

## ONLINE EDUCATION: PROSPECTS OF DEVELOPMENT IN RUSSIA

Natalia Alexandrovna Zakharova

Kazan Federal University, Kazan, Russia

E-mail: natali.zakharova@mail.ru

Contact: +79172213110

Anastasiya F. Yudintseva

Kazan Federal University, Kazan, Russia

### ABSTRACT

Nowadays two mainstreams can be observed in the sphere of distance and online education: the globalization of online education, on the one hand, its individualization, on the other. The article given is aimed at outlining some possibilities of foreign-language mass open online courses that meet the trends mentioned above, identifying tendencies in the development of distance education in Russia. Our paper is devoted to the analysis of the MOOC market, both on the national and world-wide basis.

MOOCs integrate virtual educational space at the global level. Their main characteristics include: massive involvement, openness, online interaction between students and teachers in chats, video conferences, forums, automatic assessment of student performance when performing tests, the system of mutual evaluation of each other's works by students.

To study the subject the following methods were used: system analysis, synthesis and generalization, as well as the method of comparison when identifying main trends in the development and dissemination of MOOC.

**Keywords:** MOOC, online course, research, education, distant learning.

### INTRODUCTION

The movement for open education appeared in the second half of the XX century. Its goals are to provide wide access to educational materials and create conditions for the education of almost anyone. It has received a new image in the XXI century in the form of massive open online courses (MOOC).

The English term MOOC was first used by D. Komier in 2008 when discussing with his colleagues S. Downes and D. Siemens his online course 'Connectivism and Connective Knowledge', which, in fact, was the first MOOC. Ideas of open online courses and possibility of registering people who are not students of the university were expressed even before this course appeared. But the way it was technically implemented allowed thousands of students to train simultaneously [5], that was a distinctive feature of this project. The course devoted to the

incomprehensible theory of connectivism was registered by 2300 students, which exceeded the authors' expectation almost ten times and made it possible to call it the first mass open online course.

Today, there is a great number of commercial and non-profit organizations involved in the development and support of MOOCs. Work of creating them takes place within international cooperation of leading world universities and other educational institutions. For example, at the beginning of 2018, 24 million users and more than 2,000 courses from over 150 educational institutions were registered with Coursera. According to Class Central, the largest aggregator of MOOC, which analyzes major changes and trends in mass open online courses every year, in the seventh year of its existence, massive open online courses covered 900 universities and collected 101 million users from all over the world [16]. At the same time, the number of those who first registered on online learning platforms has fallen. Today, the audience for Coursera, edX and Udacity platforms, which started in the USA in 2011-2012, is estimated at millions of people, but in other countries there are similar projects that implement learning through MOOC.

### **METHODOLOGICAL FRAMEWORK**

The aim of this study is to identify demand factors for MOOC from both foreign students and from students and teachers of Russian universities. We will also consider purposes why they study MOOC, analyze main advantages and disadvantages of such training. Such methods as system analysis, synthesis and generalization were used, as well as the method of comparison when identifying main trends in the development and dissemination of MOOC.

The study used the following data sources: articles, reports, information from sites of online platforms; a database of quantitative data collected from two leading online platforms; a quantitative database from the Class Central aggregator, which provides information on the MOOCs hosted on several major online platforms.

MOOC is still a little-known phenomenon in pedagogy, although, it is based on theoretical foundations of distance education and e-learning. The research highlights the use of a subject-language approach in creating MOOC, which can open new perspectives for the use of this type of training.

### **RESULTS**

Regardless of the MOOC format, one can distinguish both indisputable advantages of this type of training and disadvantages.

The main advantages of MOOC are accessibility, widespread involvement of students, the implementation of the principles of lifelong learning. Currently, MOOCs are able to provide an easy access, a free, flexible training schedule without significant initial requirements for participation [1]. The main goal of MOOC is to attract students, improve student performance,

expand their educational practice. MOOC encourages the “lifelong learning” system, forcing the student to think about goals and significance of their own learning and education.

On the other hand, a large number of students due to MOOC availability is the reason for the lack of contact between the student and the teacher, the lack of a possibility of direct communication, even through e-mail. A high percentage of self-exclusion, a problem of early dropping out is the most serious, as many researchers have noted. Despite the high dropout rates, the overall goal of MOOC can be achieved by a large number of course participants. For example, if ten thousand people enrolled in a course and only 20% mastered it successfully, it's still 2,000 students, which exceeds the number of students in the subject courses of many classical universities [2].

Another consequence of mass character is the complexity of knowledge control organization. In majority of courses, the final test is carried out by multiple choice tasks, which are not suitable for checking critical thinking skills and solving problems where there is no correct answer.

Creating a MOOC requires the involvement of a wide range of specialists. Otherwise, there

*Subject-language integrated learning has been booming in recent years in Europe and is aimed, in particular, at ensuring EU citizens' mobility . The subject-language integrated MOOC is a multi-purpose one not only in terms of learning, but also in relation to the audience. There are three main target groups: Russian students, Russian teachers, foreign audience.*

The evolution of MOOC in Russia follows the same path as in other countries: from open educational resources and fee-based distance courses to the creation of Russian Internet sites offering MOOCs and the placement of the Russian-speaking MOOC on the world's leading platforms. MOOC integration into the Russian educational space needs to be considered from several perspectives: use of the existing MOOCs (both in Russian and foreign languages) and creation of new MOOCs; MOOC as a part of undergraduate / specialist / graduate programs and MOOC for advanced training, self-improvement or lifelong learning. The latter is a widespread phenomenon both in Russia and abroad.

Speaking about the use of MOOCs in higher professional education programs, we can distinguish two areas: obtaining credit units and the organization of independent work of students. And if the first is the prerogative of the educational authorities, the second is the responsibility of a teacher. Modern federal state standards of higher vocational education imply large volumes of students' independent work, which requires a teacher to develop training materials and forms for organizing such a type of work [11].

Using an existing MOOC requires additional training from the teacher: either passing the MOOC at the stage of selecting an appropriate course, or working with the course materials

simultaneously with students. The use of a MOOC for independent work is limited by a number of factors: a small number of MOOCs in Russian; the uneven thematic distribution, namely, there are many more courses on technical, economic and natural sciences than on humanitarian ones; mismatch of the curriculum with the starting date of a MOOC.

One of the possibilities for creating a MOOC is to adapt existing courses made in virtual educational environment, for example, in Moodle system, to a large number of users. Another way is to start partnership with Russian MOOC platforms, which provide technical support for creation of MOOCs.

The most popular platforms are Coursera, edX and Udacity. In 2018 Coursera was the leader, functioning since the spring of 2012, and by 2018 had announced 27 million students, participation of 150 partner universities, 3100 active courses in hundreds of specializations [12]. According to Forbes, Coursera's estimated income in 2018 is \$ 140 million [15].

Since 2013 Coursera has been cooperating with Russian universities. On this platform, 290 online courses and specializations from Russian universities and companies are available. This is almost 10% of the total number of courses hosted by Coursera partners from 28 countries. 215 Coursera Russian partners' courses are created in Russian. This is three-quarters of the total number. The remaining quarter (75 courses) are developed in English. Some courses are combined in a total of sixteen specializations. According to Coursera, exactly half of students from Russia (50%) attend courses only in Russian (Figure 1).

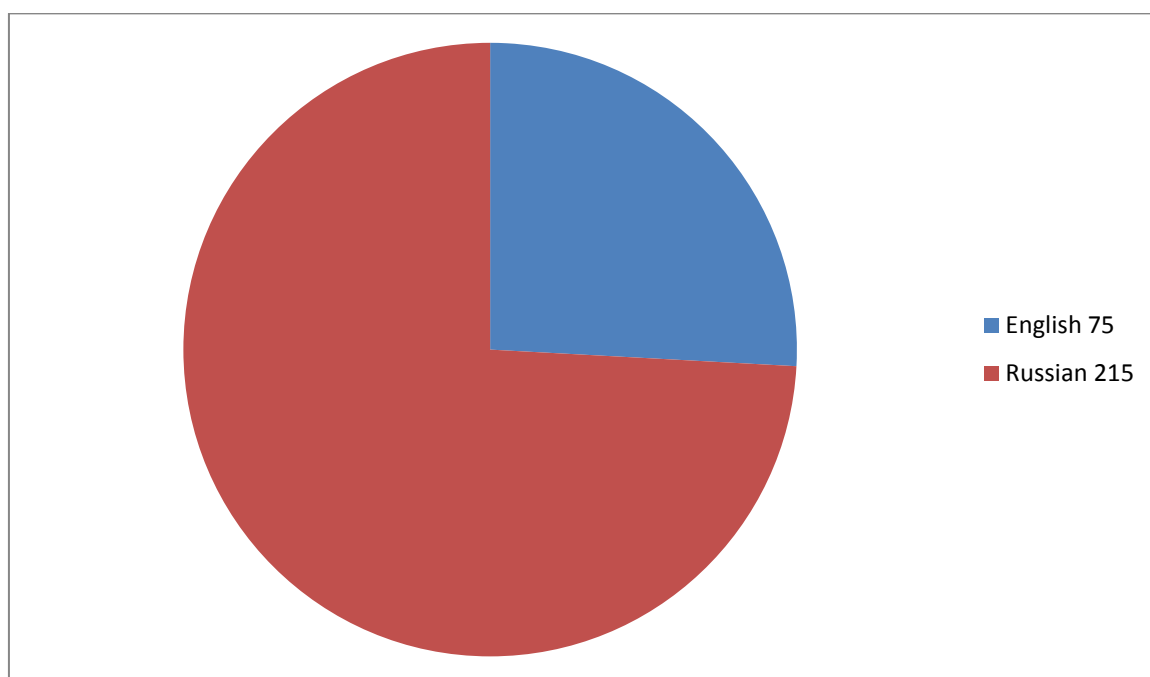


Figure 1. Russian and English courses on Coursera platform

Most Russian courses are devoted to the exact sciences. These are computer science, science, engineering, data analysis. Also the five most popular areas include business and social sciences.

Courses developed by Russians in English are popular with foreigners. According to Coursera, 93% of students of English-speaking Russian courses are not from Russia. Last year, Russia became the largest non-English-speaking region for Coursera [16].

The Russian online education market has begun to develop actively since 2013, and according to J'son & Partners Consulting, its volume in 2014 amounted to several million listeners, and the projects were presented by more than 50 companies [12]. The size of the online education market in Russia at the end of 2016 was estimated at 20.7 million rubles, or 1.1% of all educational services; in higher education, the volume of the market for all distance learning programs was about 6.8 million rubles, and the share of online courses was 1.8%.

The appearance on the MOOC market significantly changes the situation in modern education: its accessibility is increasing [3], the structure of universities is being updated. At the same time, some authors are wondering if the MOOC is a potential threat to modern universities [4]. Under these conditions, it is important to understand how the demand for MOOC in Russia is being formed, primarily from students and university professors.

Despite the fact that in the seventh year of its existence, massive open online courses covered 900 universities and gathered 101 million users from around the world, the number of those who first registered on the online learning platforms has fallen [13].

In 2018, at least one MOOC registered 20 million new users. In comparison, in 2017, and in 2016, 23 million people came to online learning platforms. Despite this the number of users willing to pay for online training has increased. Apparently, the monetization model of the MOOC platforms pays back. Providers such as Coursera receive record revenues.

This segment of the education market is headed by the largest MOOC platforms. Coursera remains the absolute leader in the number of registered users. In 2018, it reached 37 million students. Traditionally, this is two times more than second-place edX (Figure 2).

The most popular providers of MOOCs are such American platforms as Coursera, edX and Udacity, as well as the British FutureLearn. In many countries, national online platforms have appeared: XuetangX in China, MiriadaX in Latin America, France Université Numérique in France, EduOpen in Italy, SWAYAM in India, National Open Education Platform in Russia. In 2017, the Chinese online provider XuetangX ranked the third in the number of listeners (9.3 million), ahead of FutureLearn (7.1 million) [14].

In addition, the placement of MOOCs on international platforms is becoming a way of popularizing the culture of different countries and a tool for raising the status of national higher

education systems in the world. A number of countries, primarily Asian, — China, South Korea, Malaysia — are today putting forward the MOOC creation, as well as their deployment and promotion on foreign online platforms as one of the main strategic objectives at the state level. They hope to create in the future a higher education system highly appreciated by the world community to be able to compete with the world's leading educational systems [10].

In addition, in the conditions of high competition between universities in the world, MOOC has become a new tool for promoting the educational brand of universities among potential applicants (including foreign students), as well as a platform to sell certificates not only for individuals, but also for corporate clients, who can order the creation of a series of online courses to develop necessary competencies for their employees.

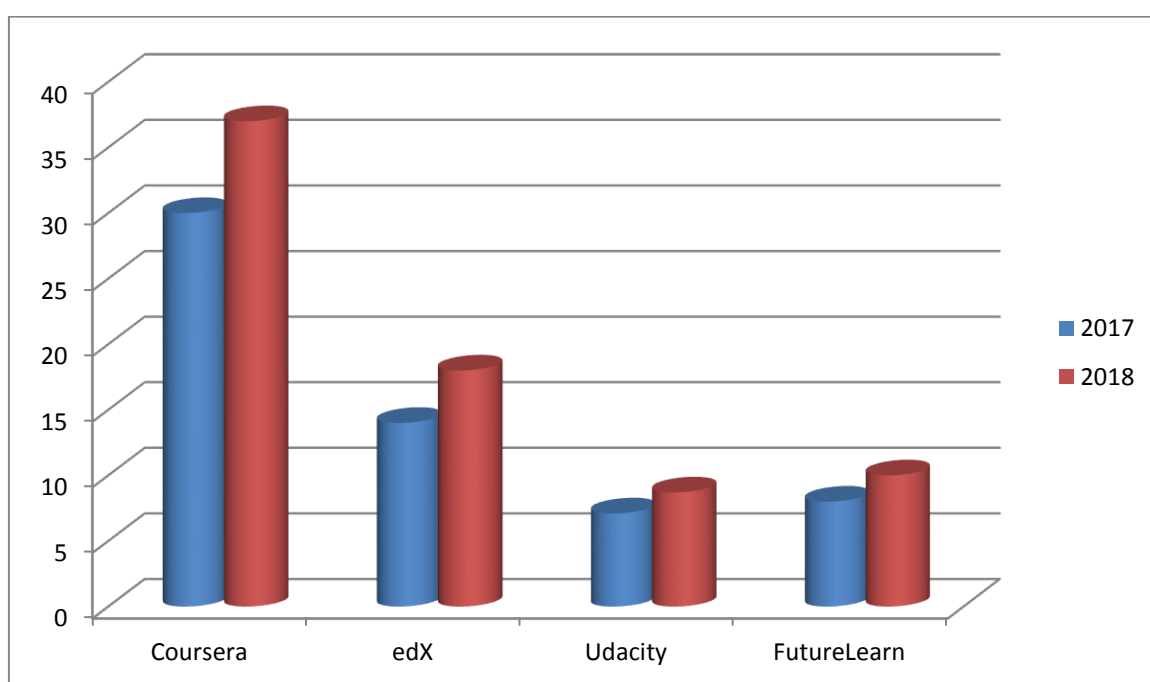


Figure 2. Main MOOC-platforms

## DISCUSSION

Since 2015, both an international and national platforms have been formed on the MOOC market. Universities and other organizations from various countries that produce online courses in different languages are represented on the international market of MOOC. The subjects of such a market are producers of online courses all over the world and consumers of online courses all over the world. In contrast to the international market, providers of one or several countries that produce MOOCs in their native language are nationally represented.

Data on the main directions of development of online courses, international and national aspects are highlighted in the works of such scientists and researchers as Shapiro H., Deng J., Semenova T., Foerster S., Liang D., Kizilcec R. and others [13; 2; 12; 4; 8; 6].

Depending on which MOOC market — international or national — providers from different countries operate in, there are two behavioral strategies to create and promote online courses.

The first strategy involves the positioning and promotion of the country on the international MOOC market through the creation and placement of online courses on platforms whose users are citizens of foreign countries.

The leading international providers include major American platforms edX and Coursera, which cooperate with organizations / universities from other countries and which account for the largest number of students from different countries [8]. The second strategy is the promotion of online education in the domestic market to solve local problems. To implement it national platforms and / or resources of leading providers can be used.

The first strategy is used mainly by countries in the Asian region, a number of European countries, and Arab countries as well. As a part of this strategy, online courses are being created in the international language (English) in various subject areas, including courses in subjects of educational programs, and MOOCs dedicated to the country's history, its cultural characteristics and language learning.

The second behavior strategy in the MOOC market is aimed at solving internal tasks of the state, while national platforms or leading resources can be used [9]. OpenLearning platform is an Australian provider of open online courses, it hosts mainly courses from Australian and Malaysian universities.

Russian universities and organizations place their own online courses on both leading and national platforms. At the beginning of 2018, the National Open Education Platform hosted 259 courses. On leading platforms — Coursera and edX — from Russian institutions, 256 MOOCs are represented, of which only 25% are made in a foreign language. At the same time, a number of online courses from Russian providers on leading platforms is steadily growing. If in 2017 Coursera and edX users were offered 48 MOOCs in English, at the beginning of 2018 it was already 63 [7].

We estimate the MOOC international market on the basis of analytical data presented in Class Central MOOC reports, as well as a list of online courses hosted on major platforms such as Coursera and edX.

In 2018, MOOCs devoted to the humanities accounted for about 10% of all courses that were hosted on international platforms. A choice of courses to study foreign languages is very limited. Basically on the platforms there are courses of learning English - from basic to advanced level [6].

In addition, it is possible to find courses aimed at developing individual English language skills: speaking, listening comprehension, rules of punctuation. Some courses are accompanied

by subtitles in Chinese or Spanish, which increases the demand of the audience who speak little English. The second most popular language after English is Chinese.

According to the analytics of the Class Central platform, in all subject areas one can distinguish entry-level courses, which, as a rule, are of an introductory nature, and advanced courses. Russian universities and organizations place their own online courses on both leading platforms and national ones. At the beginning of 2018, the National Open Education Platform hosted 259 courses. On leading platforms Coursera and edX 256 MOOCs from Russian institutions are represented, just 25% of which are recorded in a foreign language. At the same time, the number of online courses from Russian providers is steadily growing on leading platforms.

### **CONCLUSION**

Researchers in this area evaluate benefits and risks of using MOOC in education in a similar way. Among the advantages, accessibility and massive involvement dominate over other parameters of quality education. Both teachers and students are unanimous in their positive assessment of general subjects' replacement with the MOOC, and at the same time they are quite restrained or negative about the replacement of special (professional) subjects. Main problems and risks of using a MOOC are related to the lack of necessary feedback from the teacher, weak incentives to complete the training in the absence of constant external control and unreliable identification of the listener during the assessment.

An analysis of the MOOC market indicates an intensive growth in the number of MOOC manufacturers and providers, as well as the number of participants in online courses. Millions of people around the world are in need of high-quality affordable education and are looking for opportunities for professional and personal growth, so the world's leading countries are actively involved in the online education race. Putting MOOCs of Russian universities in a foreign language on the MOOC international market will allow Russia to solve a number of cultural, political and economic problems. International platforms can be considered as a means of popularizing their own culture, as an opportunity to draw attention to their history, modern scientific and technical developments.

### **RECOMMENDATIONS:**

The study records can be used to create massive open online courses, in the preparation of relevant lecture courses or teaching aids for students. The work also has practical significance in studying main trends of distant learning development, so the paper given is of great interest for researchers, teachers and students.



## ACKNOWLEDGEMENTS

The work is performed according to the Russian Government Program of Competitive Growth of Kazan Federal University.

## REFERENCES

1. de Barba P., Kennedy G., Ainley M. (2016) The Role of Students' Motivation and Participation in Predicting Performance in a MOOC. *Journal of Computer Assisted Learning*. Vol. 32. No 3. P. 218–231.
2. Deng J. (2017) Research on Higher Vocational Students' Acceptance and Use of MOOC in Web Software Development Course. *Boletín Técnico*, vol. 55, no 7, pp. 689–695.
3. Fakhrutdinova A.V. , Shamsutdinova D. V. , Kalimullina O. A. , Ivanova A. V. (2018) Influence of multicultural environment of educational organisation on students individual development. *Abstracts & Proceedings of ADVED 2018 - 4th International Conference on Advances in Education and Social Sciences, 15-17 October - Istanbul, Turkey* ISBN: 978-605-82433-4-7.
4. Foerster S. H. (2017) Global: Relax—Higher Education Won't Be Killed By MOOCs. *Understanding Global Higher Education. Global Perspectives on Higher Education* (eds G. Mihut, P. G. Altbach, H. Wit), Rotterdam: Sense Publishers, pp. 151–153.
5. Gyshchina O. M., Mikheeva O. P. (2017) Massive open online courses for pedagogical staff training. *The Education and Science Journal*, vol. 7 (19), pp. 119–136. DOI: 10.17853/1994-5639-2017-7-119-136.
6. Kizilcec R., Saltarelli A., Reich J., Cohen G. (2017) Closing Global Achievement Gaps in MOOCs. *Science*, vol. 355, no 6322, pp. 251–252.
7. Klimentyev D., Klimentyeva V. (2015) Optimizatsiya akademicheskikh obrazovatelnykh programm rossiyskikh vuzov za schet ispolzovaniya massovykh otkrytykh onlayn-kursov [Optimization of Russian Higher Education Academic Programs by Means of Massive Open Online

- Courses]. Vestnik Permskogo natsionalnogo issledovatelskogo politekhnicheskogo universiteta. Problemy yazykoznanija i pedagogiki, no 4 (14), pp. 22–27.
8. Liang D., Jia J., Wu X., Miao J., Wang A. (2014) Analysis of Learners' Behaviors and Learning Outcomes in a Massive Open Online Course. Knowledge Management & E-Learning. Vol. 6. No 3. P. 281–298.
  9. Patru M., Balaji V. (eds) (2016) Making Sense of MOOCs: A Guide for Policy-Makers in Developing Countries. Available at: <http://unesdoc.unesco.org/images/0024/002451/245122E.pdf> (accessed 18 April 2019).
  10. Phan T., McNeil S.G., Robin B.R. (2016) Students' Patterns of Engagement and Course Performance in a Massive Open Online Course. Computers & Education, vol. 95, april, pp. 36–44.
  11. Phan T., McNeil S.G., Robin B.R. (2016) Students' Patterns of Engagement and Course Performance in a Massive Open Online Course. Computers & Education. Vol. 95. April. P. 36–44.
  12. Semenova T.F., Vilkova K.A., Shcheglova I.A. (2018) The market of massive open online courses: perspectives for Russia . Voprosy obrazovanija, vol. 2, pp. 173–197.
  13. Shapiro H.B., Lee C. H., Wyman Roth N. E., Li K., Çetinkaya-Rundel M., Canelas D. A. (2017) Understanding the Massive Open Online Course (MOOC) Student Experience: An Examination of Attitudes, Motivations, and Barriers // Computers & Education. Vol. 110. July. P. 35–50. <https://doi.org/10.1016/j.compedu.2017.03.003>
  14. Tong T., Li H. (2017) Demand for MOOC — An Application of Big Data. China Economic Review. January. P. 1–14.
  15. <http://www.edutainme.ru/post/MOOS-2018/> (accessed 18 April 2019).
  16. <http://www.edutainme.ru/post/rossiya-na-coursera-v-tsifrakh/> (accessed 18 April 2019).