The Practice of Implementing Bologna Process in the Education Sector in the Russian Federation: Trends and Consequences

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Abstract
The article presents studies that contribute to the ongoing discussion on the higher education reform in Russia in accordance with the Bologna Process.

Currently, many higher education institutions of the country have implemented a two-tier system of education, where the first-tier of higher education is bachelor's degree program with the average period of study equal to 4 years, the second-tier of higher education is master's degree program designed for training for 2 years. The specialist degree program remained only in the technical universities. Recently, bachelors make up the main percentage of university graduates. Not many young people enter the master's degree program, mostly those students who plan to devote their future activities to science.

The number of studies, currently available in literature, confirming the effectiveness of the transition of higher education to training students under the bachelor's degree program, as well as the demand for these graduates on the labor market, is not high. Are employers ready to employ graduates with bachelor's degree?

In this article, firstly, the attitude of employers to the transition to the two-tier system of higher education was studied. Secondly, the employers' loyalty level to a potential employee with a bachelor's degree was determined. Third, the analysis was carried out to reveal the employment of graduates from higher educational institutions with bachelor's, specialist, and master's degrees. Also, the article presents the dynamics in the number of students with the bachelor's, specialist, and master's degree graduated over the recent five years. Limitations of career growth of graduates with the bachelor's degree were analyzed, and the opportunities to overcome their employment problem were suggested.

In consequence of the conducted study of the transition of Russian higher education to a two-tier education system, recommendations are formulated to promote the recognition of the bachelor's degree program graduates in the labor market.

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The outcomes of the study gain the knowledge about the higher education reform in the Russian Federation, which is conducted in accordance with the Bologna Process, as well as give an idea of the employers’ attitude towards graduates of the bachelor's degree program.

**Keywords:** Bologna Process, education level, bachelor's degree program, specialist degree program, master's degree program, employment of graduates, career, education quality, labor market, higher education.

1. **Introduction**

In the current context in Russia, higher education, career, and professional growth are the priority life values.

Fifteen years ago, due to joining of Russia to the Bologna Process, the higher education in the country had received a new course of its development and renewal. There were many disputes and discussions in the scientific community, whether moving towards a two-tier education was expedient. However, there is still no consensus on the feasibility of Russia's entry into the European Higher Education Area, and the answer to the question, what are positive and negative results that Russian higher education has received in the course of these changes.

An important criterion for assessing the education quality is the demand for specialists having graduated from higher education institutions. This is the issue we will try to deal with and find out how employers treat bachelor’s program graduates of higher education institutions, whether or not they trust the new education standards.

At present, after the transition of Russia to a two-tier higher education system, the employment problem of graduates of higher education institutions with bachelor's degree, became quite relevant and requires the solution at the highest level.


2. **Materials and Methods**

The goal of the present research is revealing the effect of education transition to a two-tier education system on the quality of training, as well as determining the credibility of the employer to graduates who have studied under the bachelor's degree program.

The research deals with the following issues:

1. Definition of the purpose of Russia’s accession to the Bologna Process;
2. Analysis of the all-Russian survey of companies, hiring graduates of higher educational institutions with bachelor’s, specialist, and master’s degrees, conducted by Career.ru portal in 2011;
3. Analysis of sample observation of employment of graduates of higher education institutions, conducted by the Federal State Statistics Service (Rosstat) in 2016.

The empirical base includes the results of the research performed by the author on the basis of the data obtained through the all-Russian survey of 500 companies hiring young professionals conducted by Career.ru in 2011 and selective observation of the employment of graduates who received higher education in 2010-2015, conducted in 2016 by the Federal Service for State Statistics.


"The selective observation was carried out in compliance with the Resolution of the Government of the Russian Federation of November 27, 2010 No. 946 "On the organization in the Russian Federation of a system of federal statistical observations on socio-demographic problems
and monitoring of economic losses from mortality, morbidity and disability of the population. The observation was an additional module for a selective survey of the workforce and was carried out monthly from April to September 2016.

Units of observation are persons with the following educational levels: higher education (bachelor's degree, specialty, master's degree, top-level training), secondary vocational (including former primary vocational) and graduated from the educational organization in 2010-2015. Persons who received for the period from 2010 to 2015, two or more educations are taken into account once for the higher level education (if two educations of the same level are received, then on the latter level).

The sample was formed on the basis of the primary information file of the All-Russia Population Census of 2010 and the Population Census in the Crimean Federal District of 2014, which contains information on the permanent population, i.e. population permanently residing in the territory of the corresponding district, city, settlement.

The sample of graduates was 36 thousand people, or about 0.3 % of the total number of graduates in 2010-2015. The volume of the sample array during the observation was more than 100 thousand households visited by the interviewers. The survey was conducted in those households in which the graduates who graduated from educational organizations in 2010-2015 lived.

The results of selective observation were extended to the general population according to current calculations, having the same characteristics as graduates of educational organizations. The methodology for weighing and disseminating sample survey data is based on assigning an appropriate individual weight to each individual unit of observation. The procedure for calculating weights is to compare each sample of the Russian Federation with a sample (the number of citizens surveyed) stratified by gender, five-year age groups, the type of settlement (urban, rural) with the general population according to current calculations stratified according to the same characteristics.

Based on the results of the observation, official statistical information has been generated reflecting the employment and degree of consolidation of graduates in the acquired profession (specialty) of secondary professional or higher education. The attached tables contain the following data:

- on the graduates of educational organizations in 2010-2015 and the process of their employment;
- on the results of employment and work activity of graduates in the first job;
- on the current situation of graduates in the labor market in 2016;
- about the current employment of graduates in 2016» (Prikaz Federal’noi sluzhby..., 2016).

The purpose of selective observation is the possibility to obtain official statistical information reflecting the employment and degree of consolidation of graduates in the received profession (specialty) of higher education.

The geographical scope of the selective observation of the employment of graduates of vocational education institutions is defined throughout the whole of the Russian Federation.

For carrying out respondents’ survey, a questionnaire for selective observation of employment of educational institution graduates, who have received higher education, was approved in accordance with the order of Rosstat.

The authors also used general scientific methods of investigating the empirical level: observation, description, comparison and theoretical level: generalization, analysis.

The results of the study were obtained by analyzing the relationship between the level of education: baccalaureate, specialty, magistracy and the relevance of graduates of each level of education in the labor market.

The authors used the counting method for the Pearson's criterion $\chi^2$. The results were significant at the level of reliability ($p < 0.85$).

3. Results

Since 2003, after signing the Bologna Declaration, the Russian higher education system was faced with the task of implementing the basic principles of the Bologna Process.
"To ensure this transition, the Ministry has developed and approved the State Educational Standards (SES) of higher vocational education (HVE), which reflected the principles of the Bologna Process" (Kupriyanov et al., 2014).

In 2005, the Ministry of Education and Science of the Russian Federation has developed a plan of actions to implement the provisions of the Bologna Declaration in the system of higher vocational education of the Russian Federation until 2010. "Goals of higher vocational education system development in accordance with the Bologna Declaration" were defined as follows:

1. Developing higher vocational education system based on two main tiers – bachelor's and master's degree programs;
2. Studying and implementing the European Credit Transfer and Accumulation System (ECTS);
3. Introducing the Supplement to Diploma for higher professional education, compatible with the European Diploma Supplement;
4. Creating and providing the comparable system of recognition in the Russian Federation of foreign documents on education, and recognition of Russian documents on education in the member states of Bologna Declaration;
5. Addressing the problem of education quality and development of comparable methodologies and criteria to assess the education quality;
6. Promoting the development of academic mobility of students and university teachers" (Prikaz Ministerstva obrazovaniya..., 2005).

It is believed that the main goal of all countries involved in the Bologna Process was creating the European Higher Education Area (EHEA). This task was achieved in 2010 through the efforts of all the participants, and it was announced about the creation of the EHEA. In 2017, 48 countries have become EHEA associates.

It should be noted that great hopes were laid on the EHEA in terms of gaining more attractiveness in the world educational community. National educational systems of European countries have gained the opportunity to extent their knowledge through the unique knowledge of the partner countries, which became possible due to the increased mobility of students and teachers.

"Another thought that is important to understand for the evaluation of the Bologna Process: EHEA is not a geographical concept. This is an aggregate of ideas and technologies associated with education, which were formulated by a number of European countries and developed jointly by all EHEA member states" (Kamynina, Grudzinsky, 2017).

Russian higher education took a tack on two-tier education system. The task was set to eliminate training at the level of specialist degree program, while implementing education at the levels of bachelor's and master's degree programs.

In order to determine the attitude of employers to the transition to a two-tier system of higher education, Career.ru portal has conducted a nationwide survey among 500 companies hiring graduates of higher educational institutions having bachelor's, specialist, and master's degree. The survey was conducted from 18 to 25 July 2011.

Answers to the question posed to companies whether bachelor's degree of their potential employee was sufficient to perform professional duties, were as follows: yes – 79, no – 21 %.

Table 1 shows the answers to the question posed to companies involved in different fields of activity: “Is bachelor’s degree of potential employee sufficient to perform professional duties?”

<table>
<thead>
<tr>
<th>Field of company's activity</th>
<th>Yes, %</th>
<th>No, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks, finance, and insurance</td>
<td>92</td>
<td>8</td>
</tr>
<tr>
<td>Human resource management</td>
<td>90</td>
<td>10</td>
</tr>
<tr>
<td>IT/Internet</td>
<td>85</td>
<td>15</td>
</tr>
<tr>
<td>Service-to-business</td>
<td>83</td>
<td>17</td>
</tr>
<tr>
<td>Wholesale selling</td>
<td>82</td>
<td>18</td>
</tr>
</tbody>
</table>
Companies from banking and financial sector were more loyal to the graduates of higher educational institutions with a bachelor’s degree. Among them, 92 % of companies were ready to hire graduates with bachelor’s degree. Also, 90 % of companies involved in human resource management would have given preference to bachelors. The survey results indicate worse situation with respect to companies engaged in construction and real estate, from which just 54 % were ready to hire bachelors. At that, it was noted that the larger the company, the less demand they manifest for undergraduates with bachelor’s degree.

During the survey, it was also revealed that 25 % of employers, who hired graduates of higher education institutions, gave negative assessment to the transition to a two-tier system of higher education, 64 % rated the transition neutrally, while only 11 % gave positive assessment.

"Currently higher education is perceived as a mandatory requirement of the employer, as a necessary but insufficient condition for obtaining a job in an effective segment of the labor market. Often, higher education is required even where it was previously not mandatory" (Solovov, 2016).

In the course of the survey on the employment of the university graduates, the respondents were asked questions related to different periods, namely training in an educational institution, the graduation from the educational institution, searching a job in the labor market after graduation, and the employment at the first job and current job.

Table 2 shows the data of a sample survey of employment of university graduates conducted in 2016 (Vyborochnoe nablyudenie...).

### Table 2. Employment of graduates depending on their level of education for the period of 2010-2015 (thousand people)

<table>
<thead>
<tr>
<th></th>
<th>Total number of graduates</th>
<th>Including:</th>
<th></th>
<th>Among them</th>
<th></th>
<th>Among them</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Those who were</td>
<td>Total number</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>looking for a job</td>
<td>of unemployed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Those who were</td>
<td>graduates</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>not looking for a job</td>
<td></td>
</tr>
<tr>
<td>Total number of</td>
<td>6,476.9</td>
<td>5,860.2</td>
<td>3,965.1</td>
<td>1,895.2</td>
<td>616.7</td>
<td>296.9</td>
</tr>
<tr>
<td>graduates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>319.8</td>
</tr>
<tr>
<td>Total population</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher education</td>
<td>5,430.1</td>
<td>4,967.4</td>
<td>3,337.1</td>
<td>1,630.4</td>
<td>462.7</td>
<td>225.7</td>
</tr>
<tr>
<td>based on</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>237.0</td>
</tr>
<tr>
<td>specialist and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>master’s degree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher education</td>
<td>1,046.8</td>
<td>892.8</td>
<td>628.0</td>
<td>264.8</td>
<td>154.0</td>
<td>71.2</td>
</tr>
<tr>
<td>based on bachelor’s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>82.8</td>
</tr>
<tr>
<td>degree program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the data of the comparative table, it can be concluded that the categories of graduates considered in terms of the level of education of the specialty and the master’s degree from 2010 to 2015 were employed by 4,967,400 people. 462.7 thousand people did not find a job.
At the same time, among bachelor's degree program graduates 892.8 thousand people were employed, whereas 154 thousand people were not employed.

Thus, we see that in the labor market the demand for specialty graduates and master's degree graduates is higher than that of bachelor's degree. Employers, in most cases, do not trust graduates with the bachelor's degree, they treat them as the graduates with incomplete higher education, believing that these graduates have insufficient theoretical knowledge and low level of practical skills in specialization. Nevertheless, salary expectations of the graduates are often overstated.

The problem of incoherence of the knowledge and skills, mastered by higher education graduates, with the requirements of employers is becoming increasingly acute.

To compare, it is necessary to provide data of selective observation of university graduates employment in 2016 in terms of percentage (Table 3).

**Table 3.** Employment of graduates depending on their level of education for the period of 2010-2015 (%) *(Vyborochnoe nablyudenie...)*

<table>
<thead>
<tr>
<th>Total number of graduates</th>
<th>Total number of employed graduates</th>
<th>Among them</th>
<th>Among them</th>
<th>Total number of unemployed graduates</th>
<th>Among them</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Those who were looking for a job</td>
<td>Those who were not looking for a job</td>
<td>Total number of unemployed graduates</td>
<td>Those who were looking for a job</td>
</tr>
<tr>
<td>Total number of graduates</td>
<td>100</td>
<td>88.9</td>
<td>63.1</td>
<td>25.8</td>
<td>11.1</td>
</tr>
<tr>
<td>Including those who has received education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher education based on specialist and master’s degree program</td>
<td>100</td>
<td>91.5</td>
<td>61.5</td>
<td>30.0</td>
<td>8.5</td>
</tr>
<tr>
<td>Higher education based on bachelor’s degree program</td>
<td>100</td>
<td>85.3</td>
<td>60.0</td>
<td>25.3</td>
<td>14.7</td>
</tr>
</tbody>
</table>

Analysis of Table 3 shows that 91.5 % graduates of specialist degree and master's degree programs, as well as 85.3 % of bachelor's degree program are employed, while 8.5 % of specialty and master’s degrees, as well as 14.7 % of bachelor's degree programs graduates are not employed. The increase in the percentage of employment was influenced by the active search for job.

The percentage of unemployed graduates with respect to the level of bachelor's education is almost twice as high, the percentage of unemployed graduates in terms of education level of the specialty and magistracy, this result is statistically significant, since selective studies were conducted at the federal level, and the probability of accidental occurrence of the above mentioned indicators is small.

When comparing the indicators of the All-Russian survey among 500 companies hiring graduates of higher educational institutions in terms of the level of education of the bachelor’s degree, specialty, master's degree conducted by Career.ru in 2011 with selective observations of the employment of graduates who received higher education by the Federal State Statistics Service in 2016 year, we can conclude that for five years there were very small positive changes (about 5 %) in the demand of employers for graduates of higher education Bachelor program.
"It seems that the key problem is how, while modernizing education, to preserve national and cultural traditions in this process. The modernization processes of the educational system should not violate cultural traditions. Historical experience in modernization of education accumulated by the world practice suggests that this process is necessarily accompanied not only by acquisitions but also by very significant losses" (Pankratova, Rasheva, 2014).

There is reason to believe that at this development stage of domestic higher education, it is necessary to develop new standards, not borrowed in the West, but national ones, oriented to our mentality and economy, standards that will satisfy potential employers.

"For the full-fledged development of Russia, its revival in the future as a leader in the field of education, it is necessary to stop implementing Western models into the existing system, while continuing to integrate into the global and regional educational space" (Andryushina, Lutsenko, 2014).

Next, we consider the dynamics in the number of students studied according to the bachelor's, specialist, and master's degree programs in the five-year period from 2011 to 2016. Taking into account the demographic situation during the period from 1995 to 2000, called by sociologists the "demographic hole", when the birth rate decreased by 7.1% in the whole country, the number of students in higher education institutions decreased by 26.5% from 2011 to 2016. The economic crisis of 2012 also played a certain role.

The Higher School of Economics, at the support of the Ministry of Education and Science of the Russian Federation, as well as with the help of the Federal State Statistics Service, conducted a study on the development of general, secondary vocational, and higher education in the Russian Federation. The statistical book "Education in Figures: 2017" presents the number of students enrolled in higher educational programs (Table 4).

Table 4. The number of students enrolled in higher educational programs in 2011-2016 (at the beginning of the academic year, thousands of people) (Borodina et al., 2017).

<table>
<thead>
<tr>
<th></th>
<th>2011/12</th>
<th>2012/13</th>
<th>2014/15</th>
<th>2015/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>6,490.1</td>
<td>6,075.4</td>
<td>5,209.0</td>
<td>4,766.5</td>
</tr>
<tr>
<td>Including based on the programs:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor's degree programs</td>
<td>1,425.4</td>
<td>2,271.8</td>
<td>3,516.1</td>
<td>3,530.9</td>
</tr>
<tr>
<td>Specialist degree program</td>
<td>4,929.3</td>
<td>3,634.8</td>
<td>1,465.9</td>
<td>904.9</td>
</tr>
<tr>
<td>Master's degree program</td>
<td>135.4</td>
<td>168.8</td>
<td>227.0</td>
<td>330.7</td>
</tr>
</tbody>
</table>

The number of students who choose the bachelor's degree program increased in 5 years by 59.6 %, master's degree programs – by 59.0 %, whereas the number of students enrolled in the specialist degree program has decreased by 5.5 times.

This statistical information confirms the actual transition to the two-tier system in higher education. Enrollment of students to the specialist degree program is carried out mainly in technical universities.

"The desire of higher education institutions to bring the training of bachelors as close as possible to the training of specialists, traditionally perceived by employers, causes the mechanical transfer of disciplines from the previously existing specialist degree programs to the new bachelor's degree programs. At the same time, the variable parts of the program also acquire a professional orientation, often narrowly of subjective nature. The volume of disciplines for general education available in the curriculum of the specialty program is reduced and transferred at best to optional study, which is justified by the reduction of the standard terms of training according to new standards. However, even such professional orientation of the programs continues causing the employer's alertness to the bachelor's qualification (degree) (Aleksandrov, 2013).
It is necessary to pay attention to the fact that business is interested in competent professionals, and therefore it is necessary to determine the points of contact, when developing higher education standards in Russia. It is necessary tuning in to information coming from the labor market to determine what kind and how many graduates are needed for the effective development of the economy. It is necessary to attract enterprises for practical training of students, where they could gain practical experience and take decision concerning possibility of continuing education by the master's degree program.

"We can just add that if such an indicator as "employability competence" was introduced with respect to the university, it would help improving its competitiveness in the labor market" (Zadorozhnyuk, 2012).

4. Discussion

Transition to a two-tier education system caused restrictions on career growth of graduates with bachelor's degree. In June 2016, the Federal Law "On the civil service in the Russian Federation", Chapter 2, Article 12, paragraph 3 was amended as follows: "For vacancy filling of civil service position jobs in categories of "Heads", "Assistants (Advisers)", and "Specialists" of the highest and main groups of civil service position jobs, the availability of higher education not below the level of the specialist and master's degree is obligatory" (Federal'nyi zakon..., 2004).

In accordance with this amendment, a graduate, enrolled in the bachelor's degree program, cannot occupy policy-making post, thus the opportunity for his career growth is limited legally. As a result, to advance in a career, graduate with the bachelor's degree will need to enter the master's degree program (provided that the graduate of the bachelor's degree program has diploma with honors).

"Fulfilling life of people in the XXIst century will require more and more comprehensive education, far beyond the capabilities of secondary school. At that, it is not the labor market that should dictate the scale, diversity, quality, and effectiveness of education. They are determined by the whole logic of the need to build human potential, self-actualization of people as citizens, as parents, as cultural subjects, as well as by diversity of life, rather than just the economy (Plaksiy, 2014).

5. Conclusion

Since its inception, the Bologna Process has brought together 48 countries. However, many European countries have recognized the imperfection of the Bologna Process. Today the Russian diploma neither actually nor legally has force in Europe. Moreover, in April 2018, the UK has blocked the decision on mutual recognition of education documents with regard to Russia. Since 2011, Russia has carried out the transition to a two-tier education system under the bachelor's and master's degree programs at higher education institutions. In turn, employers are still wary of graduates with bachelor's degree.

In this situation, the possibility of transition to targeted education and coordination of training programs with the business will be a necessary direction in the education reform, which will provide an opportunity to solve the employment problem of graduates of higher education institutions trained under the bachelor's degree program.

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Prikaz Federal’noi sluzhby..., 2016 – Prikaz Federal’noi sluzhby gosudarstvennoi statistiki ot 1 aprelya 2016 g. № 169 «Ob utverzhdenii Osnovnykh metodologicheskikh i organizatsionnych polozhenii po provedeniyu vyborochnogo nabлюдения trudoustroistva vypusknikov uchrezhdenij professional’nogo obrazovaniya» [The Order of Federal state statistics service of april 1. 2016. No. 169. «On the authorization of the major methodological and organizational provisions on carrying out sample survey of employment of graduates of vocational education institutions»].


