

# *Change of Higher Education Model: University Viewpoint*

Valery I. Mamonov  
Novosibirsk State Technical University  
NSTU  
Novosibirsk, Russia  
v.mamonov@corp.nstu.ru

Marina P. Dudkina  
Novosibirsk State Technical University  
NSTU  
Novosibirsk, Russia  
m.dudkina@corp.nstu.ru

**Abstract**—This paper deals with public demand concerning the public function of modern higher education and analyzes near-term prospects of its development. On the one hand, Russia demonstrates stable demand for higher education, which has always been and remains among important social values. That is why the majority of parents prefer their children to graduate from a higher educational institution. On the other side, the gap between education and real demands of the economy has negative effects on its quality. According to Rosstat, which analyzed employment of graduates from higher educational institutions in 2010–2015, about 30% of the Bachelor’s program graduates and 16% of the Master’s program graduates found job in professions they were trained. The main reason for low demand is their inadequate vocational qualification. The low competitiveness of recent graduates is due to traditional conservatism of higher education system with its emphasis on classical academicism, detriment of applied orientation of educational programs. The set development vector can be changed only by linkage of interests of the State, business and higher education, the latter will have to adapt to demands of environment. So, it is obvious that updating of federal state educational standards is a question of renovation of the whole system of higher education. The article argues in favor of the necessity of higher education reforming, describes its aims and conceptual aspects of upcoming changes; interfacing of educational programs and professional standards in order to achieve close interrelation between employers and universities, and approaches to solving the problem of quality of specialists training. The article analyzes a mechanism how to link mutual interests of the State, employers, higher educational institutions, graduates, and the regulatory framework of forthcoming reforms. The authors analyze difficulties, which higher educational institutions will face in the near future, when new educational standards will be introduced.

**Keywords**—higher education, reform of the higher school, federal state educational standards, professional standards, exemplary principal educational programs, quality of higher education, independent evaluation of qualifications, principal educational programs

## I. INTRODUCTION

The creation of key conditions for the transition to the digital economy foresees the necessity to improve the system of vocational education, which is responsible for the training of competent specialists. This problem was successfully solved by the Soviet higher school. It is generally recognized that the whole education sector of that time was distinguished by the quality training of professional personnel for the national

economy, especially in the engineering and technical sphere, which ensured the fundament of the Soviet economy. There was the efficient close interrelation between the personnel training and satisfaction of needs of the economic development of the country, and it was based on the unification of the higher education, on the clearly formulated State order and the model of postgraduate work assignment. This system was not ideal, but it ensured economic stability and provided social guarantees for graduates of higher educational institutions, thus satisfying both public and personal interests.

There is no denying that this experience is important and valuable, but the paradox of it is that if to transfer that system mechanically into modern conditions, it would not produce positive results it used to produce in the past. The changes in the historical conditions, technological breakthrough and digitalization of all spheres of human life require specialists with qualitatively novel competences, specialists able to render intellectual services, first of all, with the use of modern IT-technologies. The observed nowadays snowballing growth of available information indicates in principle that higher education inevitably moves towards a cognitive revolution. Now the higher education should take into account not only the changed methods of information acquisition, but also to learn how to select it in a new manner, to structure it, to enter it, etc. [1]. The today’s education, which is oriented not to contribute to the technological modernization of the country, but to solve its own internal problems, is not often adequate to the global tasks of the human capital development.

## II. THE PROBLEM OF QUALITY IN HIGHER EDUCATION

During the period of the vigorous reforming, which followed the breakup of the Soviet Union, there was a shift in priorities in the sphere of vocational education. The appearance of the term “educational service” in the Federal Law, which directed higher educational institutions to satisfy needs applicable, was a milestone event. But if earlier the main customer of the personnel was the State, which was interested in the training of professionals for various branches of the national economy, but under the conditions of the educational sector commercialization and the gradual decrease of the State participation share, the main consumers of educational services

became future students and their parents. At the same time, the opinions of the academic teaching staff of higher educational institutions and of the professional communities, as well as the needs of the real sector of economy, in fact, were not taken into consideration. This inevitably has led to the utilization of the tasks of the higher school, which has to serve that, which was declared to be useful to a concrete person, but not to the society in general. Another inhibiting factor was also traditional for a classical education “imposition” of a uniform educational trajectory to a whole group of students, who, in such a way, became passive executors of someone else's will. Consequently the students lose interest in learning, there is low motivation for gaining professional competences and the orientation to get the so-called “diploma jacket”, i.e. formal degree certificates. Another negative factor became a mass-scale of higher education under conditions of the public underfunding of higher education. Now higher education is accessible to any person, who is able to pay for it. But the question, whether this person is able to learn the educational program, to master the necessary body of knowledge and to gain professional experience, is not so important [2].

The analysis of the situation in higher educational institutions shows that the key figure in the educational process – the teacher – is losing the position as a person, who gives knowledge, who is an example of a successful person, a teacher above and beyond the call of duty, by his/her thoughts and actions. In many cases, he/she becomes a retranslator of the content of textbooks and has superficial knowledge of the real situation in the topical area, which he/she tries to send to students. This is due to various reasons, the main ones are the stopping of carrying out serious and independent research work, the detachment from real practical activities, and unwillingness to acquire changes occurring in the society. The result is the same: the function of a teacher in such case overshadows the goals of his/her professional activity.

As a result, for the time being, there is a paradoxical situation, when with the formally high level of education of the population, there is an acute staff shortage in the real sector of the economy, and the human capital quality has a little effect on the economic growth and its stability. It is known that Russia occupies only the 89<sup>th</sup> place in the rating for accessibility of qualified personnel, one of the indicators of the economic growth potential of a country [2].

The analysis of approaches to the overcoming of negative trends mentioned above is a subject of research [3]. The task is not only to analyze the proposed approaches to solving the problem of supply of highly qualified personnel to the economy of the country, but also to reveal the real problems, which should be overcome by higher educational institutions in order to achieve a new quality of higher education.

### III. NEAR-TERM PROSPECTS OF HIGHER EDUCATION DEVELOPMENT IN RUSSIA

A new round of educational reforms in Russia was initiated by the creation of the National Agency of Qualifications Development under the President of the Russian Federation, active efforts aimed at the elaboration of new federal state

educational standards (FSES of HE) and exemplary principal educational programs (EPEP), and the publishing of a set of regulatory documents in 2015-2018. The content of these documents proves that conceptual changes are coming, which are to ensure the overcoming of the crisis in the system of vocational education in general and higher educational institutions in particular. The goal of reforms is similar to that which the Soviet higher education pursued, when solving the national problem of the necessary personnel training for all sectors of the economy was coupled with the satisfaction of private interests of getting quality education, further employment and professional identity of the personality.

In fact, the reform started in May, 2015, when the amendments to the Labor Code of the Russian Federation were added. These amendments refer to the application of professional standards. Professional standards are the documents containing detailed characteristics of the personal qualification necessary for this or that professional activity. That is why representatives of the real sector of the economy were actively involved in the elaboration process via their industry associations, communities and unions. The idea of the lawmakers was that the professional standards should become the link between needs of the real economy, priorities of the State and the system of personnel training. This mechanism foresees that now employers together with the State as the regulator of this process would become the main customers of educational services. Thus the following model of the interactions between these subjects is being formed:

- since the 1<sup>st</sup> of July, 2016, employers are obliged to use the professional standards in terms of the qualification requirements necessary for a worker to perform a certain labor function, provided that these requirements are set by the Law or other legislative and regulatory acts of the Russian Federation [4];
- the State legally represented by the Ministry of Education and Science and the leading Federal Academic Methodological Associations elaborates and introduces new FSESs of HE and EPEPs;
- higher educational institutions form their own educational programs on the basis of FSESs of HE and EPEPs and train graduates, whose qualification meets the requirements of the professional standards.

In fact, the competency-based model, on which the ideology of the present FSESs of HE is based, would be changed with a new qualification model.

New educational standards, which are partially accepted, have conceptual differences from their precursors. Thus, they have a Chapter devoted to the quality of graduates training. It seems to be not incidentally. Such approach makes it possible for the State to consider the vocational education focused on personnel training for the innovative economy not only as the implementation of its own social function, but also as strong investments in the future with the expected high reward. To obtain a desirable job would be possible only if to confirm the qualification got at the higher educational institution and to pass the corresponding examination at a Center of Independent Evaluation of Qualifications. That is why the new FSESs of HE

give a high status to the evaluation of the quality of educational activities.

It is foreseen that each educational program implemented in a higher educational institution should be systematically and thoroughly monitored; this monitoring should include the following aspects:

- evaluation of the content of education in terms of the disciplines and practices;
- organization of the pedagogical process;
- compliance of the conditions of the implementation of the educational activity with the regulatory requirements (staff, information, material and technical).

The monitoring of the quality according to the new FSEs of HE would include external and internal evaluation. The internal evaluation is within the competence of the higher educational institution. The external evaluation would be carried out with the use of the following instruments:

- the public and professional-public accreditation;
- the independent evaluation of qualifications.

The public accreditation is well known for the academic community, but the independent evaluation of qualifications is a new procedure for the majority of universities, although this term was introduced by the Federal Law "On Education" in 2012. It was, probably, the first attempt to take into consideration interests of the business communities in terms of personnel training and to obtain its satisfactory evaluation of the quality of knowledge and skills of graduates. The goal of the professional-public accreditation, contrary to that carried out by the Federal Education and Science Supervision Agency, is to understand and evaluate how the graduates of this very higher educational institution meet the requirements specified by the employers on the regional labor market. At the same time, the absence of the regulatory framework is a factor hindering the introduction of this type of the accreditation procedure in practice. Some higher educational institutions, which understand the importance of the external evaluation of the quality of their graduates training by the relevant communities, have addressed to the corresponding industry organizations and associations in order to carry out such professional-public accreditation of their universities. But this practice would not become a mass one and would not be able to improve the crisis situation in the higher education in general. The situation started to change only after the approval of the new requirements for the professional-public accreditation. It is important that the evaluation of the qualification obtained is not only the exclusive right of the academic community, but it becomes independent. The Rules for conducting professional examinations by Centers of Independent Evaluation of Qualifications have been effective since the 1<sup>st</sup> of January, 2017.

So, the new model of higher education foresees that the qualification awarded to the graduate of the higher educational institution, who successfully passed the Final Certifying Examination, is not considered to be final. In order to pretend to carry out a certain type of professional activity, the graduate must additionally pass a professional examination and to

confirm the qualification obtained at the higher educational institution [4].

Thus, from the point of view of academic staff, the reforms of the higher education proposed by the State are considered urgent and important.

#### IV. DIFFICULTIES IN THE TRANSITION TO A NEW MODEL OF HIGHER EDUCATION: VIEWPOINT OF A HIGHER EDUCATIONAL INSTITUTION

Despite the conservatism, which is typical of the educational system, the predominant part of the professional academic community is aware that the solving of the problem of the lagging of the higher education behind the constantly changing needs of the economy is a problem, which requires a prompt response. To our opinion, the solution of the problem of personnel supply with the vocational training, which is relevant to up-to-date needs, should not depend on the presence or absence of the policy decisions and formal grounds. If to reorganize educational programs on the basis of the professional standards just now, it is possible to obtain positive effects in two years in Master's Degree courses and in four years in Bachelor's Degree courses.

Novosibirsk State Technical University, which is a basic regional higher educational institution, makes attempts to combine its own projects with the priorities of the Novosibirsk Region [5]. The analysis of pilot Master's educational programs based on the new principles of interaction with the business community and the state and municipal authorities of the Region shows that this cooperation could not be a simple linear process.

Let us characterize some difficulties, which, according to our opinion, have appeared during the introduction of the new approaches to the content and organization of the educational process.

The first (main) and the most vivid problem is a necessity to reconstruct interrelations of the academic environment with employers. At present, these interrelations have a fragmentary character and are limited to the organization of students' practical training periods, and to sporadic invitations of representatives of the business community to open lectures and master classes. There are rare cases, when business acts as a customer of educational services and participates seriously, not formally, in the formation of educational programs. This situation is easily explainable. Despite the fact that the current FSEs of HE foresee the involvement of the heads and representatives of the relevant organizations to the educational process, this requirement is implemented with great difficulty. On the one side, higher educational institutions are not able to pay decent salaries to embedded lecturers, and the latter, in their turn, are not ready to conduct classes on a permanent basis, putting off their core activities. Evidently, the new educational model, tooled for professional standards and independent evaluation of qualifications, would require the content alteration and restructuring of these relations. This way is typical for European and American higher educational institutions [6]. The question whether our higher educational institutions are ready and whether business agrees to make close

contacts, is still open. For the time being, according to our experience, this new type of interrelations has been implemented predominantly on the level of personal contacts and friendly relations. Surely, such approach could not be a stable basis for the whole educational system. Would the State propose a new model of interrelations between higher educational institutions and representatives of the real sector of the economy, either would it lay upon higher educational institutions or not is still unclear.

It is not a secret that the decrease of the higher education quality during the recent two decades was caused by the forced commercialization of higher educational institutions. The decrease of the budget financing negatively affected the motivation of the academic staff and students. The former are already accustomed to consider students as customers of educational services, and the latter, with rare exceptions, have acquired a welfare mentality of passive consumers. The introduction of independent evaluation of qualifications would inevitably push the administration and academic teaching staff of universities to toughen the requirements to the quality of education, which could negatively impact the economic situation in higher educational institutions. Could many higher educational institutions be able to afford to send down from the university the so-called “commercial” students? This is a rhetorical question, but, nevertheless, this is a real problem, which could hinder the intended reform. And the legally accepted principle of per capita financing stimulates higher educational institutions to keep the contingent. This fact also does not contribute to the strengthening of requirements to the results of the mastering of educational programs. This is not a surprise that the point rating system does not work properly, when the satisfactory threshold in the form of a positive mark is achieved even before the intermediate attestation. It is evident that the search for an optimal model of financing of vocational education, which would take into account and harmonize all the interests of all participants of this process, is a stiff problem. This is also proved by the world experience. The problem of the accuracy of indicators during the calculations of the models of financing of activities of educational institutions, which was based on the evaluation of their productivity, became a subject of research since the 1960s, and at the end of the last century the basic models of the evaluation of the effectiveness of educational programs have been formed. But the results of the recent studies of American researchers showed that from 18% to 56% of institutions were misclassified as effective or ineffective, if incorrect indices of effectiveness were used [7].

Evidently, that under new conditions, a revision of approaches to the evaluation of activities of higher educational institutions is needed in general and of each teacher in particular. For the time being, the main tool for the evaluation of universities is a notorious annual monitoring of the effectiveness and places they occupy in various ratings. The analysis of the indicators of the monitoring makes it obvious that it is impossible to evaluate the quality of the future specialists training. Similarly, the inclusion in the world top educational ratings does not guarantee a high quality of personnel training.

As far as academic teaching staff is concerned, for the time being, the evaluation of the quality of their job means the implementation of a performance-based contract of employment (effective contract). In this contract the most important indicators are publication activities, especially in peer-reviewed scientific publications included in all known scientometric systems. It goes without saying that there is no good education without science, and vice versa: no education, no science. These are two communicating vessels [8]. But on the other side, the requirement itself to publish many articles and often without taking into account the quality of these publications and their practical significance is a dead-end road, which does not contribute to the prestige of science and does not increase the educational potential of the teacher. The requirement to increase the quality of the proficiency of graduates, which is clearly set in the new standards, would inevitably push the administration of higher educational institutions and academic teaching staff to increase attention to the pedagogical process, which, for the time being, is in fact removed to the periphery. But if such shift would not be reflected in the effective contract, then another trap would appear, when everybody would suffer: students, teachers, administrations of higher educational institutions and, in the long run, employers and the State.

Another obvious problem is a practice of infinite improvements of the legislation, which is typical for the latest decade. The success of the reform would depend on the completeness of its regulatory framework. To our opinion, new FSEs of HE should be introduced in practice only then, when the standards themselves and the exemplary educational programs in all fields of training and specialties are finally ready, as well as the regulatory legal acts, which regulate the above mentioned issues, are elaborated. Otherwise, there would be preserved the current situation of infinite changes, which the teacher has to include into learning and teaching documents due to the fact that a new regulatory legal act or amendments to the existing norms have come into operation. The improvement of learning and teaching documents in this situation is often formal and even shadows the main teacher’s functions (pedagogical and research), and does not motivate him/her to improve the quality of work. The excessively widening of responsibilities and duties of the teacher due to the inclusion of additional tasks transforms an assistant professor or a professor into a polyfunctioner. On the other side, permanent insertions of amendments to the legislation and the absence of stability in this sphere necessitate the management of higher educational institutions to widen administrative and management apparatus, which structural elements ask teachers to present a lot of additional information in the form of reports, notes, etc., which only indirectly refer to teachers’ duties.

A slow reproduction of academic teaching staff and its general ageing is another inhibiting factor. The transformation of the post-graduate course into the third stage of higher education has not solved this problem, but, on the contrary, has made the situation more complicated. The educational post-graduate program, which was built in accordance with the Bachelor’s and Master’s educational programs, has acquired



not only all the problems, which are typical of the first two stages of education, but it has lost the priority significance of research work, which was always its characteristics. A post-graduate student has transformed into an ordinary student, for whom research work has become a minor matter. Hence it follows that there are so many indistinct final qualifying research papers and a catastrophic decrease in the number of defended Candidate's dissertations.

In addition to the above-mentioned problems, which could distort the content of the reform either sufficiently impede its implementation, it is possible to point out problems connected with the elaboration of the internal quality system of educational programs, for the time being this system is based on the ISO 9001-2011 standards, which are slightly applicable to educational institutions, that is why they do not meet the expectations.

## V. CONCLUSION

As a result, several conclusions can be drawn.

Firstly, the mechanism of the higher school reforming has been started up. Its goals could be evaluated as adequate as compared to the problems the country faces, it is vitally important for the country that graduates of higher educational institutions obtain quality education and completely implement their professional potential. It is obvious that the future of the State depends on the state of the human capital.

Secondly, the forced introduction of the new model of higher education into life, unfortunately, could lead to some problems, which could become a hindrance for the achievement of positive results, which are planned as the goal of the reform.

Thirdly, it is obvious that the reform of the higher school and the introduction of its new model, which foresees the integration of the traditional for the domestic education academicism with the training of students in a narrow practical sphere, which is determined by the professional standard, could not be problem-free. That is why the most important is the experience of those higher educational institutions, which are ready to launch pilot projects and are ready to analyze and propose solutions of the emerging difficulties. This will make it possible to avoid the formalization of the introduced changes [9]

and, in the long run, to overcome the situation of the labor market oversaturation with graduates of higher educational institutions having qualifications, which do not meet modern requirements specified by employers.

It is impossible to monitor all the trends and changes under the conditions of the permanent reforming of the educational system, and it is nearly impossible to keep pace with them. That is why the most important question for a university for the successful solving of the problem of the increase of education quality is to choose priority tasks and to concentrate on them resources and efforts of the teaching staff, in order to achieve the planned outcomes in the optimal way. Nowadays, the existence conditions are crucial for universities, i.e. changes in the environment and use of state-of-the-art technologies, such as digitalization, occur faster than they can be traced by higher educational institutions.

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