One thing in common for any social systems, in terms of a synergetic approach, is contradiction between chaos and order in development. On one hand, development of an educational cluster is a movement toward integrity, toward full order and stability, on the other hand, integrity, totality, stability is "death" of a cluster, a halt in its development. An educational cluster is good while it is not yet formed, while it is not yet a fully attained long-term goal, and it becomes insufficiently good when it is ultimately crystallized. As order grows, an educational cluster has less space for sudden innovations, non-standard situations, for creative manifestation of personality.

Educational systems were considered by many (S. Katalnikova, L. Novickis, N. Prokofyeva, V. Uskov, C. Heinemann [18]; S.V. Krivykh [19]; N.M. Talanchuk [20] etc.)

Educational systems built on a cluster approach usually develop faster than many other social systems and rarely attain an especially high level of integrity. And this is natural: for in any educational cluster generations of subjects (students, instructors, employers etc.) change quite rapidly, each generation feeling itself the subject of development of the cluster, introducing in it something of their own, something new. That is why the development of an educational cluster is determined by not so much objective as subjective factors.

This educational model has a multitude of unstable foci, unstable states, this instability not being its negative feature. The instability focus determines the region that can later become a source of further development of the cluster. Consequently, in managing an educational cluster it is important to identify foci of such instability, and they can be embedded in the model of the system being set up.

Figure 1 reflects the structure of a multilevel educational cluster in today's socio-cultural space.

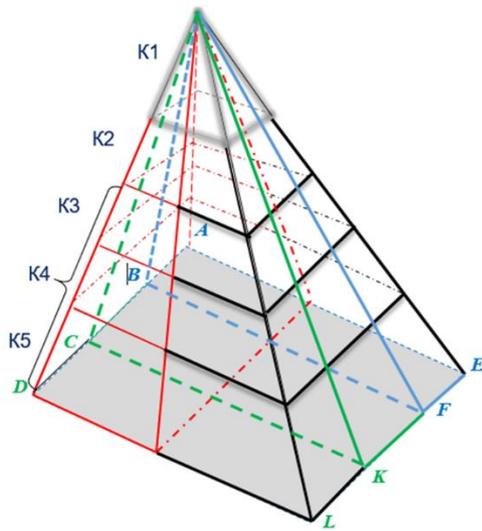


Fig. 1. Structure of multilevel educational cluster in today's socio-cultural space

An educational cluster of the content of modern professional training of choreographers was built and implemented in the educational process of the chair of modern choreography of Federal State-Funded Educational Institution of Higher Professional Education Herzen State Pedagogical University of Russia (in figure 1 it is depicted at the apex of the pyramid and marked K1) with a network of its institutes, departments, centers, research labs and other structural subdivisions performing various associated and serving functions (in the figure they are marked K2).

Blocks K3 – K5 reflect cluster-forming components, organizations, establishments and creative teams:

1) K3 – choreographic venues – places where ballet master and performing practices are held: theaters (such as Yacobson Ballet), dance studios, concerts and balls, etc.

2) K4 – creative venues – places where cultural and educational activities are implemented – development and implementation of creative projects: dancing plays, graduation efforts etc.

3) K5 – pedagogic venues – places where pedagogic practice is held: educational establishments (schools, orphanages), further education establishments for children (creativity centers, clubs studios etc.), vocational training establishments (further educational sections) etc.

*Social institutes* are represented by establishments of education, culture, youth policies, healthcare, social services, physical training and sports. *The sphere of labor* comprises base organizations, establishments offering bases of pedagogical and social practices.

We have deliberately subdivided an educational cluster into two parts: the left one (red) is the *cultural sphere*, the right part (black) is the social labor sphere intended to form competences referred to professional activities. The cultural sphere of the base of our cluster is represented by

establishments of culture (exhibitions, museums, theaters, cultural centers, contests, festivals and such).

*The social labor sphere* of the base of our cluster consists of various establishments, organizations (schools, orphanages, further education establishments - clubs, studios, sports centers etc.).

In the base of the cluster the following activity components of professional training of choreographers are shown as rectangles:

1) rectangle ABFE represents a base of practices (pedagogical, performing, ballet master etc.);

2) rectangle BCKF represents the cultural and educational space;

3) rectangle CDLK represents the creative and performing space.

In such a structure a space of potential capacities of the students is actually created for transfer of constantly appearing external effects on the part of instructors, social environment and the sphere of labor for a future specialist into his/her internal potentials – professional competences, as well as a striving for self-education, self-improvement and self-development. Under the conditions of social upgrading a necessity in a person arises who is capable of self-actualization, creative labor, self-education, self-development, self-control, continuous education at the workplace, of a search, processing, accumulation, implementation of new professional knowledge, performing collective and independent activities, who is able to link personal motivation with social ones [21].

As O.N.Shilova notes, under the conditions of social upgrading a necessity arises in a person «*who is capable of self-actualization, creative labor, self-education, self-development, self-control, continuous education at the workplace, of a search, processing, accumulation, implementation of new professional knowledge, performing collective and independent activities, who is able to link personal motivation with social ones*».

The clusterization of the educational space of a college, district, city, region, expansion and deepening of the cluster-forming external and internal links create optimal conditions to form and develop professional competences in modern professional training of choreographers aimed at developing personality of a future choreographer who has a high level of general, pedagogical, project and reflexive culture.

An educational cluster for developing the content of modern professional training of choreographers as a multilevel, sophisticated system functions in accordance with the following principles:

*Systemacity* – an educational cluster is viewed as a holistic, complex, multilevel system. The basic advantages of cluster systems are global scale, flexibility and relative simplicity of control.

*Stability* – an educational cluster has stability to external influences, for it functions mostly on account of internal

resources, and is also easily accreted and upgraded using universal means.

*Synergy* – in an educational cluster the cooperation of external and internal environments results in a synergetic effect leading to self-development, self-realization and self-organization.

*Flexibility and variability* – an addition of a new component improves its operation, and withdrawal leads to no fatal consequences, which ensures stability and development with optimal expenses.

A multilevel educational cluster considered by us that unites in its structure the systems of educational, socio-cultural, creative and other various subdivisions and implies cooperation with the socio-cultural sphere and the sphere of labor creates beneficial conditions for:

- rising the quality of professional training of choreographers;
- expanding the range of educational services on account of inviting specialists of cluster-forming components;
- satisfying cultural and educational needs of the students;
- developing professional mobility of bachelors;
- taking into account the requirements and demands of employers.

All these conditions are conducive to formation and development of professional competences in modern professional training of choreographers.

#### IV. FINDINGS

The clusterization of the socio-educational space of the region, expansion and deepening of active internal and external links create optimal conditions, above all, for rising efficiency of professional education, will smoothly build into it the upbringing system aimed at developing the personality of a student having a sufficient level of general, professional and reflexive culture, capable of efficiently influencing the cultural policies of the region, the development of its socio-cultural sphere.

In the modern community there are global transformations, as a consequence, the level characteristics of its systemic development change, new opportunities for development and new situations for implementing systemic self-organization and solving problems of professional training of modern specialists open. The acknowledgement of relevancy of the implementation of networking cooperation of education and social labor sphere is confirmed in art. 15, cl.1 of a new law "On Education in the Russian Federation": *«The network form of implementing educational programs ensures an option of learning by students of an educational program using resources of several organizations carrying out educational activities, including foreign ones, and, if necessary, using resources of other organizations»* [22].

The universality of cooperation of the system of professional education and the social labor sphere, its versatility, multifariousness, extreme sophistication determine

the problems of its learning into a category of most relevant ones. In the modern social labor sphere cooperation attains specific, fundamentally new characteristics, in connection to the specifics of all interacting forces. And above all, when the carrier of these forces is a person as a social subject actively performing and projecting his/her actions.

#### V. CONCLUSION

The phenomenon of cooperation of the system of professional education and the social labor sphere in all its complexity includes subjects, resources, space of cooperation, its forms, structure, temporal factors, implies efficiency criteria, an alignment of the real situation upon attainment of results etc despite this, we consider the network form of implementation of an educational program in professional training of choreographers as the most efficient one in terms of training a modern specialist meeting the requirements of both employers and the modern social mandate and the educational policies of the state.

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