

**ISMGE 2020****II International Scientific and Practical Conference "Individual and Society in the Modern Geopolitical Environment"****SOCIO-PEDAGOGICAL AND ORGANIZATIONAL-  
MANAGEMENT COMPONENTS OF STAFF TRAINING  
DEMANDED IN PSEDA**

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***Abstract***

The article considers the problem of training of demanded specialists considering the specifics of the region in conditions of creating the Priority Social and Economic Development Areas. Recently, the Russian higher education system is marked by the creation and development of corporate universities, which are practically absent in the PSEDA zones. The basis of corporate universities rests on the innovative associative multi-dimensional interaction of educational and production cluster of single industry orientation. To reveal the possibilities of networking among the participants of the integrated educational and production cluster, the authors applied the method of testing, questionnaires and expert assessments. Within the research process, they highlighted socio-educational and economic-management conditions: filling of the corporate university complex infrastructure with necessary educational services according to the demand of the labor market; high educational culture, formed professional competences of the university teaching staff; intensification of the subjects' activity in the university complex based on the inclusion in various types of independent work; increase of the level of professional and personal mobility for the development of professional and personal competencies during professional self-realization in the conditions of education digitalization. We presented the selected conditions as stages of implementing integrative training of educational and production cluster of PSEDA on the example of the Yurginsky Institute of Technology (branch) of Tomsk Polytechnic University. As a result, the authors presented the socio-educational integration effect of education, science, and production.

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**Keywords:** Educational and production cluster, networking, staff training, socio-educational and organizational-management conditions.

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## 1. Introduction

The problem of interaction between educational institutions and employers and other social institutions is becoming more and more topical in the current conditions of economic development. This, in turn, raises the problem of the importance of identifying the main regularities in an institutional approach, describing the characteristics of interaction between educational institutions and other social objects. The main authors addressing this problem include such researchers as Volchok (2017), Furin and Akhmatov (2013); Pudenko (2014), Rashidova (2012).

The "Federal Target Programme for Education Development for 2016-2020" included the creation of educational clusters with the participation of a wide range of employers, thus making the need for social partnership in higher and professional education more urgent. The term "social partnership" refers to the interaction of "educational institutions, including institutions and subjects of the labor market, as well as territorial administration bodies" to harmonize the interests of all participants of interaction and the realization of their interests (Smirnov, 2004). In our opinion, today social partnership is more conducive to its integration at all levels with various public organizations, enterprises, and employers, thus ensuring the formation of a single global space in the region (Malushko et al., 2018). Nowadays, personal and socio-professional formation and development of a personality exist simultaneously in different clusters, which form the individual educational space of a person.

Besides, one of the important ways of intensifying the development of economy in modern conditions is the creation and functioning of economic zones of various types and forms, which have become an integral structural element of the world economy.

In this regard, our study considers the concept of social partnership as a special type of interaction between educational and production clusters, as well as the administrative apparatus aimed at a joint solution of problems, that is, the development of the PSEDA zone.

## 2. Problem Statement

PSEDAs are special zones with a special legal regime for conducting business and other activities to create favorable conditions for attracting investments, ensuring accelerated social, and economic development and creating comfortable living conditions for the population.

One of the most important factors contributing to their creation and development is the presence of a highly qualified force while ignoring it may lead to a complete failure of the PSEDA project.

Recently, the Russian higher education system is marked by the creation and development of corporate universities, which are practically absent in the PSEDA zones. The basis of corporate universities rests on the innovative associative multi-dimensional interaction of educational and production cluster of single industry orientation.

Today, a corporate university is a higher education institution that integrates not only the educational and production cluster of a particular territory but also has the world's leading companies in partnership (Goncharova, 2010).

The presented forms of social partnership provide (Lizunkov, 2018):

- integral formation of intellectual and creative space of the university;

- system interaction and organization of monitoring of educational services and labor market of the PSEDA zone by the educational community and employers to meet business needs for qualified specialists;
- improvement of existing mechanisms and development of new ones aimed at encouraging employers to invest in training of the required personnel.

Thus, the most important condition for training staff required for PSEDA enterprises is the organization and interaction of educational and production clusters implemented through a permanent multifunctional interaction of educational institutions, administration, and enterprises with the external environment at all stages and levels of educational activities.

### 3. Research Questions

The development of the staff training system and its innovative component as an integrative educational and production center requires the creation of certain conditions related to its organization and management. We understand the socio-pedagogical and organizational-management conditions aimed at creating a project of educational space (educational center) on the basis of UTI TPU as certain interrelated measures (capabilities of objects) in educational and management aimed at the possibility of achieving an integrative state of the object, the integrity of its functioning through dialogue interaction and system coordination of all its elements.

Staff training tasks for PSEDA enterprises and the region as a whole set certain requirements to the educational cluster in relation to its structure and organization according to the requests of enterprises' employers and modern educational trajectories, namely:

- using the model of development with peculiarities of its functioning by the educational cluster;
- applying various forms of cooperation aimed at working with employers;
- using a flexible development strategy focused on market conditions and requirements;
- opening up and actively interacting with the educational cluster with the external environment, using the opportunities to change the internal environment on mutually beneficial terms (Yalov, n.d).

Growth of competitiveness of the future specialist, whose competitive advantages lie in being employed for highly paid work in the shortest possible time after graduation, as well as his quick adaptation in a new company, including when changing professions (Malushko et al., 2016).

The innovation infrastructure of the educational and production cluster is an aggregate system of innovation elements and their interaction, resulting in new knowledge through the use and implementation of innovations in the educational process, thus transforming them into new products and services (Kadyrova, 2012).

The main components of the innovation structure include:

- support structures - organizational bodies (PSEDA educational institutions; state and local government bodies; employment center, business incubator);

- knowledge infrastructure aimed at training specialists in a short time (modular system of training in the innovation environment of the educational cluster, the sector of entrepreneurship and business of PSEDA and enterprises interested in qualified specialists) (Russian-British national project, 2000);
- information infrastructure (analysis and study of the PSEDA labor market and the region as a whole, use of such tools as mass media, employment center, centers for studying demand and market conditions, Internet);
- financial infrastructure (state support, science support funds; venture companies, banks, investors).

#### **4. Purpose of the Study**

Creating integrated space implies the necessity of a new integral educational and production cluster which ensures the continuity of the learning and upbringing content in the educational system at all its levels, the directed formation of integration and training of the new type of staff demanded by PSEDA (Afonina, 2008).

Thus, the purpose of the study is to determine the socio-pedagogical and organizational-management conditions necessary for the implementation of the educational and production cluster.

The main socio-pedagogical and organizational-management conditions of the cluster organization of education within the framework of forming a regional university complex include:

1. Filling the necessary educational services to the infrastructure of the corporate university complex according to the request of the labor market, as well as the formation of a regulatory framework for cooperation on the basis of social partnership.

The educational environment of the university should timely provide its subjects with opportunities and conditions for rapid adaptation to constantly changing conditions of society. The purpose requires:

- regularly analyzing the regional labor market for changes in production infrastructure;
- studying the requirements of social partners - employers to the education content of graduates of higher education institutions;
- organizing internships for trainees at PSEDA enterprises of the relevant industry;
- organizing and ensuring positive results of various types of quality assessment of vocational education of graduates;

2. Maintaining high educational culture, as well as formed professional competencies of the university teaching staff.

The professional level of a modern teacher depends to a large extent on his professional competence and educational culture, manifested in the following:

- systematization, integrity and completeness of the design of vocational education content and related activities of trainees;
- maintenance of conditions for the realization of personal-oriented education;

- subject-subject relations between the teacher and the learner and other participants of educational activity;
- provision of conditions for creative activity, self-development, self-determination and professional development of the student;
- personal orientation and orientation of students to professional activities in the future.

In a rapidly changing open world, the ability to learn becomes the main professional quality that a teacher must constantly demonstrate to his students. Readiness for change, mobility, the ability to work outside the box, responsibility and autonomy in decision making, all these characteristics of a successful professional are fully applicable to the teacher.

The system of professional development of university teachers is an integral part of the system of continuous education, which should correspond to the changes that take place in science, engineering and technology. It is necessary to develop an internship system for teachers of technical disciplines within the framework of social partnership to learn about innovations in production.

The topics of professional development courses may include the emergence of new technologies of teaching tools or methods, the development of an inclusive environment for the educational organization, the development of digital library systems and their introduction into the educational process.

3) Accelerating the activity of educational process subjects in the university complex based on the inclusion in various types of independent work, as well as the formation of an individual educational path allowing the implementation of individual educational needs in the conditions of dual learning.

Nowadays, one of the main problems of vocational education is the huge gap between the theoretical part of training and practice, which fails to provide employers with quality qualified staff. Obviously, the training of various specialists needs cooperation with employers. Social partnership in educational institutions can realize through the introduction of a dual system of professional training with the conclusion of a tripartite contract (educational institution - enterprise - learner). The implementation of dual education within the framework of social partnership implies:

- working together with social partners to develop educational programs and curricula;
- expanding the practice base;
- conducting internships for teachers of special disciplines on the basis of social partners' enterprises;
- jointly implementing projects (development of modular programmes for obtaining several qualifications of students);
- providing the educational institution with modern technological equipment;
- introducing practical training by specialists from social partner enterprises;
- developing and implementing graduation projects ordered by social partners, with reference to the existing conditions;
- assisting with graduate employment.

Thus, the dual training system allows regions to solve their specific tasks in vocational and technical training.

4. Increasing the level of professional and personal mobility for the development of professional and personal competencies of future specialists in the professional self-realization of individuals within the digitalization of the education system.

The modern stage of civilization development shows the rapid growth of new information quantity and the high speed of information flows, constant updating of information technologies (Malushko, Novozhilova et al., 2016). In these conditions, the knowledge that graduates receive in educational institutions quickly becomes outdated, not relevant, and not demanded in the labor market. In this regard, the main objective of higher professional education is to ensure the continuous formation and development of data banks of professional information in accordance with the level of modern scientific and technological development, modern social demands. One effective way to resolve this contradiction, that is already recognized, is the use of e-learning at all levels of vocational education, or, the most common today, blended learning, which is a synthesis of traditional learning with elements of online learning and distance learning technology joint educational programs for students and employees - representatives of social partners, as well as the participation of the latter as mentors, teachers-practitioners.

## 5. Research Methods

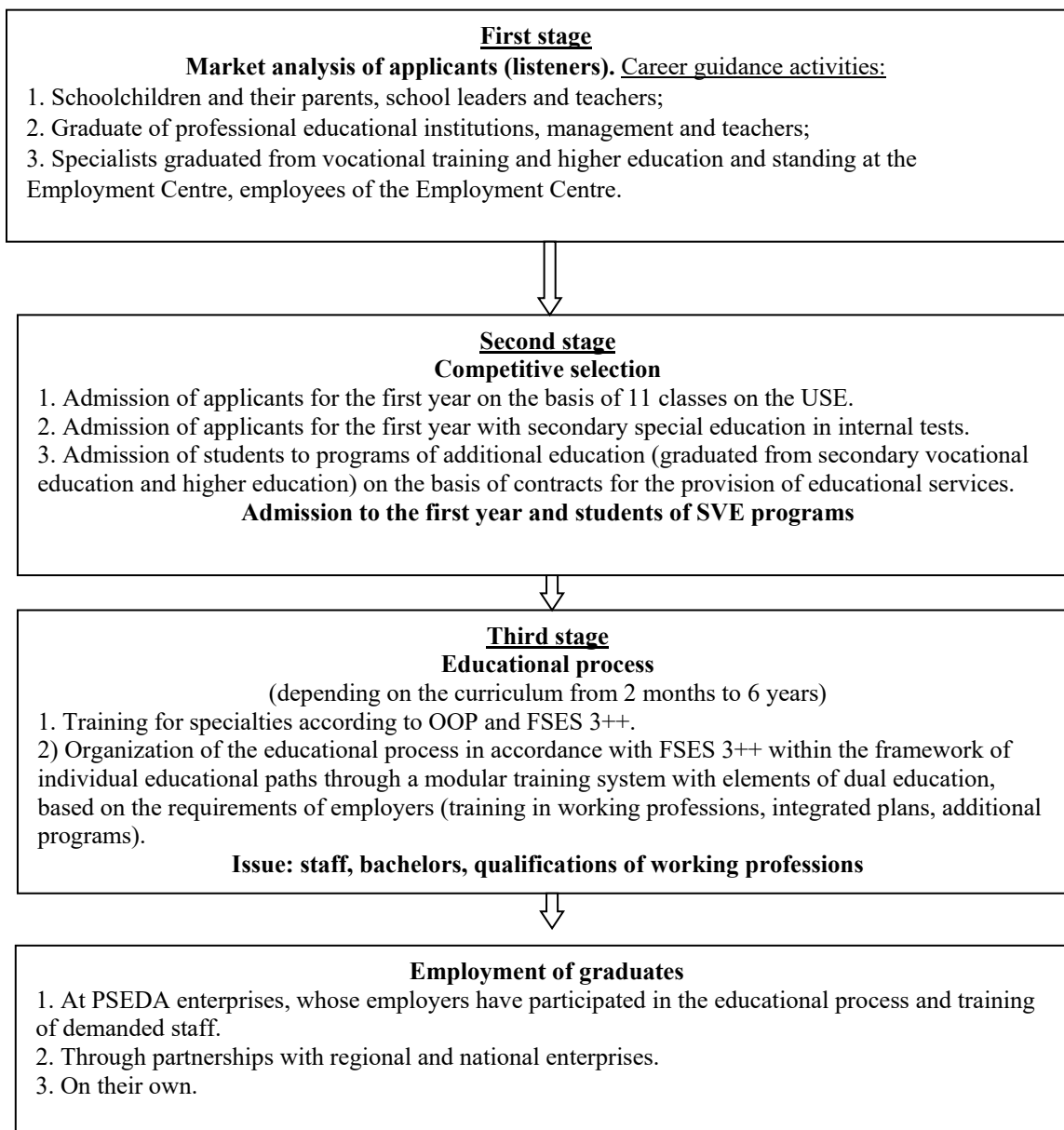
We analyzed scientific, educational literature of Russian and foreign scientists to identify socio-pedagogical and organizational-management conditions for the creation of educational and production cluster in the PSEDA zone. The main research bases are Scopus, Web of Science, and the core of RSCI. The analysis involves classification and periodization of phenomena, concepts, etc. The method of testing, questionnaires and expert evaluation allowed to reveal the possibilities of networking between the participants of the integrated educational and production cluster. The results made it possible to identify the necessary socio-pedagogical and economic-management conditions for the design of the regional university complex, their characterization from the standpoint of integral determinacy of social partnership.

## 6. Findings

Thus, we defined a number of socio-pedagogical and organizational-management conditions of designing a regional university complex, gave their characteristics from the standpoint of integral determinacy of social partnership. We presented the selected conditions as stages of implementing integrative training of educational and production cluster of PSEDA on the example of the UTI TPU (Figure 1).

At the first stage, the responsible employers of the production cluster will establish a relationship with the education cluster (each responsible employer will learn about educational programs of educational institutions that are part of the education cluster, faculty, specialties and training directions). At the second stage, the educational cluster will receive a production order for training of the demanded staff, considering the necessary requirements to the graduates' competencies set by the employers. If the educational program of educational institutions, specialties and directions of training satisfy the

employers, the program of training will continue according to the traditional trajectory of training; if the employer is not satisfied with this or that component, through the modular system of training of the demanded staff for PSEDA, the UTI TPU will implement the program of staff retraining with education in the direction and specialty demanded by the employer.



**Figure 01.** Stages of implementing integrative training of educational and production cluster of PSEDA on the example of UTI TPU

## 7. Conclusion

As a result of implementing integrative learning of educational and production cluster, we can identify, based on Z.S. Sazonova's research, the social and pedagogical integration effect of education, science and production, which is significant for the implementation of socio-pedagogical and organizational-management conditions (Table 1).

**Table 01.** Socio-pedagogical integration effect of education, science and production in training PSEDA specialists

Integration effect	Education	Science	Production
1	2	3	4
1. Professional orientation	Informing future specialists about required PSEDA specialties, orienting them in self-determination when choosing their future profession.	Identifying the main directions of scientific research aimed at involving students in scientific activities on topical issues of PSEDA	Informing about production peculiarities of PSEDA enterprises, their specifics, labor peculiarities
2. Professional development	Developing general cultural professional and sub-professional competencies	Working on scientific practice-oriented projects	Providing professional training conditions for trainees at enterprises and reducing the training period
3. Employment	Providing the opportunity to get a job at PSEDA enterprises during the last stages of training. Participating in joint projects of educational and production cluster in the process and after training		

Table 1 shows the expected social and pedagogical integration effect of education, science and production, promoting professional orientation, competence development and employment of students, which becomes possible with the emergence of new educational programs and trajectories. The synergetic effect of the participants of the educational and production cluster is a multidimensional, socio-pedagogical and organizational-management space aimed at ensuring quality staff training and their personal development.

The educational integration effect will be achieved through possible educational associations on the factory-university principle based on the dual educational system, educational, research and production alliances, PSEDA centers focused on solving the problems of training the staff demanded by PSEDA. One part of this effect will involve the rapid employment of graduates and satisfaction of the employers' requirements.

The scientific and production integration effect will be achieved through the interaction of educational and production clusters in solving not only joint tasks but also the tasks of individual units through competent and interested parties in their decision, namely scientists and teachers of the educational cluster and employers of the production cluster, as well as graduate students for real graduation projects in the production and research process, auxiliary works in the production and research, their further introduction into production and employment of the graduate (Dranev, 2001).

The social effect of integration will result from the improvement of the social situation in the PSEDA. The appearance of new educational programs for training of the required staff and jobs at the enterprises will lead to a reduction in the outflow of qualified staff and an influx of new staff, etc.

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