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Russian Educational System in the Context of Structural Reforming Crucial Goals and Problems of Transformation

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Abstract. The article is devoted to the problem of Russian educational system reforming and its adaptation to the new challenges of the modern global economic and social conjuncture. The crucial task of the Russian educational policy is to ensure modern quality of education based on preserving its fundamental nature and compliance with the current and future needs of the individual, society and the state. Modernization of education is a political and national task; it should not and cannot be carried out as a departmental project. The interests of society and the state in the field of education do not always coincide with the sectoral interests of the educational system itself, and therefore the determination of the educational modernization directions cannot be locked in the framework of the educational community and the educational department. All Russian citizens, the family and the parent community, federal and regional state institutions of power, local governments, professional and pedagogical community, scientific, cultural, commercial and public institutions should become active subjects of educational policy. The educational modernization goal is to create a mechanism for the sustainable development of the education system. The article contains analysis of institutional, administrative, economic and pedagogical aspects of reforming.

1. Russian System of Education in XXI century. Problems and Trends

The interaction of education system and labor market is traditionally considered in two main aspects: employment of graduates from vocational schools and universities in concordance with their specialty and employers' satisfaction with personnel training. Meanwhile, these problems lie much deeper and are not limited only to the sphere of professional education. First of all, several competences that will determine the approach of the younger generation to work should be formed in the school education system. These are: responsibility, discipline and work culture.

One of the chronic problems of the Russian educational system is lack of ideas in the school concerning the wide list of modern professions, about their dynamics, about the need of the economy and the social sphere of the country for certain employees. The development of vocational guidance, which has recently begun to be widely discussed, concerns mainly high school, while workers and middle-level specialists are trained in the SPE (System of professional education) sphere, where, as noted above, more than 40% of 9th-year graduates enter.

According to both sociological research and employers, the organization of secondary vocational education in Russia accumulates today the contingent, which not just lacks a sense of responsibility, but is also not inclined to discipline, - the most crucial qualities of an employee in modern enterprises. This problem seems to be the foundation stone of the Russian educational system in XXI century.

The issue of young people's vocational orientation is given a subject of increased attention abroad. For example, a seven-grade student in Finland is required to be involved in real work activity for one or three weeks, working in different companies. He or she studies career building issues, and already in the ninth grade they choose a profession with the help of HR specialists of enterprises. In Germany, finishing the gymnasium, most young people have been working in different companies (organizations) for about a year in order to choose the vector of training which they will take up at the university. In Japan, during high school education, a student can try out about 50 professions / specialties (at least to find out what any of work activities consists of).

In addition to the choice of profession / specialty, the problem of youth migration, both before and after graduation from vocational education organizations, is also highly relevant. Only a short list of professions / specialties that are taught in the region of their residence is available for most adolescents who continue their education in organizations of secondary vocational education after Grade 9. Since after the termination of the vocational education young men go to serve in the army (especially it refers to the list of workers' professions), employers tend not to invest in such educational institutions. Large companies prefer to create internal training centers in order to train the staff they need.

The problem in Russia is getting worse also due to the fact that training in universities in a number of the Russian regions is conducted in areas of training / specialties that are not in demand in their economies. As an example the vast majority of the university graduates who have received higher education in nuclear power engineering and technology (almost half of those who studied in the direction of the "Electric power, radio engineering and communication systems") leave the Ivanovo region. Their employment in a specialty outside the home region strictly depends on rental housing and is determined by the salary for which these graduates can apply for a particular job.

According to the Boston Consulting Group study, 91% of employers report a lack of practical knowledge among graduates of Russian universities. At the same time, the Monitoring of Youth Employment, which, since 2015, has been conducted by the Center for the Economy of Continuing Education, IPEI RANEPA, shows that 35 to 50% of university graduates (depending on the direction of training / specialty) are already employed, about 40% of them – immediately after graduation. Only about 8% of graduates find a job one year after completing their studies, but most of them do not look for a job until a certain point (usually for family reasons or due to health problems).

The tendency is that young people change their first job mainly because of low salary (approximately 30%) or poor working conditions (19-20%). At the same time, the monitoring of RANEPA showed that 48% of graduates of engineering universities would like to change their specialty, as well as 43% of young people who have acquired a working profession. The picture of professional preferences is the following: among builders - 10%, IT specialists - 6%, among managers - 38% of those who want to change their specialty [1].

1.1. Institutional Problems of Education Development in Russia

One of relatively new instruments in the Russian system of education is Unified State Exam (USE, school level). While preparing for the Unified State Exam, students are intensively prepared for passing 3-4 exams, while less attention is paid to cultural foundations, a wide range of views, and critical (analytical) thinking.

Unified State Exam (USE, university level). With the implementation of the USE, the educational mobility of school graduates has increased (according to sociological data, about 7.5% who received high scores on the Unified Exam enroll in universities in Moscow and St. Petersburg, another 16% - in universities of several centers - Nizhny Novgorod, Ekaterinburg, Tomsk, Krasnoyarsk, Novosibirsk, Voronezh, Rostov). As a result, many regional universities are "gradually weakened" (a strong university is, first of all, a university of strong students).

Inefficient distribution of admission control figures in areas of training, including inefficient distribution of admission control figures between universities of different profiles, increases the imbalance in the distribution of budgetary places between regions, which forces a significant portion of strong applicants to get paid places.

The system of secondary vocational education is based on the outdated structure of training middle-level specialists, skilled workers and employees, and budgetary under-funding of this level of vocational education, in turn, reinforces the ineffective structure of personnel training, because Russian educational organizations due to the lack of budgetary funds cannot upgrade the process, as well as improve the skills (retraining) of teachers.

The inefficiency and inconsistency of road maps implemented in the education system, including salary, is growing. The adopted roadmaps contain many indicators that are almost impossible to implement in the full scale. There is bureaucratization of the activities of educational organizations with the strengthening of formal control.

Introduction of professional standards is unfortunately in many cases imitative in its nature. Developed and formally implemented professional standards can create inefficient barriers in the labor market, which is rapidly changing under the influence of technological and social innovations (professional standards cannot prevent the poor quality of personnel training). Thus, according to leading universities, adoption of the professional standard of a university teacher may lead to the fact that up to two-thirds of their teaching staff will not meet its requirements, universities will lose the opportunity to attract practitioners, in rural schools there can hardly be found a director who can conduct business conversation in a foreign language, as required by the draft professional standard of the educational organization.

1.2. Administrative problems of educational development in Russia

According to PISA data Russian schoolchildren have shown high dynamics of the results in recent years. Nevertheless, the percent of Russian schoolchildren who are not ready to adequately use more or less complex texts for learning and orientation in everyday situations has decreased from 28% in 2000 to 15% in 2018, but at the same time the number of students who demonstrated the highest results, corresponding to 5-6 levels of reading literacy, increased from 3% to 7% [2]. Nevertheless, the proportion of Russian students who showed low results in this study still remains quite large.

The availability of quality education is declining - territorial, starting from the level of pre-school educational organizations (overcrowding, lack of educators, lack of places in nurseries) in about 15% of the regions; financial: with an increase in the education cost in universities, a ban on subsidizing paid students from the state has been introduced.

In many directions, inefficient restructuring of the educational organizations networks at all educational levels is carried out: merging of weak organizations with strong ones leads to erosion of reputations and brands (be it a school or university).

There is no forecast of the state demand for personnel in the short, medium and long-term perspectives both on the regional and sectoral levels, the structure of staff training does not meet the objectives of the country's long-term economic development: instead of working on quality improvement, the higher education system derives a number of training directions (including technical and agricultural), which should ensure the development of the country in the long term, while the restoration of these areas will require many years and budget expenditures.

Licensing and accreditation of educational organizations poorly improve their role in cutting off inefficient educational organizations, professionally weak pedagogical staff, low-quality educational resources and programs.

There is an implicit stimulation of the inflow into Russia of foreign students with a low level of knowledge, the transformation of many Russian universities into suppliers to the global educational market with respect to cheap low quality education; at the same time, there are no mechanisms for securing qualified graduates-foreigners in Russia.

There is a tendency to replace government orders with actual government procurement, distributed between public and private educational organizations in the absence of criteria for assessing the quality of educational programs and educational organizations; also relevant is the threat of the budget educational organizations network destruction, while its preservation is necessary to ensure the

sustainable development of this sphere due to the long duration of education for the younger generation [3].

Despite numerous initiatives, there is no progress in the development of the continuing professional education system (as noted, there is no real need for most employers). Practically, workers of 45+ are not included in the system of continuing professional education, which hinders the solution of the problem of effective employment (minding the reduction in the number of employed people) and, in particular, economically effective raising of the retirement age.

The regulation of paid admission prices has a negative effect on the economic activities of universities. The status of a higher education institution as a non-profit organization (the main characteristic of which is the possibility of a flexible approach to pricing, including price discrimination) is not taken into account, as well as the fact that in many cases tuition prices should be set at the marginal rather than at the average cost of a single student. In addition, the state can partially sponsor tuition at a university for paid students, which is widely used abroad (assistance to paid students is provided in the form of exemption of the educational loan rate, its repayment by the state if the university graduate goes to work in remote regions or the village, goes to work with so called difficult children etc.) In Russia, due to the underdevelopment of educational loans, these types of sponsorship are practically not used.

1.3. Economic problems of education development in Russia

The state education investing is being reduced, the share of budget expenditures on education in 2018 decreased to 3.5% of GDP.

An inefficient model of per capita financing has been introduced in professional education. There is a steady trend to include so called «all costs» standards, to determine the «full cost» (price) of educational service and actually buy it on the market (transition from government task to government procurement).

There is a gap between budget financing «according to the standard» and budget limits distributed between educational institutions. So, normative per capita financing cannot be a guide for any educational organization on medium and long-term work planning. In conditions of budget revenues fluctuations it is impossible to use simultaneously two methods of budget planning: according to standards and on the basis of planned budget revenues.

A relatively significant private sector emerged only in higher and additional vocational education, the attraction of private funds to the education system is limited, and public-private partnership remains relatively marginal.

1.4. Pedagogical Problems of Education Reforming in Russia

The lag in the content and technologies of education from the topical needs of society and economy is growing. As to the employers, graduates of vocational education organizations mostly do not possess the necessary level of knowledge and skills.

Mass school is not aimed at increasing the child’s individual motivation to develop. The main goal for today remains the development of subject knowledge, and not the development of the child, based on his or her interests, talents and parents' requests.

The quality of vocational education is declining: the results of the international literacy study of adult PIAAC and WorldSkills championships confirm Russia’s lack behind graduates from other countries in terms of the skills needed for the modern economy. At the same time, as the experience of Russia's participation in the WorldSkills program shows, this position in the system of professional education can be corrected quite effectively with appropriate efforts.

New teaching methods are limited in the Russian education system: despite the fact that computer skills and the ability to use new technologies are a significant factor in growing efficiency of activities, at the same time modern tools and information technologies (electronic educational resources, etc.) are extremely limited in Russian education.

The new standards of general education place special emphasis on the achievement of meta-subjective results by students and the development of universal educational activities among them. The same thing concerns international studies of the education quality, which mainly contain tasks for ability to apply the obtained subject knowledge in a vast range of practical life situations. At the same time, the accepted methods and practices of school education, by contrast, are in fact aimed exclusively at developing some kind of narrow subject knowledge, which is necessary, but not sufficient for obtaining modern education [4].

Meta-subject skills, such as the ability for teamwork, rational time management, search for the right information, etc., are those qualities that employers especially appreciate. The educational standards declare them, teachers in the systems of secondary vocational education and higher education often do not know how to form these skills, and not always have them.

The new educational standards requirements did not affect the content of pedagogical education: teachers are not taught either critical thinking or working with information. Textbooks and teaching aids are outdated and no longer relevant.

According to TALIS, only 6% of the Russian schools directors had prepared for their positions before they were appointed [5]. In Singapore this number is about 70%.

There is a weak development of the educational cultural component: the efforts of including the resources of museums, art galleries, theaters, educational tourism, and other objects of cultural and educational significance in the educational process are insufficient.

Despite high positive dynamics of PISA results, Russia keeps occupying a low position in the ranking according to the results of this study. That indicates a low level of Russian schoolchildren's skills and abilities development according to PISA standards focused on the practical application of the knowledge gained [6].

At present, the system of assessing the quality of school education is opaque and in fact excludes the possibility of parents' and schoolchildren's obtaining an independent external assessment of the educational results achievement. Teachers do not know how to give effective feedback in writing, which would help parents understand what the child's problems are. The state does not create conditions for the emergence of private (non-state) centers that are not affiliated with state / regional structures.

2. Priorities for the education system development in the medium term (until 2024) and in the long term (until 2035)

In order to solve the list of problems mentioned above, priorities for the Russian education system development should be the following:

1. Creation of human, infrastructural and technological conditions aimed at personalizing education, revealing the working potential of each student.
2. Changing the structure of training in vocational education in accordance with the new tasks of social and economic development.

These priorities determine the goals and objectives of the reform at each stage of education: from pre-school to higher. When implementing these priorities in the field of preschool education, the following tasks should be solved:

- granting early development of children (up to 3 years), accessibility for all interested toddlers of preschool educational organizations, counseling support for parents;
- development of a pre-school education system to reduce differentiation in preparing children for school.

In the system of general (school) education the following tasks are to be solved:

- reducing the differentiation of regional education systems on the terms of education of students;
- preservation of the Russian general education space integrity, while ensuring both educational programs variability and the individualization of education (unity of results);

- development of the network interaction of schools and organizations of additional education to ensure the fullest consideration of the students' educational interests, individualization of educational vectors;
- increasing the level of graduates' functional skills, necessary for successful socialization in the modern society, including introduction of modern educational technologies in the general education system and the development of the educational culture;
- building an objective system for monitoring the quality of general education.

In additional education the following tasks should be solved:

- granting a variety of educational services that allow forming flexible educational trajectories by combining formal and non-formal education, developing network education in the system of additional education of children and adolescents for further individualization of educational directions, especially in rural areas, in urban-type settlements, small and medium cities;
- preserving the opportunities for creative leisure of children and young people;
- development of physical culture of the young generation, involvement of children and young people in sports activities;
- increasing the interest of the younger generation in modern technology and technology through the development of technical creativity of children and young people;
- involvement of adolescents in complicated life situations in non-formal educational activities.

In vocational and higher education the following main tasks should be accomplished:

- changing the structure of staff training, bringing it closer to the structure of training in developed countries minding the forecast needs of the economy and social sphere;
- updating the content and technology of vocational education, including through the use of online education resources;
- creating a system for educational results estimating, based on criteria available to the student;
- raising the general level of professional culture;
- increasing the flexibility of building the educational trajectories of vocational education due to the growth of the young people's educational mobility, using the principles of educational programs' modularity and the network organization of the educational process;
- developing dual vocational education based on public-private partnerships;
- reducing the differentiation of conditions for obtaining vocational education in regional education systems;
- improving the competitiveness of the Russian education system in the global educational market and developing education export.

In continuing education the following tasks are to be solved in order to improve the situation:

- involvement of the majority of Russian adult population into continuous education (including the development of mass open online courses);
- development of the social education of migrants, both workers and members of their families;
- improvement of technological, legal, financial, environmental and medical skills of the adult population;
- reduction of barriers to transition between levels of vocational education through the development of continuing educational programs;
- creation of conditions for the development of self-education and strict monitoring of its results [7].

3. Conclusion

The new State Program "Development of Education for 2019-2024" should be regarded as the main mechanism for implementing the priorities of Russian education development

Until 2019, programs (new priority national projects) should be developed to provide advanced training and retraining for teachers and administrative staff of state and municipal organizations of pre-school, general and vocational (secondary vocational and higher) education. These Programs should be built according to the type of the Presidential Program for the Advanced Training of

Managerial Personnel in order to provide comprehensive training for the above categories of educators. In this case, the principle of advanced training should be implemented not just for teachers or managers, but for pedagogical teams (especially in systems of pre-school and school education, as well as in the system of secondary vocational education). At the same time, advanced training programs must be diverse in form and accountable to the consumer. The teacher should know what he is taught and have the opportunity to estimate the performance of service providers. The quality of the system work should be assessed by the head of the educational organization, who sent the teachers (pedagogical team) to training. It is the number of days per year that a teacher must devote to improving skills, but not the formal list of standard training cycles (once in three years) is normalized all over the world.

The implementation of these programs should begin in 2019, and end by 2024. Thereafter it is necessary to rationalize the number of days per year that the teacher has to devote to advanced training, and not the frequency of the standard training cycles (once in three years).

It is also necessary to develop and implement the "Distance education for remote areas" Project in order to improve the quality of education and its availability for schoolchildren.

There is another priority project called "Modern secondary vocational education". Nowadays, the demand for mid-level specialists in Russia providing technological culture of production, administrative and technical support for management processes, development of market infrastructure, technical, information and social services is growing. A secondary vocational school provides accessible and mass vocational education aimed at training skilled workers and mid-level specialists. At the same time, technological and social development leads to the emergence of new professions and specialties (for example, an operator of automated transport systems, electric transporter, concierge of robotics, etc.).

Training of specialists with secondary vocational education is aimed at meeting the needs of both the federal and regional labor markets. The profile structure of vocational secondary education, which is focused on the federal level, should include mainly training on targeted federal programs, for science-intensive and high-tech industries, to provide federal infrastructure systems, product quality control systems, training in the field of art, in new professions and specialties that have not yet received mass distribution. The prestige of secondary vocational education system will be promoted by granting the right for secondary vocational education organizations to implement the "applied bachelor's program". At the same time, the preferential right to study the programs of applied bachelor's degree should be assigned to applicants with specialized secondary vocational education. This measure will serve as a logical continuation of the policy of dual education implementing. At the same time, it is necessary to develop joint programs of applied baccalaureate in vocational schools and universities.

At the regional level, it is necessary to develop multi-level educational organizations that train middle-level specialists, skilled workers, and retrain personnel in a wide range of specialties and professions. Due to the fact that mainly pupils and students from low-income population strata study in organizations of secondary vocational education, this determines the preservation of the leading role of the state in organizing and financing this sphere.

A window of opportunity associated with the ongoing changes in higher education system is going to be created in Russia in the period 2020–2024. Due to a sharp increase in the flow of foreign students, opportunities for the growth of the export of Russian education (by means of the adoption of the priority project "Development of the export potential of the Russian educational systems") are to be expanded. Also the development of mass open online courses will allow Russian universities to increase quality content in their educational programs and create competitive courses in foreign languages, ensuring the attraction of foreign students and trainees to Russia.

The scale of the planned reform can be estimated through the figures which are introduced in Table №1.

Table 1. Financial implementation of the national project "Development of Education for 2019-2024" [8].

Calendar year	Project funding (in rubles)	Purpose of payment
2019	116 billion 628.29 million	Preschool education
2020	132 billion 741.25 million	General education
2021	143 billion 544.87 million	Professional education
2022	129 billion 293.48 million	Retraining and professional development
2023	128 billion 910.32 million	Youth policy
2024	133 billion 335.32 million	Applied Educational Research

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