Motivation of University Teachers Developing and Implementing Open Online Courses

Maria Petrovna Prokhorova
Department of innovative management technologies
Kozma Minin Nizhny Novgorod State Pedagogical University
Nizhny Novgorod, Russia

Tatyana Evgenievna Lebedeva
Department of innovative management technologies
Kozma Minin Nizhny Novgorod State Pedagogical University
Nizhny Novgorod, Russia

Angelika Arkadevna Shkunova
Department of innovative management technologies
Kozma Minin Nizhny Novgorod State Pedagogical University
Nizhny Novgorod, Russia

Svetlana Viktorovna Bulganina
Department of innovative management technologies
Kozma Minin Nizhny Novgorod State Pedagogical University
Nizhny Novgorod, Russia

Antonina Leonardovna Lazutina
Department of innovative management technologies
Kozma Minin Nizhny Novgorod State Pedagogical University
Nizhny Novgorod, Russia

Abstract — **The article describes research on the motivation of university teachers to develop and implement open online courses. It was determined that the practice of using open online courses is developing, which requires the involvement of teachers in both their development and use. The study was carried out using the methodology developed by S. Richi and P. Martin which was used to develop an averaged motivational profile of the developer of the online course. It was found that the leading motives of such teachers are the desire for achievement, high earnings and material incentives, recognition of merit, self-improvement, the ability to learn new competencies, the desire to constantly have a stimulating interest. Motivating factors for teachers who do not have experience in developing online courses were identified. Additional material rewards, new experience in using educational technologies, and skills in working with a wide and diverse audience are motivating factors. The results can be of practical importance for the development of decisions aimed at encouraging teachers to develop online courses.**

Keywords — *open online courses, MOOC, teacher, development, education.*

I. INTRODUCTION

The rapid spread of massive open online courses (MOOC), has become one of the leading trends in modern education. MOOC are a new format of distance education based on e-learning via the Internet. Currently, there is a rapid increase in the number of courses, users, specialized platforms that allow you to master such programs [1, 2, 3]. By the end of 2018, more than 900 universities have been developing MOOC, the total number of online courses reached 11.4 thousand (2000 of which were created in 2018), and the number of programs involving the possibility of awarding bachelor's or master's degrees was 47. Employers recognize official certificates of the largest educational platforms [4; 5].

Among the most popular MOOC providers are the American Coursera, edX, and Udacity platforms, as well as the British FutureLearn. The countries create their own national online education platforms, such as XuetangX in China, MiriadaX in Latin America, France Université Numérique (FUN) in France, EduOpen in Italy, SWAYAM in India, National Open Education Platform in Russia [6].

For universities, MOOC are currently a means of competition, a tool to improve quality of education (by integrating courses developed by leading universities in the educational process) [7]. According to Tretyakov V. S. and Larionova V. A., savings from online courses can be 67% [8].

II. METHODS AND MATERIALS

The following issues were chosen for the study:

- What motives make teachers develop and use MOOC in the educational process?

- What are the main factors that make teachers learn new skills for the successful application of MOOC in the educational process?

- What ways of stimulation can encourage active participation of teachers in the development and implementation of open online courses?

The purpose of this article is to study the motivation of teachers to develop open online courses.

Research Objectives:

- identification of motives encouraging teachers to develop open online courses;

- ranking of motivational factors;

- identification of motives;

- definition of conditions that can encourage teachers to develop open online courses;

- drawing conclusions on the most significant motives.

The study was conducted in June - October 2019.

There were two stages of the study.

At the first stage, the motives of teachers who already gained experience in developing online courses were studied. Since the development of open online courses is a new practice for Russian universities, the total number of respondents was 18 people. These teachers developed and posted online courses on educational platforms of universities. Among the respondents, 63% were women, 37% were men. Their age ranged from 32 to 52 years. 83% had candidate's degrees.

To study the motivation of teachers, the questionnaire developed by S. Richi and P. Martin was used [9]. It was specified for research tasks. The choice of this technique is due to its validity, reliability and adaptation to the Russian sample. As a result, an average motivation profile was compiled, leading motives were identified.

At the second stage, questionnaires were conducted both for those who have experience in developing online courses, and for those who do not have such experience, but had experience in developing electronic courses in LMS Moodle. The questionnaire included two questions, the answers should be given by the 10-point scale:

1. Evaluate factors that could motivate you to develop an open online course

2. Assess the importance of incentives that are required to engage you in the development and use of open online courses in the educational process.

The results were interpreted and supplemented by the answers of respondents obtained during the discussion of the survey results.

III. RESULTS

As a result of the diagnosis of motives, at the first stage of the study, the following results were obtained. Figure 1 shows the average values of labor motivation factors for all respondents.

The obtained values of labor motivation factors were divided into groups according to their significance.

The first group consisted of the leading motives of teachers to develop and use open online courses (Figure 2).
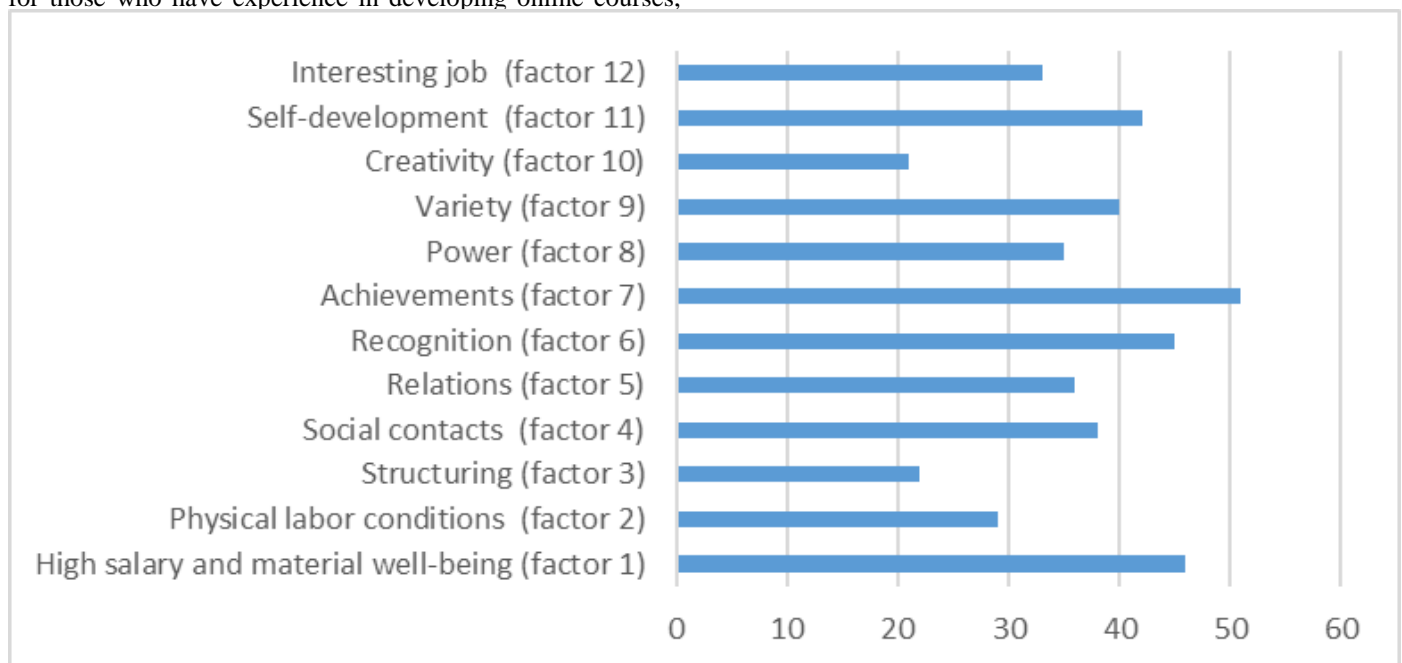

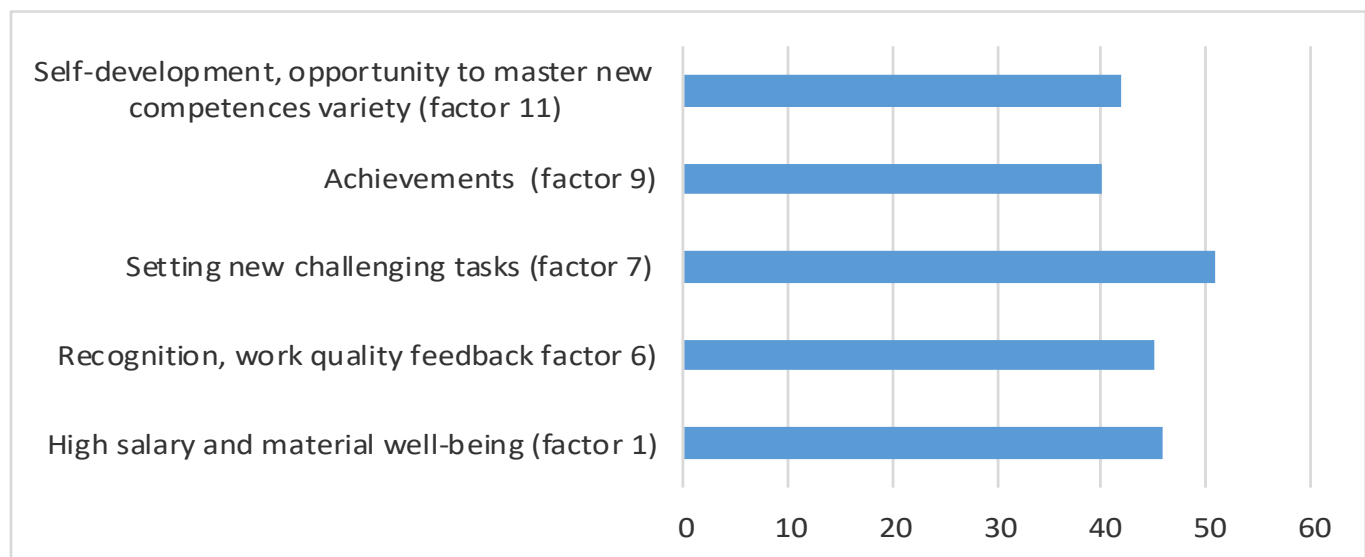Fig 1.   Average values of labor motivation factors for all respondents

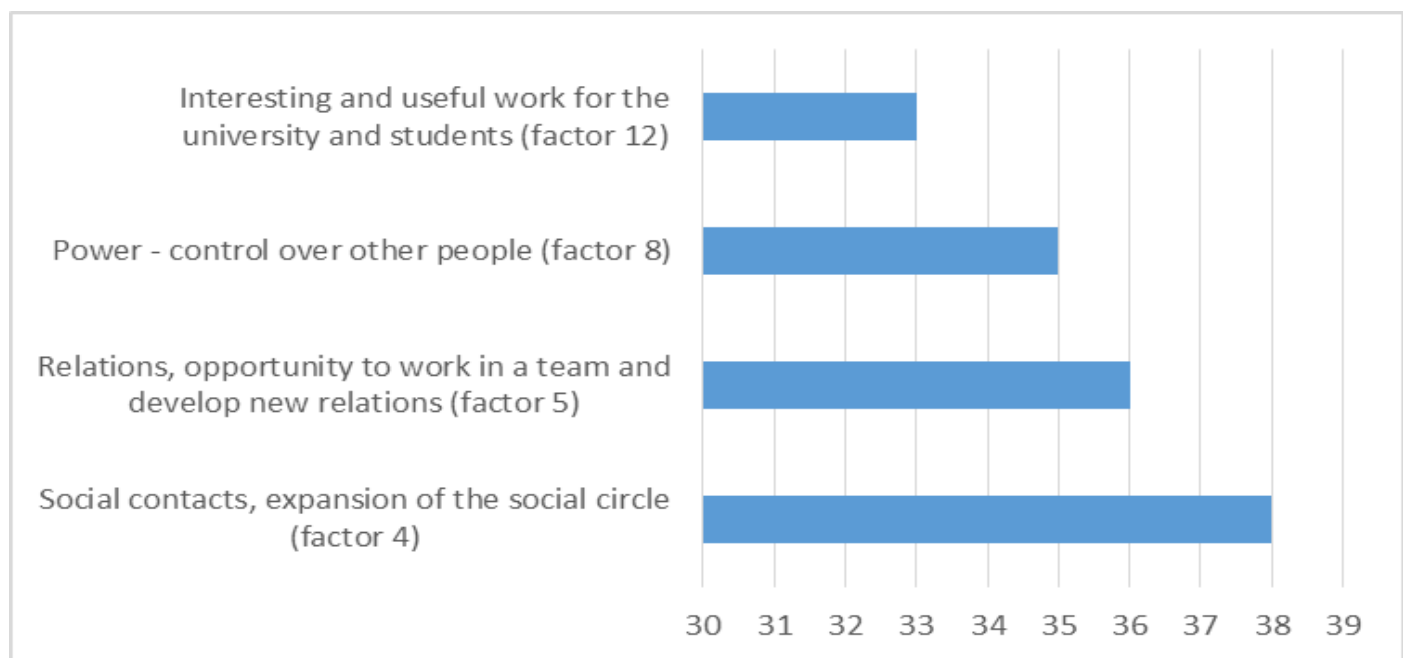Fig 2.   The first group of motives for the development and use of MOOC

Fig 3.   The second group of motives for the development and use of MOOC

The first group of factors included those that had the highest average values in the range from 40 to 51 points: pursuit of achievement, new challenging tasks (51), material incentives (46), recognition of merit, feedback on quality work, raising the status (45), self-improvement, the ability to learn new competencies (42), diversity, interest (40). It can be stated that teachers have a prevailing research interest in the new educational format, a desire for professional self-assertion, and high personal ambitions.

The second group of motivation factors are factors presented in Figure 3.

The second group of motives includes motives whose assessment ranged from 30 to 39 points: social contacts (38), relationships, the ability to work in a team (36), power and influence - the ability to establish control over others (35), interesting and useful work for the benefit of the university and students (33).

The results indicate that social contacts and a wide circle of communication, control over others are less significant than a professional interest in new technologies. Indirectly, this suggests that these are people who prefer working alone, spreading their ideas and showing professional qualities.

The third group includes the least significant motivation factors: physical working conditions - providing technical and methodological opportunities for course development (29), structuring, clear instructions on how to complete tasks (22),

creativity, breadth of views and the ability to generate new ideas (21).

Creativity as the ability to generate new ideas and embody them is not a leading motive. This can be due to the fact that the MMOC format requires structuring the training material, meeting deadlines, and it is rather laborious.

At the second stage of the experiment, factors that encourage teachers to develop and use online courses were studied. The average rankings are presented in Figure 4.
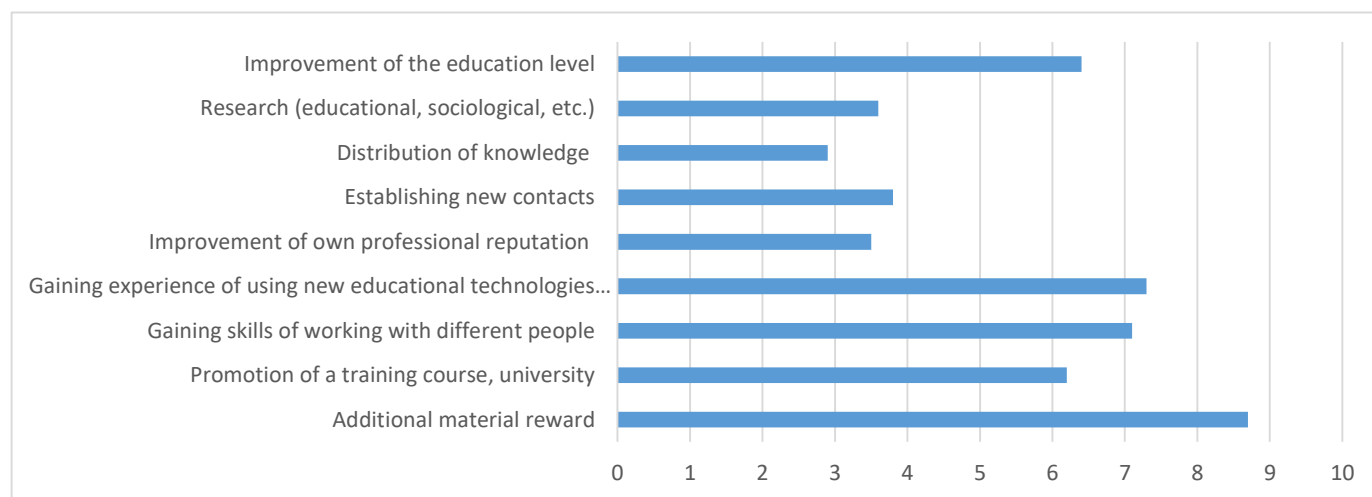

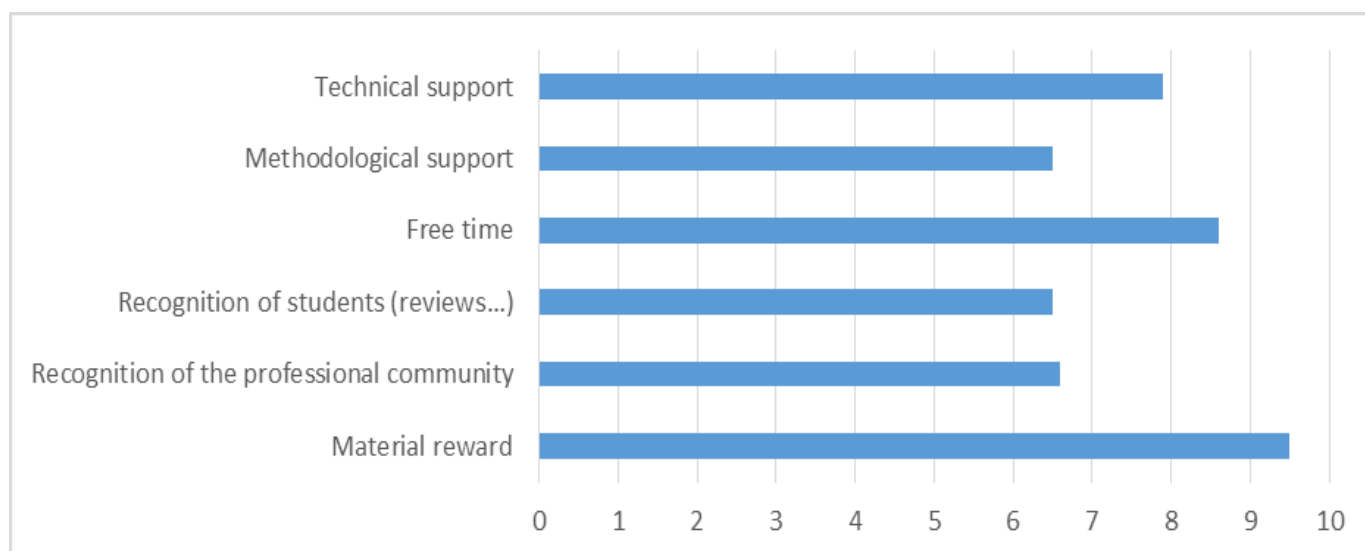Fig 4.   Factors motivating teachers to create and use online courses

Fig 5.   Evaluation of incentive measures for the development and use of online courses

The survey results show that the most significant motivation factors are additional material reward (8.7), experience in using educational technologies (7.3), and skills to work with a wide and diverse audiences (7.1). An increase in one's own educational level is also significant, when the

teacher receives a certificate (6.4). The lowest scores were given to the factors associated with the dissemination of knowledge in one's own subject area (2.9), professional reputation (3.5), and the ability to conduct research (sociological, pedagogical, etc.) (3.6).

Analyzing this data, it can be argued that the development of online courses is considered as an additional load, which should be paid, as well as a format that allows you to professionally develop and interact. Most teachers do not believe that online courses can help improve their reputation, because they fear competition with products developed by leading national universities.

The identified motivation factors were supplemented by an assessment of incentive measures that would create favorable conditions for teachers to be involved in the development and use of MOOC (Figure 5).

The answers to this question allowed us to create a picture of those conditions that will contribute to the effective involvement of teachers in the development and use of MOOC in the educational process. Material remuneration (9.5) and working time for this process (8.6) rank first. This means that inclusion of MOOC in the teaching load is crucial for Russian teachers, since not all universities pay extra money for this work.

An important condition is technical support (7.9). Most respondents express concern about possible technical problems when developing an online course (recording lectures, delivering newsletters, etc.). They need qualified technical support.

The lowest scores were given to methodological support (6.5), recognition by the professional and student communities (6.6 and 6.5, respectively). At the same time, the first factor is recognized as less significant due to the availability of wide opportunities to fill in the gaps in one's own knowledge independently or through training in such open courses. The recognition by the professional community (review of course materials and feedback) does not play a big role for the above-stated reason for the fear of competition with better online courses. Teachers do not pay attention to grades and feedback, as they fear that grades may be biased.

IV. DISCUSSION

In Russia, MOOC are promising courses. Their development and use will become a common practice that will expand traditional contact methods of teaching [10, 11, 12]. In modern education, there are a number of trends that characterize MOOC development:

1. An increase in the number of people studying online.

For Russia, the MOOC development forecast is favorable. Russia ranks 37th by the development of digital skills and 66th by the involvement of employees in vocational training [13, P. 485]. The most successful open online education is implemented in continuing education. According to the study, the online education market turnover grew in 2019 by more than 60% [14].

In addition, according to the current priority project "Modern Digital Educational Environment in the Russian Federation", conditions for improving quality and expanding possibilities of continuing education for all categories of citizens are being created. The development of the Russian digital educational space involves an increase in the number of students of educational institutions that have mastered online courses from 35 thousand to 11 million people by the end of 2025 [15].

MOOC are becoming real instruments of competition between educational organizations, increase requirements for the course content, format and capabilities of online courses [16, 17, 18]. Having your own online courses and courses hosted on national platforms and platforms of leading universities is becoming a prerequisite for a successful modern university. In January 2020, the National Open Education Platform hosted 449 courses developed by 16 leading Russian universities (for comparison, in March 2019, the corresponding number of courses was 351) [19].

2. Integration of open online courses in the educational process.

Currently, there are different models of using online courses: as an additional resource, a model of blended learning, tutor support, and independent learning [20]. Teachers using the online course have a new tool, they are forced to learn new competencies and expand activities. Thus, all these trends indicate the need to study the motivation of teachers as key figures in online education.

At the same time, an analysis of modern sources shows that there are few studies dealing with motives of MOOC developers. A larger number of sources is devoted to the study of users of open online courses: capabilities of Internet technologies in education [21], characteristics of users [22], reasons for successful completion of courses, and training results [23].

A large-scale study of the characteristics of students and teachers of online courses is presented by Y. M. Roshchina and others who assessed advantages, disadvantages and prospects of using MOOC [24]. A qualitative analysis of the online format of educational courses in the Russian education system is presented by U.S. Zakharova [25].

An attempt to describe MOOC users was made by L. Popova who described the user of an online course by gender, age, geographic, and target characteristics [26, 27, 28].

Among the sources studying online courses, there are no studies on the motivation of MOOC developers. Meanwhile, the results of such studies may become the basis for the development of new management models which can be effective in the context of digitalization of education.

This is due to the fact that distance online courses change the learning and teaching systems. The development and implementation of online courses change working conditions of the teacher, pedagogical functions, shift task priorities, etc. In addition, the development and implementation of online courses require special training of teachers and students who must possess developed competencies [29, 30].

Therefore, the study of motives of developers of online courses is of scientific and practical interest, since it will allow the development and application of modern methods of motivation of pedagogical work in changing conditions.

V. CONCLUSION

The study allows us to identify the motives of teachers who have already developed open online courses and are ready for this activity. Due to the limited sampling, the results of this study cannot be applied to all Russian teachers. However, some important conclusions can be drawn.

When creating the average motivational profile of the MOOC developer, it was revealed that the most important motives are the pursuit of achievement, new challenging tasks, self-development, a new status, recognition, high material reward. These teachers are ambitious and purposeful people, capable of achieving their goals.

To motivate these people, it is advisable to provide high-quality methodological, technical, and non-material support, allowing us to create and promote high-quality educational products - open online courses.

For Russian teachers, the reputational risks associated with the professional evaluation of online courses by colleagues are not significant. This is confirmed by U.S. Zakharova and K.I. Tanasenko, who identified more significant consequences (reduced teaching load or dismissal in case of refusal to develop such courses).

Universities implementing MOOC should pay special attention to material incentives for their development and use, as well as adequate time accounting for the development of online courses in the teaching load. The MOOC development is resource-intensive (the high cost of time and intellectual resources).

The most important condition that needs to be created for MOOC development is quality technical support.

References

[1] M. Bali, M. Crawford, P. Signorelli et al., «What makes a cMOOC Community Endure? Multiple Participant Perspectives from Diverse cMOOCs», Educational Media International, vol. 52, No. 2, pp. 100–115, 2015.

[2] S.B. Harden, Transitional Disruption or End Times: The Apocalyptic Possibilities of MOOCs in Higher Education, Community Engagement 2.0 ?: Dialogues on the Future of the Civic in the Disrupted University, New York: Palgrave Macmillan, 2014, pp. 73–81.

[3] F. Hollands «Why Do Institutions Offer MOOCs?», Journal of Asynchronous Learning Network», vol.. 18, No. 3. pp. 1–20, 2014.

[4] K.A. Makoveichuk, «Prospects for the use of courses in the MOOC format in higher education in Russia», International Scientific Journal, No. 6–3 (37), pp. 66–67, 2015.

[5] B. Shah, «The Numbers: MOOCs in 2018 Class Central», 2018 [Electronic resource]. Retrieved from URL: https://www.classcentral.com/report/mooc-stats-2018

[6] T. V. Semenova, K. A.Vilkova, I.A Scheglova, «The market for mass open online courses: prospects for Russia», Educational Issues, No. 2, pp. 173–180, 2018

[7] S.A. Zolotukhin, «The advantages and disadvantages of mass open online courses», Discussion, No. 4 (56), pp. 97-101, 2015

[8] V.S. Tretyakov, V.A. Larionova, Open online courses as a tool for the modernization of educational activities at a university», Higher Education in Russia, No. 7 (203), pp. 55–66, 2016

[9] Management of motivation: Textbook. manual for universities, Moscow, UNITY-DANA, 2004, 399 p.

[10] M.L. Gruzdeva, Zh. V. Smirnova, O.V. Chaikina, O. V. Golubeva, O.T. Cherney, «Using Internet Services in Teaching Methodology», Lecture Notes in Networks and Systems, vol. 57, pp. 1193-1199, 2019, DOI: 10.1007 / 978-3-030-00102-5_125

[11] M.L. Gruzdeva, N.I. Tukenova, «Analysis of the current state of research and development in the field of building information and educational environments of higher educational institutions», Vestnik of Minin University, vol. 7, no 2. pp.1-12, 2019.

[12] A.V. Ponachugin, Yu.N. Lapygin, «Digital educational resources of the university: design, analysis and examination», Vestnik of Minin University, vol. 7., no.2, pp. 5-10, 2019

[13] The Global Competitiveness Report 2018. Retrieved from: https://www.classcentral.com/report/mooc-stats-2018 (2018)

[14] Online education (Russian market). Retrieved from: http://www.tadviser.ru/index.php (2019)

[15] The future of online education in Russia: growth and cautious investments. Retrieved from: https://www.forbes.ru/tehnologii/342961-budushchee-onlayn-obrazovaniya-v-rossii-rost-i-ostorozhnye-investicii (2019)

[16] A. A. Beloglazov, L.B. Beloglazova, «The use of mass open online courses as a way to improve the quality of teaching in the field of information technology», RUDN Journal of Informatization in Education - Vestnik RUDN. Series: Informatization of Education, vol. 15, no. 2, pp. 206–214, 2018, DOI: 10.22363 / 2312-8631-2018-15-2-206-214.

[17] V. Charushnikov, «E-learning: pros and cons», Higher education in Russia, no. 12, pp. 113-115, 2008

[18] K.A. Makoveichuk, «Prospects for the use of courses in the MOOC format in higher education in Russia», International Scientific Journal, no. 6–3 (37), pp. 66–67, 2015

[19] Open education: national platform. Retrieved from: https://openedu.ru. (2019)

[20] Guidelines for the inclusion of online courses in the curriculum. Retrieved from http://academsport.sfedu.ru (2019)

[21] A. Egorova, V. Kuznetsov, S. Yashin, D. Lapaev, V. Agafonov, «Studying the Directions of Strategic Development of Machine Building Enterprises», Perspectives on the use of new information and communication technology (ICT) in the modern economy, Book Series: Advances in Intelligent Systems and Computing, vol. 726, pp. 464-472, 2019

[22] T.R. Liyanagunawardena, «Learners and Massive Open Online Courses: A Review», Interactive Journal of Medical Research, no. 5 (1). pp. 66–67, 2016

[23] L.V. Borisova, «Problems of training teachers for work in the information and educational environment of distance learning with a remote contingent of university students», Vector of Science, Togliatti State University, no. 4 (7), pp. 45–47, 2011.

[24] Ya.M. Roshchina, S. Yu. Roshchin, V.N. Rudakov, «Demand for mass open online courses (MOOC): the experience of Russian education», Education Issues, no. 1, pp. 174–199, 2018, DOI: 10.17323 / 1814-9545-2018-1-174-199.

[25] U.S. Zakharova, K.I. Tanasenko, «MOOC in higher education: advantages and disadvantages for teachers», Education Issues., no.3, pp. 176-192, 2019, DOI: 10.17323 / 1814-9545-2019-3-176-202.

[26] Yu. A. Elizarieva, «Modern teacher in the process of "MOOKization" of education», Humanitarian Informatics, vol. 10, pp. 92–100, 2016, DOI: 10.17223 / 23046082/10/10.

[27] P. Pekker, L. Popova, «Online learning students in Russia: who are they?», The EARLI Conference on Education in the Crossroads of Economy and Politics, pp. 9192-9199, October 2017 [The EARLI Conference on Education in the Crossroads of Economy and Politics, p. 11283, 2017].

[28] P.L. Pekker, «Key professional competencies for teachers of mass open online courses (MOOK)», Values and meanings, no 1 (53), pp. 117–127, 2018.

[29] S.B. Bulganina, O.B. Golubeva, T.E. Lebedeva, M.P. Prokhorova, «Managing students' independent work at university», Modern Journal of Language Teaching Methods (MJLTM), vol. 7, Issue. 10, 2017

[30] O.I. Vaganova, T.Y. Lebedeva, M. P. Prokhorova, Zh. V. Smirnova, A. A. Shkunova, «Pedagogical support of the educational and information environment», Espacios, vol. 40, no. 2, pp. 21-28, 2019