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**REGIONAL VOCATIONAL EDUCATION SYSTEM IN PEER  
REVIEW**

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***Abstract***

The article analyzes the problems of the system of vocational education in Kuzbass, which are associated with the formation of personnel potential for modernization of the regional economy. The effective solution of the tasks of transforming the labor market largely depends on the positions and actions of the main stakeholders. In this regard, the problem of studying the forms of interaction of various participants in the educational space, which must objectively correspond to the long-term strategy of transition to an innovative model of development of the regional economy, is relevant. In the article this problem is studied from the point of view of the systemic and institutional approaches. The subject of the research was the system of views of the main stakeholders on the interaction of participants in the educational space. The main method of gathering information was determined by an expert survey in the form of a semi-formalized interview (N = 39). The composition of experts is representatives of government, business, media, professional education organizations. The obtained results are analyzed using the method of interpretation of meanings. The article analyzes the system problems of formation of personnel potential for the modernization of the regional economy and the institutional causes of these problems. Problem solving requires institutional measures at the federal and regional levels. One of the ways of cooperation of the real sector of the economy with science and education is the creation of research and educational centers.

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**Keywords:** Modernization, economy, human resources, expert survey.



## 1. Introduction

In a globalizing world, the goal setting for the social transformation of Russian society is associated with an increase in competitiveness, which fundamentally depends on the ability of societies to respond adequately to unexpected challenges of various types (Zaslavskaya & Iadov, 2008). By the expression of Zaslavskaya (2003), the “vital nerve” of social transformation are transformations in the economy. The basis of competitiveness are structural changes in the Russian economy based on modernization and innovative development. For Kuzbass with a coal-metallurgical specialization, the urgency of the problem of modernizing the regional economy is aggravated by the fact that economic life is concentrated in single-industry towns, where 70% of the population lives. It is not by chance that Kuzbass cities were among the first to enter the program to support the modernization of Russian single-industry towns, the purpose of which is to improve the quality of life of the population by overcoming the technological lag of enterprises and sustainable economic development of the territory by attracting investments in high-tech industries, business services, and recreation (Makieva & Krivogov, 2011; Kutergina & Lapin, 2015). In this regard, to the theoretically and practically significant areas of research is the study of factors of modernization of the economy of single-industry territories.

## 2. Problem Statement

The transformation of the institutional environment does not create enough conditions for modernization, the key social resource of which is human potential (Khadasevich, 2012). Therefore, modern challenges are objectively addressed to the vocational education system. At the same time, higher education is destined to play a fundamental role in shaping the economy based on a modern, highly technological base of domestic production using digital technologies (Barber, Donelli, & Rizvi, 2013). General characteristics of higher education as a social institution at the regional level have features that are largely related to the status of organizations carrying out educational activities in the region.

The country has formed a network of federal, national research, regional support universities, which have a significant impact on the development of education, science and economics in the country, region and provide high quality education. These universities receive financial support, including government assignments, and are centers of attraction for talented young people. New models of universities (Prokhorov, 2013) reflect the processes of hierarchical segregation in the Russian education system, which leads to qualitative differences in the education received by students. According to the estimates of the Ministry of Education and Science of the Russian Federation, according to the number of students studying at leading universities, 17% of students have quality education (Senashenko, 2017).

However, the mass training of qualified personnel for the enterprises of the region is carried out by the so-called traditional universities. Regarding the quality of education in the well-known work of Readings (1996), it is shown that bureaucratic assessment is based on formal indicators reflecting certain conditions of education quality, therefore important results may not be considered when assessing quality. Already from the beginning of the 2000s. in the Kemerovo region, personnel risks arose for the modernization of the economy. The region is in the fourth cluster “regions with a low level of human

potential” (Petrosyants, 2011, p. 27). The quality of personnel becomes a serious constraint for innovative entrepreneurship in the small business sector (Urban & Urban, 2013).

### **3. Research Questions**

To understand the current challenges to the regional vocational education system, the subject of the research is the system of ideas of the main stakeholders on the interaction of participants in the educational space. Without the information, differentiated geographically (region, single-industry city), it will not be possible to organize effective cooperation in order to implement the regional development strategy.

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

The problem and the subject focus the research goal: to study the views of the main stakeholders (teachers, employers, government officials) on the interaction of participants in the educational space in solving current and future problems of modernization of the regional economy and single-industry territories. The goal is reflected in the objectives: to assess the existing forms of interaction of educational organizations with employers; identify interaction problems in the context of meeting the needs of the labor market; get expert suggestions on improving the effectiveness of cooperation.

### **5. Research Methods**

The methodological possibilities of the systems approach allow studying the problems of the regional education system in their interrelation with the tasks of developing the regional labor market in the context of the modernization of the economy. Institutional methodology emphasizes the importance of studying the regulatory and activity aspect of research (North, 1997; Fligstein, 1996). In the sociological interpretation, the institute is a unity of formal and informal rules and norms, as well as social practices of their application (Zaslavskaya, 2003; Kirdina, 2014). In this regard, the application of institutional methodology aims at studying the formal and informal forms of interaction between the stakeholders of the regional education system. Studying the factors of the activities of the stakeholders allows you to uncover institutional problems in the field of education and the labor market in the context of the actions of social actors.

The main method of gathering information is an expert survey (N = 39). The choice of method is due to its ability to identify and evaluate the qualitative criteria for the functioning of socio-economic processes, which provides a more accurate and adequate display of the properties and characteristics of the evaluated object in conditions of economic instability (Dorokhova & Goncharuk, 2013). The expert survey was conducted in the form of a direct expert assessment with the help of a semi-formalized interview. During the interview, the experts had the opportunity to express their independent opinion on the issues studied. Experts evaluated the system of multi-level vocational education in the region and in the largest single-industry town of the Novokuznetsk region, expressed their views on the state of the labor market in the Kemerovo region, on the principles of changing the vocational education system adequate to the requirements of economic modernization.

The selection of experts was carried out based on a preliminary analysis of the composition of the stakeholders of the vocational education system. The composition of experts: the rector of higher education, the vice-rector; deputy directors of secondary vocational education institutions; entrepreneurs; deputies of the legislative assembly, directors of recruitment agencies, director of the center for vocational guidance and additional education; director of the training center of an industrial enterprise, director of a large industrial enterprise, heads of medium-sized enterprises; media representatives. Personal selection of experts was carried out with the help of a personal appeal and because of expert presentation in the media. The obtained results are analyzed using the method of interpretation of meanings.

## 6. Findings

Labor market situation.

To unequivocally assess and predict the situation on the labor market in the region, experts find it difficult, since the main challenges are determined by political processes. According to them, the labor market is becoming global. This trend is also evident in the mono-cities of the region. Experts confirm that highly qualified specialists are in demand on the labor market. We need specialists who can create and promote complex technical products, which is associated with increased competition in the technology market. Non-traditional forms of employment are developing distance, flexible, rotational, etc. Increased professional mobility: people are ready to move to other cities at work. The demand for specialists in professions that can be automated and run by computers is decreasing.

At the same time, local trends of changes in the professional field of the region differ from global trends. The structure of professional employment in the Kemerovo region in the next 20-30 years will not change. The demand for working professions in the metallurgical and coal industries remains. It's not worth waiting for jobs for new modern professions, there are no historical and technical prerequisites for this. Due to the specifics of the existing production potential, working professions and specialists with secondary technical education are in demand.

Expressed on the local labor market trend of increasing requirements for the quality of training of workers of industrial enterprises. We need specialists of working professions of high qualification. At the same time decreases the demand for specialists with higher education. Secondary vocational more in demand than higher education.

At the industrial enterprises there was a shortage of personnel with working professions. The turnover rate of workers with low educational levels is high, but this is not a serious problem for the enterprise. An increase in the demand for working specialties at the same time does not lead to an increase in the prestige of working at a factory for working professions.

The main reasons for the shortage of personnel: the lack of readiness of people for physical labor, low wages in general and in this group of occupations, lack of understanding of the importance / significance / prestige of working professions. Such ideas can be provoked by the employer himself, demanding that employees only observe labor discipline, not encouraging innovative approaches to work and not evaluating the result of work. As a result, industrial enterprises recruit people without basic professional skills to work in blue-collar occupations and teach primary professional skills on their own.

The problem of reducing the level of training of workers and specialists is common to all industrial enterprises.

#### Characteristics of the vocational education system

Education continues to play a significant role in the employment of a person. High significance of higher education in the public consciousness. There comes an understanding that a modern enterprise cannot work effectively without constant training and retraining of workers. To be successful, you need to master new competencies all your life. Another global trend is the change in the functions of higher education: it should be engaged not so much in training as research and forecasts.

All experts agree that the paradigm of education is changing. The essential characteristics of education change: it becomes accessible to everyone, individual in the path of its receipt and based on digital technologies. The organization of training for new professions is changing. In this situation, the use of new educational technologies is expanding interactive, remote.

The quality of education in educational institutions of the country differs little, as it is regulated by federal educational standards. Only leading universities can make training unique. It is difficult for higher education institutions of the region to compete for the applicant with capital (large) cities.

The main problem of vocational education is that it does not correspond to the needs and structure of the labor market: education is already focused on a post-industrial society, while real production needs professionals and workers who can work in an industrial society. The system of vocational training does not form for graduates' universal competences, first, skills of analytical and critical thinking. The level system of personnel training has destroyed the system of training engineering personnel for enterprises. Students in higher education do not have enough time to master the profession.

At the same time, there is a point of view that there are enough applied bachelor programs in vocational schools and colleges for teaching vocational skills in popular working professions. In the top popular profession's areas of higher education, as a rule, are not included.

Educational institutions constantly monitor employers' requirements for the preparation of graduates through personal contacts with them, through graduates. However, a rigid set of required professional competencies for a graduate cannot be set, since in four years of training, the content of the profession in modern conditions may change. The agreements of the university with employers on joint activities for the training of workers are of a framework nature. Employers take the responsibility to inform the university about what competencies the right graduate should possess. The willingness to change, to apply new educational technologies from secondary specialized educational institutions is higher than that of higher education institutions.

Educational institutions are ready to open new areas of training at the request of the labor market. In general, it is important to open new educational programs that should provide modern multidisciplinary training, meet the requirements of the time and the needs of the city and the region for specialists. For example, there is an increasing need for professionals who can solve employer problems using digital technology.

The most high-quality training receives training magistracies. Master programs are more flexible than undergraduate. Studying in an applied project or network magistracy gives a graduate career advantage.

At the same time, experts note a decline in the quality of training graduates of educational institutions at all levels, starting with general education schools. High scores on the exam do not guarantee a high level of training of the applicant. The decline in the quality of training in Novokuznetsk universities and colleges is associated with outdated equipment on which students learn. Graduates of technical schools are not ready to work in blue-collar occupations without additional training in the workplace.

Every industrial enterprise is currently solving the problem of training itself. Large industrial enterprises, which have resources, create their own training centers for preparing for blue-collar occupations, raising the level of skills of engineering and managerial personnel. Constant retraining and training of workers has become a production necessity. Remote technologies expand the enterprise's capabilities in creating training centers. The organization of its own training centers is associated with the investment of additional resources, due to which it is necessary to pay the employee wages during the training period, when he does not actually participate in the production process.

Training in higher and secondary special educational organizations is carried out by employees of the company at their own expense. However, the company is ready to pay for tuition after graduation, subject to quality progress. The enterprise's cooperation with technical schools takes place in the form of providing places of practice for students. After the internship, students may be employed at the enterprise in parallel with continuing education at a technical school. According to experts, the creation of a technical school at the enterprise can be a successful form of interaction. Professional skills training takes place directly in the future workplace and is supported by theoretical knowledge in the technical school audience. Students in the early stages of training get used to production, get used to receive a social package, which increases their loyalty to the enterprise.

Experts confirmed the readiness of enterprises for close cooperation with educational organizations. The company is ready to order individual courses and seminars for vocational education organizations to improve the skills of their employees, to involve university specialists as experts in complex areas of work, and to order scientific research to universities.

## **7. Conclusion**

The expert survey revealed systemic problems in the formation of personnel potential for the modernization of the regional economy and single-industry territories:

- requirements for the regional system of vocational education on the part of employers and industry relate primarily to the training of specialists of an industrial type of economy and do not meet the modern challenges of modernization;

- the region has not formed social and technical prerequisites for the creation of new jobs that are adequate to the challenges of modernization;

- there is a shortage of quality labor in the labor market;

- the regional vocational education system does not meet the needs of the labor market in terms of the structure of training and the quality of the graduates;

- forms of interaction of industrial and educational organizations are limited to the formal requirements of the educational standard.

The identified problems have institutional causes. Structural policy at all levels of government stimulates the innovative development of the region. But a qualitative restructuring of the regional economy structure is possible under the condition of an active investment policy of a manager / owner in this regard, experts note the motivational problems associated with investment behavior. At the same time, experts point out that the quality of the work force is the actual need of the employer, which in various forms stimulates mutually beneficial cooperation with professional education organizations. Experts note high potential for cooperation. One of the most effective ways of cooperation between the real sector of the economy with science and education is the creation of research and educational centers. By 2024, a network of 15 scientific and educational centers, including in Kuzbass, should appear in Russia. The goal is to unite the potential of scientific organizations, universities and industries to solve the problems of modernization and the formation of its human resources. Solving this problem requires institutional measures at the federal and regional levels.

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## References

- Barber, M., Donelli, K., & Rizvi, S. (2013). On the eve of the avalanche. Higher education and the coming revolution. *Issues of education*, 3, 152–231.
- Dorokhova, Yu. V., & Goncharuk, N. S. (2013). Using the method of expert assessments in predicting social processes. *Central Russian Bulletin of Social Sciences*, 3, 34–44.
- Fligstein, N. (1996). Markets as politics: a political-cultural approach to market institutions. *American Sociological Review*, 61(4), 656–673.
- Khadasevich, N. R. (2012). Human resource potential of the region of the Russian Federation as a social resource for economic modernization. *Bulletin of St. Petersburg University, ser. 12. Sociology*, 195–200.
- Kirdina, S. G. (2014). *Institutional Matrices and the Development of Russia: An Introduction to the X-Y-Theory*, 3 ed., revis., expand. and illustr. St. Petersburg: Nestor-Istoriia.
- Kutergina, G. V., & Lapin, A. V. (2015). Managing the development of single-industry cities: domestic and foreign approaches to modeling. *Bulletin of Perm University. Economy*, 3, 69–77.
- Makieva, I. V., & Krivogov, I. V. (2011). Modernization of the economy of one-company towns. *Bulletin of the Financial University*, 5, 5–14.
- Nort, D. (1997). *Institutions, Institutional Changes and the Functioning of the Economy*. Moscow: Fond ekonomicheskoi knigi Nachala.
- Petrosyants, D. V. (2011). Human Development Index in the Subjects of the Russian Federation. *Regional economy: theory and practice*, 43, 23–31.
- Prokhorov, A. V. (2013). University models in the context of globalization. Proceedings of higher educational institutions. Volga region. *Humanitarian sciences*, 3(27), 56–66.
- Readings, B. (1996). *The university in ruins*. Cambridge: Harvart University Press.
- Senashenko, V. S. (2017). On the reform of the domestic system of higher education: some results. *Higher education in Russia*, 6, 5–15.
- Urban, O. A., & Urban, N. A. (2013). The innovative potential of small business (based on a sociological survey). *Bulletin of Kemerovo State University*, 1, 295–299.
- Zaslavskaya, T. I. (2003). *Societal Transformation of Russian Society: Activity-Structural Concept* (2nd ed.). Moscow: Delo.
- Zaslavskaya, T. I., & Iadov, V. A. (2008). Social Transformations in Russia in the Epoch of Global Changes. *Sociological Journal*, 4, 8–22.