Development of a Highly Adaptive Higher Education System for Satisfaction of the Labor Market Needs

Islam O. Sulumov [a], Zulay K. Tavbulatova [b] and Vozkaev Said-Umar Said-Alievich [c]
Chechen State University, Grozny, Russia

Keywords: Labor Market, Higher Education, Innovation.

Abstract: In the modern market of skilled labor, various transformational processes are clearly observed, which are manifested in the presentation of new requirements for the skills of employees, in the emergence of completely new professions and the obsolescence of existing ones. In addition, non-traditional forms of working relationships are developing, such as remote work, freelancing, outsourcing, and many professions are subject to automation. These changes are caused both by the natural course of scientific and technological development, and by the increasingly complex socio-economic relations in the world. The Institute of Higher Education plays a key role in the formation of relevant competencies, but in the context of the accelerating pace of changes in the labor market, it does not effectively cope with this task. We see the reasons as excessive state regulation of this sphere and insufficient influence of market mechanisms on the formation of educational activities. The purpose of the article is to formulate the basic principles of the higher education system reorganization that most adequately meet the needs of employers in the labor market. At the first stage, it is necessary to identify the key problems of education and find their causes. The next task is to find ways to eliminate these problems based on the analysis of tendencies in the labor market and in the innovation sector.

1 INTRODUCTION

One of the root problems of the modern higher education system is its inertia and inability to adjust its activities in accordance with global changes. Most of the basic principles laid down in it at the stage of formation are still unchanged. For example, in disciplines where the speed of updating knowledge varies significantly, similar approaches to learning and teaching are used. Many educational programs that are developed for a period of 4 years or more may be completely irrelevant by the end of it.

The resulting gaps in knowledge are more often filled by specialists due to private educational courses, which became particularly popular during the coronavirus pandemic. At the same time, higher education is indispensable in the formation of complex competencies that require comprehensive training of specialists in the innovative and technological fields. Thus, it can be stated that private courses solve their tasks more effectively than the higher educational system. The reason for this, as we see it, is the absence of strict regulatory and other restrictions in the system of private education, and, accordingly, a more pronounced role of market mechanisms in its formation.

Higher education establishments play a key role in the innovation activity of enterprises by cultivating appropriate competencies for the labor market, and, therefore, they should be considered as full-fledged participants in market relations, including the process of creating the added value of innovations. From this we come to the conclusion that the most important transformational processes and tendencies taking place in the field of innovation should also take place in the field of education, but these problems are a deterrent factor. The analysis of private educational courses field is an important source of knowledge about how and in what form these changes should occur in higher education.

[a] https://orcid.org/0000-0002-9149-2439
[b] https://orcid.org/0000-0001-6799-1513
[c] https://orcid.org/0000-0002-1461-2150

Sulumov, I., Tavbulatova, Z. and Said-Alievich, V.
Development of a Highly Adaptive Higher Education System for Satisfaction of the Labor Market Needs.
DOI: 10.5220/0010671200003223
In *Proceedings of the 1st International Scientific Forum on Sustainable Development of Socio-economic Systems (WFSDS 2021)*, pages 519-523
ISBN: 978-989-758-597-5

2 RESEARCH METHODOLOGY

At the first stage, it is necessary to identify the problem areas of higher education, to determine their causes. To do this, it is necessary to explore and analyze the scientific literature on the problems of education.

Next, it is necessary to identify the most important tendencies that take place in the labor markets and in the field of innovative business, as well as to formulate some tendencies independently. To solve the first part of this problem, a review and analysis of the relevant literature will be carried out in the same way. In order to formulate tendencies, the method of inductive and deductive reasoning is the most relevant.

At the final stage of the research, the main place is occupied by the method of analogy. The ways and possibilities of transferring the identified tendencies to the field of education will be explored. Taking into account the mutual influence of tendencies, some specific forms of this combination will be predicted using the synthesis method. Research at this stage will proceed in line with the solution of the identified educational problems.

3 RESEARCH RESULTS

So, we will highlight the following main problems of higher education:

Lack of strategic planning. The development of educational programs is most often based on the current demands of the labor market. The duration of training in these programs is on average from four to six years, and by the end of this period, the knowledge gained may be significantly outdated. To solve the problem, it is necessary to develop a mechanism for analyzing the state of the labor market and various tendencies in order to make prognoses about its future condition and develop programs taking into account the future market needs (Yaakob, M. F. M. et al, 2019).

Lack of flexibility in the educational process. Educational programs, as a rule, do not involve making adjustments as the requirements of the labor market are updated. This applies both to the choice of disciplines and to the knowledge taught in each of them. There is an obvious need for new standards for the development of these programs, which include a more flexible and targeted approach to different subjects, given that the pace of knowledge updating in different disciplines varies significantly.

Poor feedback during training. Students do not have sufficient opportunities to influence the educational process. Among the main problems, students highlight the bias of test and exam scores. There are often complaints related to the insufficiently high level of teaching staff training. They affect the following aspects: accessibility of presentation; the culture of teacher communication; sufficiency of knowledge volume; relevance of the material; visibility of the lecture material. This problem is complicated by the fact that students can not formulate exactly what competencies they want to get, since they do not have practical experience in implementing knowledge during the operation at enterprises. This leads to the following problem of education (Evans, 2013; Yaakob, M. F. M. et al, 2019).

Poor integration of the educational process with business and innovation. This problem is particularly acute in Russia, while the United States, Japan and European countries are implementing quite effective practices for the development of innovative activities, starting from the stage of basic research and ending with commercialization. This requires a comprehensive integration of research universities with innovation infrastructure, including business incubators, technology parks, as well as enterprises, including venture funds and tech-companies (Minmin and Petruk, 2017).

Lack of access to quality education in remote regions and provinces. Studies show that in developing countries, the gap in the quality of education between the central and remote regions of the country is more distinct. In Russia, this problem is compounded by the underdeveloped transport infrastructure and the geographical features of the country (Beeby, 2013).

Due to these features of the country, as well as many other reasons, a significant proportion of the population has difficulty in accessing educational institutions in the regions. The level of education in remote regions is often quite low.

In one of the researches, we identified and described the tendency of innovation activity specialization, the essence of which can be described as follows: various industries and spheres of activity are subject to fragmentation of their activities by product components or business processes as they develop. In other words, in each of the industries, large manufacturers or service providers tend to delegate the development of various components of their products or the execution of business processes to specialized companies that demonstrate the best quality and efficiency in these aspects. Thus, the

organization's resources are focused on more promising areas (Magomadov et al, 2020).

This tendency is directly related to the fact that in the modern world, monolithic organizational structures are giving way to more flexible and adaptive structures (network and virtual), since in a dynamic environment, the success largely depends on the ability to quickly establish temporary interaction with external counterparties, and advanced IT technologies with decentralized management practices play a key role in this.

Implementing network management in the training of specialists can also improve the effectiveness of the educational process. To do this, it is necessary to abandon the traditional approach, according to which the training of students is linked to certain universities. Faculties and institutes should acquire independence from centralized university management, independently establishing interaction among themselves and providing students with the entire cycle of educational services. Thus, education should take place in various educational structures specializing in a narrow range of disciplines.

As in the case of network structures, such forms of interaction will be temporary, and as requests for new competencies appear in the labor market, higher educational establishments will quickly build new associations in order to train students in the appropriate set of disciplines. This solution can largely eliminate this problem of flexibility lack in education.

One of the global tendencies that have significantly transformed economic relations is the process of the economy transition to online platforms is called "uberization". According to E. Mcafee and E. Brynjolfson, platforms are network environments that take advantage of a free, perfect, and instant economy. More precisely, the platform can be defined as a digital environment that provides access, reproduction and distribution with marginal costs close to zero (McAfee and Brynjolfsson, 2017).

An example of such platforms are online marketplaces – e-commerce sites that connect sellers with buyers. It is often referred to as an electronic trading platform, and all transactions are managed by the website owner. Such platforms allow sellers to avoid a lot of marketing and transaction costs, and provides buyers with a single catalog of products from different manufacturers (Hultmark, 2002).

Other platforms work in a similar way: taxi search, call and payment services connect private drivers with a uniform customer base; real estate rental services connect real estate companies and property owners with clients; social networks serve as platforms for posting information from various news publications, providing access to it for all users.

So, it is necessary to distinguish the following features of platforms: a uniform digital platform; a uniform base of service providers (products) and users (buyers); transfer of marketing and transaction costs (search, payment, delivery) to the service due to automation; cooperation of suppliers as independent contractors, rather than full-time employees; elimination or weakening of the territorial binding of business to a certain area, which is provided by digitalization and a uniform logistics system.

Today, distance learning technologies are actively developing. As a result of these tendencies interweaving, as well as a radical revision of the state regulation policy of this sphere, online platforms should appear that provide a full range of services for the provision of higher education. These platforms should represent a new format of online universities, the main functions of which will be the development of educational programs, planning of the educational process and ensuring its continuity for students.

Unlike traditional universities, teachers with the necessary competencies will be involved in service contracts, and not as full-time employees. For teachers of traditional higher educational establishments, this can serve as an alternative job, or as an additional source of income. The absence of a geographical link to the place of work will ensure an increased demand for appropriate places and, consequently, a high level of competition between potential teachers. This will allow to select the most competent and promising candidates, and, if necessary, will allow to replace some teachers with others as soon as possible. This will ensure the continuity of the educational process.

Due to the development of online technologies, the need for maintaining lecture halls, classrooms and libraries is gradually disappearing, which should significantly reduce the cost of training services. The effectiveness of private online education courses and web conferences that adhere to this approach also confirms the viability of this tendency. Also, research shows that the effectiveness of remote education is steadily increasing over the time (Kariya, 2003; (Kebritchi, 2017).

So, such a structure can largely serve as a solution to the problem of access lack to education in remote regions of the country, due to the affordability of education and the lack of geographical reference to places of education. Moreover, it will introduce a competitive factor in the aspects of pricing and quality of education in the activities of regional

higher educational establishments that occupy a monopoly position in their territorial segments.

The platforms will be more effective in forming new professions and competencies requested in the labor market, as they do not involve the training of appropriate staff in their faculties, but attract ready-made specialists from traditional higher educational establishments. It also solves the problem of creating a flexible system of higher education.

As it has already been noted, the effectiveness and demand for private educational courses is partly due to the fact that market mechanisms play a more prominent role in this area than in the field of higher education. Accordingly, those courses that better meet the needs of the labor market become more popular. Obviously, the ability to meet the current demands of employers is directly related to the fact that the knowledge taught in the courses is directly related to the practice of business and other activities. Often, teachers have a certain work experience in the relevant organizations, or experience of cooperation with them. Often, the courses are formed by the enterprises themselves in order to train potential or working staff.

Attracting representatives of private education to the academic environment for presenting lectures and seminars can largely solve the problem of integrating education and business. The remote educational format is the most suitable for this task. It is reasonable to apply this practice within the framework of the platforms described above, which provide for the conclusion of contracts for the provision of services with teachers, rather than enrolling them to the staff. This will allow private entrepreneurs to simultaneously conduct the usual practice of training with their own audience.

The idea of participation of the business or innovation spheres representatives in the educational process is not new, but there are difficulties with their involvement in it, often they are of a material nature, since the level of remuneration in the academic environment is noticeably lower than the level of income in the business environment.

This problem is also relevant for the field of private training courses, in which a high level of teaching and reputation are associated with the corresponding cost of services. Its solution requires a comprehensive approach, involving the introduction of new educational standards and the launch of state programs aimed at attracting relevant specialists in the field of higher education. Such measures can significantly transform the private training market, as the increased demand for such services will increase the supply. Active competition for a new market will lead to a gradual reduction in prices for the services of private teachers, as well as the adaptation of their activities to the requirements of higher educational establishments. The possibility of concluding long-term contracts with universities will also be a factor in reducing the prices for these services, which will ultimately have a positive impact on the availability of quality education for various segments of the population.

4 DISCUSSION OF RESULTS

The proposed measures represent the general principles of the higher education system restructurization, aimed at accelerating the preparation of graduates for the changing conditions of the labor market. In other words, the formation of an adaptive market-oriented educational system.

The implementation of appropriate measures should be carried out at the state level by revising some aspects of regulation in the direction of their weakening, as well as taking measures of an incentive nature for higher educational establishments that are ready to transform their activities. Thus, the primary role of the state should be to create the appropriate conditions, including incentives, for the transformation of this sphere.

Directly decisions on the reorganization of the higher educational establishments activities, as well as on the foundation of new establishments based on the described principles, should be made at the level of the higher educational establishments' management. For example, when implementing a network approach to ensuring the educational process, it is necessary to provide the faculty management with the opportunity to leave the subordination of universities, forming independent or autonomous educational establishments, to conclude associations with other higher educational establishments in order to form certain professional competencies of graduates.

Finally, these measures should contribute to the partial withdrawal of higher educational establishments from the guardianship of the state and the transition of their activities to market mechanisms, including in the aspect of financial support. Thus, the cost and attractiveness of education at higher educational establishments will directly depend on how much their graduates are in demand among employers.

These measures will inevitably lead to serious shocks in the field of education, as due to natural selection, inefficient establishments will be at risk of

closure. Students of these higher educational establishments will find themselves in a vulnerable position, and the protection of their interests is also a function of the state. In general, the higher education system in all developed and developing countries is arranged in a similar way, and the described problems occur in each of them. Therefore, the relevant changes are already overdue, and the state, which has been a pioneer in reforming the education system, will be able to go through the transformation stage less effortlessly, and improving the overall level of graduates' qualifications will have a beneficial effect on the state of its economy and other areas.

5 CONCLUSION

The authors formulated the following measures for the radical transformation of the higher education sector:

Introduction of a network approach to the organization of the educational process. Students can take part in various educational establishments, each of which specializes in a narrow range of disciplines. This involves establishing temporary cooperation between independent higher educational establishments, each of which has the necessary set of disciplines for the formation of certain competencies of graduates, for the period of their training.

The creation of higher educational establishments - platforms based on remote education, which contain the following differences from online universities: absence of their own staff of teachers and their training programs; involvement of teaching staff from traditional universities on the basis of service contracts; absence of lecture halls, seminar classes and other facilities for conducting educational classes, since all classes are held in online mode only.

Attracting leading private educational courses to work in universities. The knowledge taught should be part of the competencies required to train the relevant specialists. The objective is to provide graduates with the knowledge that is most in demand in the labor market.

ACKNOWLEDGEMENTS

The research was carried out with the financial support of Russian Foundation for Basic Research in the framework of scientific project No. 20-310-90066.

REFERENCES

Beeby, C. E. (2013). The quality of education in developing countries. *Harvard University Press*.

Evans, C. (2013). Making sense of assessment feedback in higher education. *Review of educational research*, 83(1): 70-120.

Hultmark, C., Ramberg, C., Kuner, C. (2002). Internet marketplaces: the law of auctions and exchanges online. *Oxford University Press on Demand*.

Kariya, S. (2003). Online education expands and evolves. *IEEE Spectrum*. 40(5): 49-51.

Kebritchi, M., Lipschuetz, A., Santiague, L. (2017). Issues and challenges for teaching successful online courses in higher education: A literature review. *Journal of Educational Technology Systems*, 46(1): 4-29.

Laskov, V. B. i dr. (2016). Obratnaya svyaz' v obrazovatel'nom protsesse: mneniye studentov o kachestve prepodavaniya. Sciences of Europe, 10-2:10.

Magomadov, M. M., Tavbulatova, Z. K., Sulumov, I. O. (2020). Tendentsiya spetsializatsii kak faktor innovatsionnogo preobrazovaniya otrasley i sfer deyatel'nosti. Kreativnaya ekonomika, 14(5): 829-846.

McAfee, A., Brynjolfsson, E. (2017). Machine, platform, crowd: Harnessing our digital future. *WW Norton & Company*, 2017.

Minmin, V., Petruk, G. V. (2017). Nauka, obrazovaniye i biznes: zarubezhnyy i otechestvennyy opyt integratsionnogo vzaimodeystviya. Azimut nauchnykh issledovaniy: ekonomika i upravleniye, 6(2): 19.

Yaakob, M. F. M. et al. (2019). Strategic Management and Strategic Planning in School: Is It Worth for Teachers? *Academy of Strategic Management Journal*, 18(3): 1-6.