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**DUAL APPROACH IN STUDENT TRAINING TO THE
CHAMPIONSHIP OF OCCUPATIONS WORLDSKILLS**

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Abstract

The main problem considered in this article represents an important issue today because of Russia's accession to the international organization WorldSkills International. (WSI), as well as the introduction of a dual training system to improve the quality of training of skilled workers and the insufficient theoretical, technological and scientific-methodological aspects of the dual interaction of social partners, in the process of joint training of students for WorldSkills champions. Theoretical and experimental methods, adequate to the nature of the problem being studied, were used to solve research problems and test hypotheses. There is a presentation of a model of interaction and a phased vertical organization of championships, based on the system of classes and competitions. This model should be helpful and useful during the organization of effective interaction between the educational institution and the enterprise, which contributes to the activation of cognitive activity and the stimulation of motivation for self-development of the individual.

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Keywords: WorldSkills professions championship, dual approach, social partnership, motivation for self-development, mentor.

1. Introduction

In recent years competitions in professional skills have become increasingly popular in Russia, which are regarded as extracurricular activities of trainers, are of great importance and fulfil a number of important tasks: they help to identify gifted students and pedagogical workers, popularize professions and specialties, create conditions for the exchange of experience, stimulate the motivation of self-development, personal and professional growth.

It is important that professional competitions are also a fairly objective monitoring tool and contribute to more effective interaction of social partners - educational institutions and profile enterprises.

For example, the results of the first participation of the Russian national team in the world championship of working professions of WorldSkills International with all the obviousness showed the depressing state of affairs in the system of training skilled workers.

This situation is due primarily to the fact that in the system of training qualified workers, insufficient attention is paid to the development of the creative potential of the student's personality, the formation of communicative qualities, professional independence, mobility, creative, rationalization activity, the ability to find non-trivial solutions in production situations.

According to Tkachenko (2014), the development of the domestic economy is hardly possible without skilled workers who received high-quality professional training in accordance with the requirements of the modern labor market.

All this in the aggregate determines the urgency of the problem of training a qualified worker, the formation and development of his professional competence, including in the system of contests and championships of the WorldSkills professions.

A significant event in the competitive movement in Russia was the entry into the international organization WorldSkills International. WSI – the world championship of working professions, the main objectives of which are to increase the prestige of the workman and popularize the working professions, attract young people to productive sectors of the economy, educational standards for the training of skilled workers and employees (Zolotareva, 2013).

In 2011, the Supervisory Board of the Agency for Strategic Initiatives (ASI) approved the project "Holding the National Championship of Working Professions WorldSkills", and in April 2012, on the initiative of the ASI and the Ministry of Education and Science of the Russian Federation, a visit to Russia of the WSI President Simon Bartley was organized. As a result of his visit, a decision was made to include Russia in the international association WorldSkills International. And on May 17, 2012, on the territory of South Korea, at the next WSI assembly, Russia was officially accepted into the WorldSkills International organization (Worldskills Russia, 2018).

Russia's accession to the international organization WorldSkills International gives a new impetus to the development and improvement of the vocational education system, contributes to increasing the effectiveness of the dual creative and pedagogical interaction of social partners, especially educational institutions and profile enterprises (Zolotareva, 2013).

One of the important areas of such creative and pedagogical cooperation in the preparation of the future skilled worker is the competitions of professional skills that are regularly conducted jointly with

the social partners, and, first of all, by educational institutions and employers' representatives (Galaguzova & Gaïneev, 2013).

In numerous studies (Galaguzova & Gaïneev, 2013; Pakhomova, 2003), it is noted importance development of creative abilities of students. This is largely facilitated by the playful, creative, competitive atmosphere of the competitions, which is especially relevant precisely with the professional training of skilled workers, when the "bright head" and "golden hands" are especially important.

2. Problem Statement

Professional pedagogy considers the competition as a competition for students and students of professional educational institutions.

The system of stage-by-stage organization of competitions usually includes competitions in-training (in one professional educational institution), regional, regional and all-Russian competitions.

The first stage in the system of contests, championships of WorldSkills became the system of classes-competitions, developed by us, conducted as a control-checking session after the completion of the module or block of the curriculum (Figure 01).

3. Research Questions

Since the main didactic goal of the control and testing session is the monitoring of the quality of the formed skills and skills in performing assignments of performing, research and research, the main goal in this class is the formation and development of educational and professional independence in the implementation of:

1. Algorithm for the execution of the issued tasks;
2. Troubleshooting and determining how to fix them;
3. Finding the best options for improving the circuit.

The goals set determine the structure of this training session, which consists of 3 stages:

The first stage is executive-reproductive;

The 2nd stage – variational-search;

The third stage is the problem-search (Gaïneev, 2016).

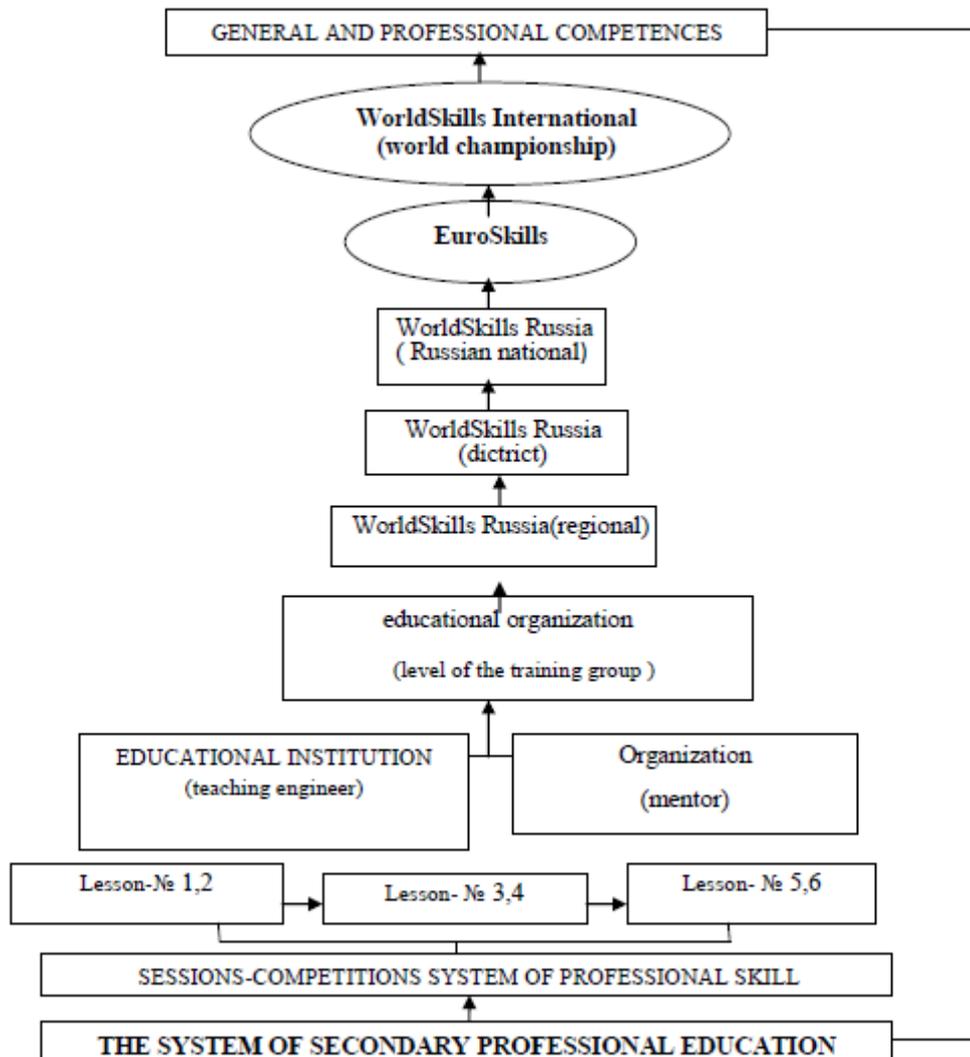


Figure 01. Occupations-competitions system of professional skill

Certain didactic advantages of competitions of professional skills are obvious. However, the insufficiently effective interaction of educational institutions with enterprises does not contribute to realizing the potential of contests for motivating the educational, cognitive and creative, rationalization activity of students.

4. Purpose of the Study

The key figure in the organization of creative and pedagogical interaction is the master of industrial training: he must not only be able to design the educational process, but also effectively interact with social partners, the employer, and first of all – the immediate representative of the enterprise – the leader of the trainee's practice in real production conditions (Gaïneev, 2016).

5. Research Methods

The key figure in the organization of creative and pedagogical interaction is the master of industrial training: he must not only be able to design the educational process, but also effectively interact

with social partners, the employer, and first of all - the immediate representative of the enterprise – the leader of the trainee's practice in real production conditions (Gayneev, 2016).

In the framework of our research, the development of the didactic provision of professional training of a qualified electrical engineering worker, we developed such a direction of the dual interaction of the educational institution and the enterprise as a creative and pedagogical one. This direction was realized in joint implementation of creative projects, development and implementation of rationalization proposals (kaizen proposals), joint preparation of students for professional skills competitions, championships of professions "WorldSkills Russia" Figure 02.

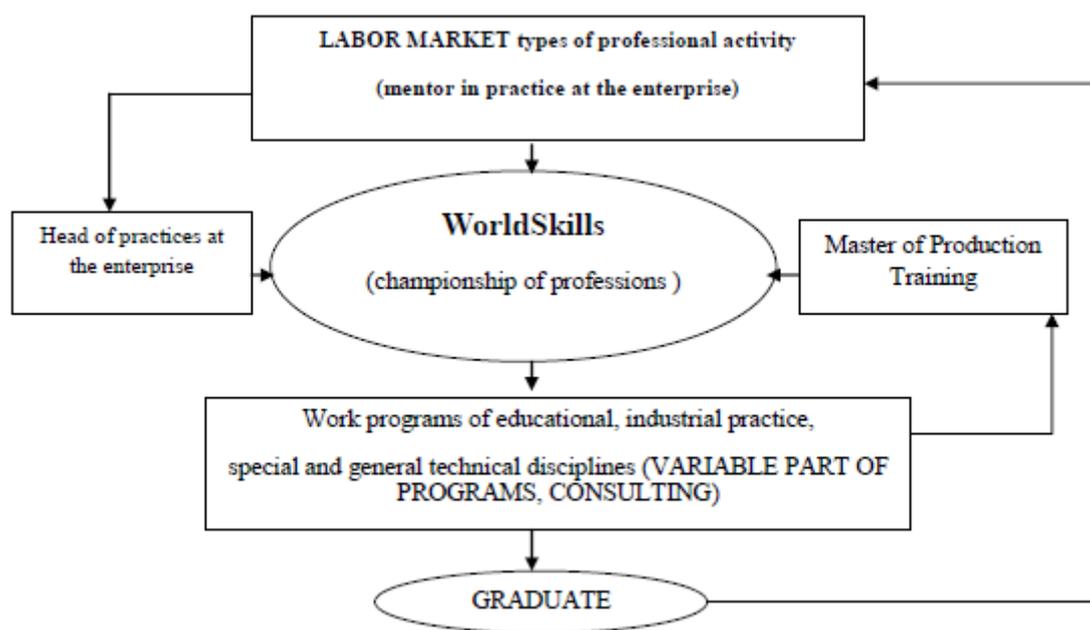


Figure 02. Creative and pedagogical interaction of social partners

Thus, the master of industrial training creates special conditions that contribute to the formation of rationalization and creative abilities in the process of organizing the process of practical training, effective interaction with teachers of general technical and special disciplines, social partners, managers of industrial practice (mentors) in a profile enterprise and using the potential of the circle of technical creativity.

The high demands on the professional and pedagogical competence of the teacher of practical training: teaching: the highest (sixth) qualification rank in the work profession, higher pedagogical education, as well as his own creative and constructive activity, which manifests itself in his personal productive, productive participation in competitions, organization of the work of the circle of technical creativity, as well as in its scientific and methodological activity (Figure 02).

The other side of the creative-pedagogical interaction must correspond to the same high level: the representative of the employer, the head of the company's industrial practice (mentor).

An important aspect here is that the ones shown in Figure 02 participants – social partners should be interested in the development of both the educational sphere and the sphere of production. This will be possible due to the fact that the represented social partners are, first of all, the state, which, being one-

time both the customer and the executor, is interested in the synergistic effect received from the presented interaction.

In addition, the state is the main investor in the educational sphere. In this regard, we note that, as noted in other publications, depending on the scope of implementation of investment projects, their classification (technical, social, economic, etc.), they are all aimed at improving the material and technical resources of universities (laboratories, workshops, etc.), the reduction of the cost of educational services and the formation of an effective organizational structure, we must not forget about the terms of their implementation, which have the following time intervals: up to 3 years (short-term), 3 to 5 years (medium-term) and more than 5 years (long-term) (Korotkova, Dokukina, & Nikitina, 2015).

First of all, this is the highest qualification rank in the profession, his inclination to pedagogical, mentoring, his creative-design, rationalization activity. That is why the most important task of the teacher of the educational institution – the master of industrial training - is the selection of the leaders of the production practice (mentors) at the enterprise from among the most experienced workers, innovators of production, who have experience in creative activity, and also a propensity for pedagogical activity, mentoring.

6. Findings

Thus, the creative and pedagogical interaction of an educational organization and an enterprise in the training of a skilled worker in the WorldSkills championships is understood by us 'as a cooperation between an educational institution and a profile enterprise in the implementation of the professional training of a qualified worker, ensuring its competencies adequate to the demands of the labor market and meeting the interests of the individual, society and the state' (Gayneev, 2016, p. 52).

Creative and pedagogical interaction begins at the first stage of the contest – within the training group: the master, together with the mentors of the basic enterprise, develop a training stand - the scheme and the interns begin to prepare for the competition within the educational institution.

At the end of the contest within the framework of the training group, the winners of this stage – three students, begin training, in conjunction with the group master and mentor in practice, to the contest within the college. Then, the winner and the second prize-winner start, also together with the teacher of the college and the tutor of the enterprise for the production practice of the students, begin preparations for the regional competition.

It should also be noted that when the student is effective, the incentives and mentors are provided for by practice: they are awarded by the management of the enterprise with a certificate of honor and a cash prize.

The main criteria for assessing the results of the implementation of the practical task are the criteria and indicators of the effectiveness of the worker's professional activity, determined in professional pedagogy: the culture of work, the technical safety, labor productivity, the quality of work performance, professional independence, creative attitude to work (Faizullina, 2002).

Representatives of enterprises and businesses take the most active part in the organization and conduct of competitions: the development of benchmark indicators, work as members of the jury and appellate commissions,

The official representative of the German firm "BOSCH" – the Ulyanovsk group of companies "Sigma-SI", the Ulyanovsk group of companies "Sigma-SI", the official representative of the German company "BOSCH" traditionally supporting those areas of activity in which the main resource and engine are "smart" hands (Muzykantova & Yurin; 2012).

For many years, Sigma-SI has been supporting competitions in technical sports, held in Ulyanovsk and the region. This year the Group also took part in the organization of the WorldSkills championships, provided prizes at the courses for all areas of training conducted in the system of vocational education of the Ulyanovsk region.

The foregoing structure, the system of stage-by-stage organization of professional skills competitions, as demonstrated by our long-standing practice, contributes to more effective implementation of the principles of personally oriented, developing technology training and corresponds to the principles of a differentiated approach in preparing the future worker and specialist.

This approach allows the most effective formation of cognitive self-worth and creative activity of students, significantly increases their interest in the profession and technical creativity and allows to build an individual educational trajectory in modern conditions of education standardization, as well as a form of professional development that stimulates the motivation of self-development creatively working teacher (Pakhomova, 2003).

A comparative analysis of the results of the final attestation (final qualification exam) testifies to the high level of theoretical and practical training of the test subjects in comparison with the similar parameters of the subjects in the control group (Table 01).

Table 01. Results of final attestation of subjects control and experimental group (score)

Group	Number of students	Mark (points, %)						Average Score
		Satisfied		Well		Excellent		
		N	%	n	%	n	%	
CG	52	17	32,7	15	28,8	20	38,5	4,06
EG	51	3	6,8	7	10,2	49	83,0	4,64

Since the qualification rank is the integrative criterion of the professional qualification (professional skill) of a skilled worker, we conducted a comparative analysis of the qualification grades assigned to the subjects of the control and experimental groups based on the results of the final certification – the final qualification examination (Table 02).

7. Conclusion

Comparative analysis of the results of the final certification and the qualification categories assigned made it possible to draw a conclusion about the high effectiveness of didactic conditions on the formation and development of the professional competence of students. In the control groups, 38.5% of the students passed the final exam for "excellent" rating, but none of them managed to reach the level of the fifth grade.

It should be noted that even the graduate of the control group, who defended the final qualification work for the "excellent" grade and received the diploma with "honors", did not manage to master the fifth

qualification level, since the professional training of the control group was conducted according to the traditional system, without the systemic dual interaction of social partners.

Analyzing the problem of the reliability of the results of research, experimental work in pedagogy, Novikov (2003) rightly points to the need for more remote results of organized pedagogical influences.

In this regard, we will present the results of professional activities of graduates of the 5th qualification categories of experimental groups, winners of professional skills competitions: out of 22 graduates of the 5th category: 18 graduates work by profession, 12 of them graduated to the highest level of qualification – the 6th category; 3 graduates – continued their studies at the energy faculty of the Technical University.

Many of these graduates in the subsequent labor activity became the leaders of the brigades, masters of the plots, power engineers.

The effectiveness of the creative and pedagogical interaction of social partners in the joint preparation for the WorldSkills championships is also confirmed by the results of the activity on the most significant indicators of the educational, production and creative activity of the students (Table 02).

Table 02. Results of the activities of the control and experimental groups

№	Occupation	Training Group	
		Control	Experimental
1	Set of contingent - (the 1st year)	25	25
2	Release contingent - (the 3rd course)	19	25
3	Deducted (loss of contingent)	6	-
4	Offenses (count)	5	1
5	Graduation - Diploma with Honors	1	5
6	Graduation - Diploma for "4" and "5"	3	14
7	Issue - qualification rank (the fifth)	-	4
8	Issue - qualification rank (the fourth)	5	12
9	Issue - qualification rank (the third)	14	6
10	Number of rationalization proposals	2	19
11	Regional competitions of professional skills (the first place)	-	3
12	Exhibitions of technical creativity (place)	7	1
13	Participation in the "Art-forum-forum" (place)	-	1
14	Participation in scientific and practical conferences	-	4
15	Publications in scientific and technical publications	-	4

It was not long before the Russian team took first place at the European Championships (EuroSills-2016, Gothenburg, Sweden) and at the World Championships (WorldSkills-2017, Abu Dhabi, UAE) (Worldskills Russia, 2018).

It should also be noted that on August 10, 2015, at the General Assembly of the WorldSkills Competition-2015 held in São Paulo, the election of the capital of the WorldSkills World Cup in 2019 was held, where Russia won the race and, for the first time in its 60-year history WorldSkills International, the WorldSkills-2019 World Cup will be held in Russia, the capital of Tatarstan – Kazan.

It is established that the dual interaction of an educational institution with a pro-philanthropic enterprise in the process of joint training of students in the WorldSkills profession championship system contributes to the solution of the main task of vocational education – the formation of a new model of

education that would overcome the backlog in the structure, volume and quality of labor resources from the real requirements of modern production.

At the same time, the conducted research does not exhaust all completeness of the studied problem. Prospects for further scientific research are such problems as the formation of the need for self-development in the WorldSkills championships system, ensuring the continuity of the formation of professional competencies in the continuous vocational education system, etc. However, we should note that in the development of vocational education everyone should be interested business entities from the state to the private-corporative levels.

References

- Faizullina, G. Z. (2002). *Technique of holding competitions for professional mastery on the basis of the qualimetric approach*. Moscow.
- Galaguzova, M. A. & Gaineev, E. R. (2013). Creative and pedagogical interaction of an educational institution and a basic enterprise in competitions of professional skill. *Pedagogical Education in Russia*, (4), 252-257.
- Gaineev, E. R. (2016). Dual interaction of social partners in creative training of the modern worker. *Modern European Researches*, (3), 50-54.
- Korotkova, M. V., Dokukina, S. M., & Nikitina, S. O. (2015). Optimization of financing of higher professional education: modern Russian and world trends. *Bulletin of the Orenburg State University*, (4), 277-282
- Muzykantova, V. V., & Yurin, Y. B. (2012). Partnership in the development of the territory and activities: from the first steps to the system work of professionals in the construction industry. *Business Review*, 3(171), 24-25.
- Novikov, A. M. (2003). *How to work on the thesis: a manual for a beginner pedagogue-researcher*. Moscow: Egves.
- Pakhomova, E. M. (2003). *Competition of professional skills as a means of improving the skills of a teacher* (Doctoral dissertation). Moscow.
- Tkachenko, E. V. (2014). *Problems of training workers in Russia*. Moscow: Pedagogy.
- Worldskills Russia. (2018). Informational portal. Retrieved from: <https://worldskills.ru/>
- Zolotareva, N. M. (2013). Russia's accession to WorldSkills International. *Professional education in Russia and abroad*, 2(10), 19-23.