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**MECHANISMS FOR THE DEVELOPMENT OF THE RUSSIAN
SECONDARY-LEVEL VOCATIONAL EDUCATION SYSTEM**

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Abstract

The findings from an analysis of the current condition of Russia's system of secondary-level vocational education and economic development indicate that right now the nation's labour market is experiencing an objective, analytically substantiated shortage of skilled manpower. There are three major reasons behind this: (1) most educational programs being outmoded, with academic learning often kept too far from practical training; (2) growth and a shift toward a more innovation-driven economy (mainly, among foreign companies); (3) production-technical and handicraft occupations being regarded as low-end in Russia. The development of Russia's system of secondary-level vocational education may require thorough upgrades to the nation's education system based on the implementation and use of the latest potential and mechanisms for development. The findings from the authors' analysis of the latest research into the issue indicate the availability of some quite solid studies, both by Russian and foreign scholars. The key mechanisms for the development of the system of secondary-level vocational education include the following: incorporating project-based mechanisms into the system; secondary-level vocational education institutions taking part in competition-based and Olympiad movements; expanding international cooperation. The purpose of this paper is to describe these mechanisms in detail and suggest ways they can be implemented in practice in the Russian system of secondary-level vocational education.

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1. Introduction

The existing base of effective regional practices on preparing mid-tier workers and specialists for Russia's priority sectors of the economy is updated in real time and is available open-access. A two-way link has been established with all of the nation's regions and a set of problem areas have been identified which may require special work going forward. Currently, the effort aimed at developing the nation's system of vocational education incorporates the implementation of projects intended to enhance regional programs for the development of the system of secondary-level vocational education and facilitate the participation of educational organizations and students in competition-based movements and in international cooperation (Maracha, 2008; Klimov, Galkin, & Zueva, 2016; Agency for Strategic Initiatives, 2016; Federal Law of the Russian Federation No. 172-FZ, 2014).

2. Problem Statement

The development of the system of secondary-level vocational education requires creating and implementing new mechanisms and capabilities. Mechanisms of this kind include projects on modernizing educational programs and on student participation in competition-based movements and in international cooperation.

3. Research Questions

The paper examines a set of mechanisms for modernizing the system of secondary-level vocational education, including the modernization of educational programs, expansion of the focus on the development of competition-based movements, and development of international cooperation.

4. Purpose of the Study

Exploring a set of mechanisms for the development of the system of secondary-level vocational education.

5. Research Methods

Analysis and summarization of the use of the latest technology and mechanisms for modernizing the system of secondary-level vocational education.

6. Findings

Russia's Ministry of Education and Science, jointly with the Agency for Strategic Initiatives (ASI), has been engaged in implementing the Regional Standard for Workforce Support for Industrial Growth (hereinafter 'Workforce Standard'). The project is aimed at creating a set of management practices that are built into the system of managing a region and are aimed at providing the region's industry and economy with the high-skilled manpower needed. During the previous stage (in 2017), the project was tested in 20 pilot regions. Between 2018 and 2019, the ASI carried out activities on the

implementation of the new standard in 85 constituent regions of the Russian Federation pursuant to Item 2 of Directive of President of Russia V. Putin Pr-580 of April 6, 2018 (based on the outcomes of a meeting on the development of the system of secondary-level vocational education, held on March 6, 2018 in Yekaterinburg). In 2018, for all regions of Russia the ASI arranged regional sessions for the purposes of counseling the local authorities on relevant methodological and organizational aspects and plan development and disseminating effective regional practices on Workforce Standard implementation. As of this moment, there have been entered into a total of 29 trilateral agreements on Workforce Standard implementation between the ASI, the WorldSkills Russia Agency for the Development of Professional Societies and Manpower union, and constituent regions of the Russian Federation. A number of participating regions have developed and adopted regional roadmaps for Workforce Standard implementation (Government of the Russian Federation, 2015).

Based on the adjustments made, the institution adopted the Regional Standard for Workforce Support for Industrial Growth 2.0, which contains the following additions:

1. Incorporating a set of requirements with regard to taking account of the market for labor and employment, which are as follows:

a) factoring in the situation in the labor market in developing a model and strategy for workforce support in a region;

b) incorporating into the workforce support process a person concerned with regulating the market for labour and employment.

2. Taking account of the networked interaction between participants in the educational process:

a) in developing the regional regulatory framework;

b) in developing schemes for material-technical support for the educational process.

3. Fine-tuning the requirements for the workforce support strategy, including:

a) requirements for the development of a workforce support model;

b) requirements for the structure and subject matter of the workforce support strategy.

4. Fine-tuning and supplementing the requirements for the functions of the administrating authorities and interdepartmental interaction (Agency for Strategic Initiatives, 2016).

Based on data from a survey of executives and specialists at the HR departments of 1,267 enterprises in 85 constituent regions of the Russian Federation conducted by the ASI, the greatest shortage of manpower right now is high-skilled workers (Categories 5 and 6) and engineering-technical workers (according to 50% of the respondents). There is also a significant need for mid-tier specialists (foremen, manufacturing technicians, etc.). From the employer's viewpoint, the problem with attracting manpower is, above all, associated with poor training for specialists and the number of specialists in the labour market being out of alignment with companies' needs. Nearly half of the employers who took part in the survey voiced the need for additional training and retraining for young specialists.

Another crucial mechanism for the development of the system of secondary-level vocational education is engaging educational organizations in competition-based movements. A major innovative mechanism related to competition-based movements in the area of secondary-level vocational education is WorldSkills, the international non-profit movement focused on popularizing blue-collar occupations, enhancing existing standards on occupational training, and developing vocational education by way of

organizing and staging international competitions, both in each particular country and globally as a whole (Srygley Mouton, & Blake, 1984; King's College London, 2017; etc).

The Russian Federation joined WorldSkills via a decision by the WorldSkills General Assembly on May 12, 2012. The nation has taken part in WorldSkills international championships since 2013. The year 2014 saw the founding of the WorldSkills Russia Agency for the Development of Professional Societies and Manpower union. By way of Resolution of the Government of the Russian Federation No. 2424-r (of November 26, 2015), the WorldSkills Russia Agency for the Development of Professional Societies and Manpower union became the designated center for vocational training, retraining, and advanced training for manpower. The following WorldSkills Russia motto was adopted: "Improving the World with the Power of Skills!" (Kostrova, 2013).

Starting in 2016, WorldSkills championships held in Russia have been referred to as WorldSkills Russia. Regional championship winners compete in the National WorldSkills Russia Finals. Victorious finalists then form the national squad for participation in the World WorldSkills Competition. In 2013, the Russian national team took part in the WorldSkills International world championship in Leipzig (Germany), in 2015 in São Paulo (Brazil), and in 2017 in Abu Dhabi (UAE). At the last championship, held in the United Arab Emirates, Russia was represented by 58 young professionals (45 fellows and 13 girls) from 22 regions of the country, as well as 52 expert coaches. The Russian national team placed first in the team scoring for the first time in history, winning 11 (6 gold, 4 silver, and 1 bronze) medals and 21 medallions for professionalism (Malinovskii, 2018).

The next WorldSkills International world championship will be held in Kazan, Russia, August 22 through 27, 2019. The event and related activities are expected to draw an audience of around 250,000, which is one and a half times more than in Abu Dhabi. The competition will welcome over 60 nations, with as many as 70 nations expected to take part in the event's business program.

Russia is the first nation to introduce a separate age category – WorldSkills juniors (ages 10 to 17) (in place since 2017). JuniorSkills is viewed as an innovative area for the early professionalization of schoolchildren. The JuniorSkills movement immerses adolescents in the mechanics of specific occupations, which include both high-end cross-industry occupations and traditional blue-collar occupations in the spheres of agriculture and construction. JuniorSkills is intended to create new opportunities in terms of occupational guidance for schoolchildren and their mastering of modern and future professional competencies using the tools of the WorldSkills movement and relying on the latest best domestic and international practices.

Mechanisms provided by the WorldSkills Russia competition-based movement have helped identify a set of specific objectives and capabilities with regard to fostering the innovation-driven development of the system of secondary-level vocational education, which include the following:

- for learners – get them to learn the latest technology and top best practices from around the world and take part in regional, national, and international contests, boost their motivation for professional self-determination and personal and professional growth, and assist them with getting a job offer from employers;

- for instructors – get them to master innovative teaching methods and technology, take part in putting together relevant occupation standards, and influence the modernization of the nation’s education system;

- for educational institutions – get them to upgrade and modernize the material-technical base, boost the calibre of vocational training for young specialists, and implement in the educational process superior best practices, technology, and insights from around the world;

- for employers – get them to hire high-skilled personnel, including young talented specialists, with a focus on achieving boosts in their financial and economic production indicators.

- for the state – get it boost the prestige and social status of blue-collar occupations, gauge and compare the level of professional competencies of domestic specialists who pursue a course of study within the system of secondary-level vocational education with that posted elsewhere around the world, and implement in the system of domestic vocational education superior best practices from around the world.

Despite the obvious positive outcomes from WorldSkills Russia activities, there remain many unresolved issues, which are as follows:

- 1) Far from all educational institutions have the opportunity to take part in these contests and championships. Expenditure on staging the championships exceeds significantly the out-of-budget funding provided. The cost of funding the educational program ranges between 20,000 and 70,000 roubles per expert. The purchase of relevant equipment and tools for promoting a competency costs the organization nearly 5–7 million roubles per year. That being said, the number of partner enterprises involved with the WorldSkills movement and prepared to invest in it is limited.

- 2) In terms of the material-technical base, many professional educational institutions in Russia are lagging behind world standards, with upgrades done to it quite rarely. Equipment used for the preparation of participants is not in full keeping with WorldSkills competition documentation.

- 3) Certain modules within contest assignments are not part of the occupation-related curriculum and require systematic training of contest participants using additional expensive resources.

- 4) The way qualifying regional competitions and competitions within educational institutions are conducted is not in full alignment with WorldSkills methodologies. Most job training instructors possess no command of methodologies for organizing and holding a championship based on WorldSkills standards. Some modules get removed from the set of contest competencies, and assignments get simplified.

A crucial mechanism for the development of the system of secondary-level vocational education is international cooperation projects. This type of cooperation is covered by Article No. 105 of the Law of the Russian Federation ‘On Education in the Russian Federation’, which states that international cooperation in the sphere of education implies the pursuit of the following objectives:

- 1) providing citizens of the Russian Federation, foreign citizens, and persons without citizenship with better access to education;

- 2) coordinating the interaction between the Russian Federation and foreign countries and international organizations in terms of the development of education;

- 3) enhancing international and domestic mechanisms for the development of education.

Institutions that are part of the education system can take part in international cooperation within the sphere of education by way of entering into contracts on education with foreign organizations and citizens pursuant to Russian legislation and by way of other forms prescribed by Russian Federal laws and other regulations, more specifically across the following areas:

1) developing and implementing educational programs and research programs in the sphere of education jointly with international or foreign organizations;

2) sending learners and pedagogical and research staff at Russian organizations engaged in educational activity to foreign educational organizations as part of programs that envisage providing learners with special foreign-study scholarships, as well as admitting foreign learners and pedagogical and research workers into Russian organizations engaged in educational activity – for purposes that include learning, advanced training, and research and educational activity enhancement, including as part of an international academic exchange;

3) conducting joint basic and applied research in the sphere of education and engaging in joint innovation activity;

4) taking part in the networked form of implementing educational programs;

5) taking part in the activity of international organizations and in the conduct of international educational, research-and-development, and scientific-technical projects, congresses, symposia, conferences, and seminars or conducting the above activities on one's own, as well as engaging in the exchange of academic and research literature on a bilateral and multilateral basis (Federal Law of the Russian Federation No. 273-FZ, 2012).

7. Conclusion

Currently, the Russian labour market is witnessing a shortage of workers and specialists with a secondary-level vocational education. The primary way to resolve this issue is to further develop the system of secondary-level vocational education – rather than eliminate it. In this regard, it may be imperative that Russia's system of secondary-level vocational education be built into the system higher-level vocational education in alignment with the latest global trends (Lazarev, 2008; Kharisova, 2018).

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