



Modernization of Secondary Vocational Education System

**Raisa I. Platonova^{1*}, Verma Pankaj², Marianna M. Olesova³, Valentina V. Osipova⁴,
Agafya Z. Platonova⁵, Maria M. Yevseeva⁶**

¹ North-Eastern Federal University named after M.K. Ammosov, Institute of Physical Culture and Sport, Yakutsk, Russia. E-mail: platonova_raisa@mail.ru

² North-Eastern Federal University named after M.K. Ammosov, Faculty of Road Construction, Yakutsk, Russia. E-mail: pankajverma@gmail.com

³ Oktem Branch of Yakutsk State Agricultural Academy, Department of General Education Disciplines, Yakutsk, Russia. E-mail: olesova1964@mail.ru

⁴ Oktem Branch of Yakutsk State Agricultural Academy, Department of Agronomy, Yakutsk, Russia. E-mail: luzerna_2008@mail.ru

⁵ Oktem Branch of Yakutsk State Agricultural Academy, Department of Agronomy, Yakutsk, Russia. E-mail: aga_brom@mail.ru

⁶ Oktem Branch of Yakutsk State Agricultural Academy, Yakutsk, Russia. E-mail: emm170756@mail.ru

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Abstract

Purpose of the study: The main purpose of the study is the need to analyze the main problems and ways of modernization of the system of secondary vocational education in the Russian Federation, and disclosure of the relevance of scientific and methodological support of teachers and trainers of industrial training to implement the new requirements of the Federal state educational standard, professional standard and international competition WorldSkills. **Methodology:** The leading research methods were theoretical analysis, review of the scientific literature, the method of analysis of the pedagogical experience of educational institutions of secondary vocational education, comparative analysis and interpretation of the results of the work carried out. **Results:** The study revealed that due to the increasing need not only for acquiring, but also for advancing the best world practices and standards in vocational education in the context of modern updated technological conditions for professional work of personnel, it is necessary to improve the quality of the scientific and methodological direction of work for which unfortunately enough attention is not being paid today. Since the implementation of new educational standards, professional standards, and accelerating competition in the international championship WorldSkills, open results of demonstration examinations of College graduates are motivating factors for teachers of the vocational training on the continuous development of new professional skills, updating knowledge, and achieving a high level of professional skills in their field. **Applications of this study:** The practical significance of the materials of the article lies in the use of the results and research materials in the management of secondary vocational education, the organization of scientific and methodological work in secondary education, and updating the importance of scientific and methodological support. **Novelty/Originality of this study:** The novelty of the research lies in the fact that the problem of gap between theoretical knowledge and practical skills in the current activities of the teacher has been recognized, and ways of solving the problems have been identified through improvement in the quality of the scientific and methodological support of teachers and industrial trainers, organization of additional continuous education for industrial trainers, by changing their functional duties and conditions, and providing remuneration, and modern equipment of training and production workshops, increased funding of the material and technical base of educational organizations.

Keywords: personnel training, vocational training, secondary vocational education, World Skills, standards in vocational education, professional standard, core competencies, highly qualified specialist, workforce.

1 Introduction

For quite a long time, the development of the system of secondary vocational education has not been given due

attention at the state level and from the standpoint of civil society institutions. But recently, positive moments have been noted: - an increase in the number of students in secondary

Corresponding author: Raisa I. Platonova, North-Eastern Federal University named after M.K. Ammosov, Institute of Physical Culture and Sport, Yakutsk, Russia. E-mail: platonova_raisa@mail.ru.

vocational education, an annual increase in the number of applicants, an increase in the prestige of secondary vocational education, and an expansion of the range of educational services provided by secondary educational institutions (2,3,7,12,13,14,21). For individual industries, a government order is being formed for training personnel in the most sought-after specialties. For example, the Government of the Russian Federation for 2016–2020 approved a plan for the training of 6,000 students and the advanced training of 210,000 employees of the military-industrial complex. According to the Order of the President of the Russian Federation in 2020, in the system of secondary vocational education, the issue of personnel on the basis of the new federal state educational standards of secondary vocational education (18) in TOP-50 (16) should be carried out on the most demanded labor market, and new and promising professions. The new federal state educational standards of secondary vocational education on TOP - 50 have such distinctive characteristics:

- Types of activities and professional competencies of future specialists are based on the requirements of modern international professional standards, taking into account new technologies;
- Change of the nomenclature and orientation of general competencies;
- Attention was focused on strengthening the role of academic freedom for educational organizations of secondary vocational education in updating the structural and substantive side of education;
- The terms of the duration of training of personnel were clarified on the basis of specific proposals and recommendations of leading employers-customers in the market;
- The conditions for meeting the requirements for the implementation of educational programs have been determined (10,11,24);
- introduced new additional requirements for the level and practical experience of professional activity of teachers;
- Introduced a new form of organization of state final certification - a demonstration exam.

According to the Federal Target Program for the Development of Education for 2016–2020, a competition was held to create the Interregional Competence Centers. The purpose of the Interregional Competence Centers is the creation of conditions for the provision of training for the most popular and promising professions and specialties of secondary vocational education, as well as the provision of training for the national team to prepare for the national and international World Skills championships. As a result of the competitive work, a network of regional Interregional Competence Centers was created, “on the sites of which experimental approbation of 44 new federal state educational standards, educational programs, modules, methods and training technologies for the TOP-50 list of occupations, development of a mechanism for translating the best practical experience of training on educational programs of vocational education and training in TOP-50 are carried out” (8,22). According to Rosstat, 59% of 9th grade graduates after passing the basic state exam entered educational institutions of secondary vocational education. In 2017, according to the priority project “Workers for Advanced Technologies”, the implementation of new federal state educational standards in

the TOP-50 was started by 1500 colleges. Training and retraining of pedagogical staff has begun - almost 5,000 industrial trainers are developing advanced training programs based on the international standards of WorldSkills.

But, despite the fact that educational organizations train future cadres of working professions, guided by the new federal state educational standards of secondary vocational education, the level of preparedness of graduates does not always correspond to the actual conditions of the modern market, and the requirements of employers. Students in practical work and practical tasks work on obsolete equipment that has broken down and is no longer used in production. After graduation, young specialists experience difficulties in working with modern technological equipment of production, having sufficient professional competence at a theoretical level without practical reinforcement.

2 Results and Discussion

The problem of adaptation of graduates in their professional activities is complicated by new Professional standards, requirements for workplace activities in production, which are equipped with modern sophisticated equipment and unique technologies. It is the real conditions of modern production that allow future specialists to fully immerse themselves in the process and develop the demanded skills and practical experience of the chosen specialty. Listvin in his research on the quality of secondary vocational education, asserts that “according to the conclusion of domestic experts, 80% of graduates in engineering education have an unsatisfactory quality of training”, “according to international estimates, we still cannot compete in the global labor market 55% of graduates secondary vocational education”, “currently, a graduate of a secondary vocational education institution with a diploma of a mid-level specialist and a certificate of qualification in the working profession, when enters production, has to undergo a training cycle again, but already in the system of corporate retraining or advanced training in the working profession” (15). The author sees one of the key tasks for the revealed contradiction in the training and retraining of industrial education trainers of vocational secondary education, changing their functional duties, conditions and remuneration of labor, equipping training workshops with modern equipment, increasing funding for the material and technical base of educational organizations (15).

Specialists of secondary vocational education believe that “often in the current activity of the teacher remains a gap of theoretical knowledge and practical skills.” The solution to this problem is seen “in enhancing professional pedagogical experience based on knowledge of the structure and methods of methodical work” (20). Today it becomes obvious that reproductive teaching methods that are actively used in the practice of training specialists do not meet the requirements, “in modern conditions of production and education, the trainer of industrial training is required to be not just a demonstrator of the standard performance of labor practices and operations, but also -the production process, as well as the developer of those learning tools that he will use in his work” (5,9). In this connection, a secondary vocational education teacher is required to “adapt the existing technological equipment to the requirements of the order for the training of personnel for the needs of a particular enterprise” (17,19).

Modernization of the education system of the Russian Federation, integration into the global educational space, federal reform and at the regional level require scientific and methodological support for the implementation of federal state educational standards for secondary vocational education. At this stage, it becomes urgent to improve the scientific and methodological direction of secondary vocational schools, based on methodologically developed, corresponding to the new conditions of educational process management tools. Article 68, clause 1 of the Federal Law "On Education in the Russian Federation", which indicates the direction of the activity on the intellectual, cultural and professional development of a person and a targeted orientation to the training of skilled workers or employees, is of particular relevance in the context of continuing professional education, mid-level specialists in all major areas of socially useful activities in accordance with the needs of societies and the state, as well as the needs of the individual in deepening and expanding education.

Scientific and methodical work of a technical school, and college: It is a whole system of research activities of participants in the educational process, aimed at building and developing a methodological culture, scientific and practical competence of teachers, industrial education trainers and students in the context of creating conditions for improving the holistic pedagogical process, training qualified competitive graduates in the framework of the implementation of the new requirements of the federal state standard of secondary vocational education. Management of scientific and methodological work in a professional educational organization should be viewed as a process of goal-setting, planning, designing various programs of scientific and methodical work, developing and implementing a roadmap of scientific and methodological activities, monitoring the status of scientific and methodological activities, motivation and control.

The effectiveness of the use of effective means of management of scientific and methodological work in the technical school, and college is one of the most important conditions for supporting the implementation of the federal state educational standard for professions and specialties of secondary vocational education.

It is also necessary to change the views of the teaching staff on the quality of pedagogical work. The implementation of the designated goals and objectives to improve the quality of education is impossible without the creation and use of innovative technologies that change the role of the teacher in the educational process (4,6). If earlier, he was a carrier of knowledge, now he turns into a consultant, an organizer of a student's activity - an active subject of the educational process. At the same time, the level of psychological and pedagogical competence is important in the training of specialists. It is associated with the ability of the teaching staff to pedagogically correctly organize, conduct, diagnose and adjust the educational process.

In this regard, systematic professional development of teachers of the technical school is of great importance. Every year, various forms of advanced training and professional retraining are held by pedagogical and senior technical school workers.

3 Conclusion

New conditions for the organization of professional activities of teachers and professional education trainers of vocational education require revision of technology and teaching methods, forms of organization of studies and final exams, in which the role of the methodological department of the institution is huge. The main tasks of the methodological department of vocational education are:

- replenishing the leading professional activity of a secondary vocational education teacher with a new meaning, which requires combining academic work with research, and methodical work in a team for developing innovative projects with new technological solutions;
- Scientific and methodological support for the effective operation of the basic site of the Center for the evaluation of qualifications;
- Development of new methods for evaluating the results of teaching activities of teachers and trainers of industrial training of an educational institution;
- Provision of advisory and methodological assistance on the update and development of teachers and industrial education trainers of demanded professional competencies as the basis of professional skills;
- Development of new educational programs and updating their content with the requirements of the Federal State Educational Standard Program, professional standards and core competencies of WorldSkills;

Implementation of the new federal state educational standards of secondary vocational education, professional standards, and dual education: (17,19) The growing competition in the international championship WorldSkills is becoming the motivational factors for teachers of vocational education on the continuous development of new professional skills, the renewal of knowledge, and the achievement of a high level of professional mastery in their field. In our opinion, a new approach to organizing methodological work with teachers should provide the solution of the problems of open source software: creating research teams to ensure the maintenance of academic disciplines, subject connections, solving problems of assessing the level of the formation of subject and professional competencies of students; - establishment of effective forms of cooperation with social partners, other educational organizations on the basis of network interaction with a focus on creating an innovation-educational cluster (1). The growing interest and necessity of not only mastering, but also anticipating the best world standards in vocational education, modern, updated technological conditions for the professional work of the workforce require professors and vocational trainers at a high creative level to possess professional skills and experience. Since there is a need to be ready to organize the training of "highly qualified specialists and workers in accordance with modern standards and advanced technologies, ensuring an increase by the end of 2020 to 50,000 people the number of graduates of educational organizations implementing secondary vocational education programs that have demonstrated a level of training that meets the standards WorldSkills Russia (23).

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