Efficiency of Outsourcing and Outstaffing Mechanisms Based on MOOCs in the Market of Entrepreneurial Education Services

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Abstract—The purpose of this article is to analyze, based on new experimental data, the effectiveness of entrepreneurship education using outsourcing and outstaffing (O&O) mechanisms based on the implementation of a massive open online course (MOOC). The field study was conducted among 205 undergraduate students enrolled in entrepreneurial programs in Management and Economics at three Russian universities. As a result of the study, the following hypotheses were confirmed. Namely, H1 "Implementation of O&O does not reduce student satisfaction with the educational process", H2 "Implementation of O&O does not reduce the level of students' understanding of theoretical teaching materials". H3 "Implementation of O&O does not reduce the level of students' understanding of practical learning tasks", H4 "The introduction of O&O has a positive impact on the business environment of the university". H5 "The introduction of O&O has a positive impact on the entrepreneurial intentions of students", H6 "The introduction of O&O does not reduce the level of students' achievements". At the same time, all O&O elements were included in the educational process through online access to MOOCs based on EdX. The practical significance of the results obtained in the article is that the proposed approach allows one to effectively implement outsourcing and outstaffing for the organization of entrepreneurial education based on MOOC, the creation and connection of which does not require significant costs from the university.

Keywords—Entrepreneurial education; MOOC; online training; outsourcing; outstaffing
1 Introduction

The increased use of e-learning and online learning mechanisms is associated with the expansion of access to education in the world and the ability to model specific educational needs in accordance with the requirements of a particular user [1]. MOOCs are developed in university education as an addition to classroom courses as a tool for continuous learning and in the form of specialized additional courses that allow one to acquire additional skills and knowledge outside the scope of the main specialty [2]. At the same time, very often such courses can act as a means of attracting teachers from other universities or unique specialists from outside the university as well as allocate time for classes so that it is convenient for both specialists and students. Thus, the individualization of the learning strategy is formed [3,4].

Outsourcing, that is, the use of external resources, means the delegation of some functions by one organization to another organization [5]. In business practice, outsourcing most often involves such secondary functions as accounting, personnel management, legal support, advertising, translation, transport services [6]. Outsourcing became widespread in the 1990s in connection with the emergence of economic crises and the search for ways to reduce costs. Already at that time, more than 80% of companies in the United States resorted to outsourcing of various administrative functions. Currently, almost 100% of successful companies use outsourcing services in the world [7].

Outstaffing is the temporary recruitment of specialists who are formally included in the staff of another company. In another way, outstaffing is also called personnel leasing. Now it is increasingly used in conjunction with telecommunication technologies that do not require the personal presence of a specialist in the office of the inviting company. In the USA and Western Europe, about 90% of all companies periodically use outstaffing, and the number of such employees is 1.5% of the total number of workers [8].

From the above definitions it follows that outstaffing is a special case of outsourcing, when personnel is considered as external resources. In case of outstaffing, a contractor temporarily transfers his/her employees to a customer, and in case of outsourcing, a customer transfers his/her functions to a contractor. The main advantage of outsourcing is the optimization of company’s costs by reducing the cost of performing auxiliary processes and concentrating highly qualified personnel on target activities [9]. The same goal is in online technologies and communications for the transfer of services and the use of technologies of one company in the business processes of another [10]. The use of outstaffing also simplifies personnel management. Therefore, in this article, the term "outsourcing" will mean, among other things, outstaffing, and the term "outstaffing" will be used in cases where it is necessary to emphasize the features of this process [11].

Outsourcing approaches are widely used in entrepreneurial education. They are based on either the online learning and mobile learning mechanism used within the university or MOOCs [1]. Outsourcing in education implies not only the transfer of secondary functions to external contractors but also the transfer of the main function associated with the provision of educational services by an educational institution [12].
The practical significance of the results obtained in the article lies in the fact that the proposed approach makes it possible to effectively implement outsourcing and outstaffing based on low-cost MOOCs for organizing more effective entrepreneurial education.

The scientific novelty of the article lies in the fact that it analyzes the effectiveness of the implementation of outsourcing and outstaffing using MOOC mechanisms for organizing entrepreneurship training and confirms their effectiveness.

1.1 Literature review

The analysis of the literature has made it possible to identify four main areas of outsourcing in entrepreneurial education, some of which can be implemented by means of MOOCs or other forms of online learning:

1. Outsourcing of auxiliary functions of an educational institution; the implementation of this direction of outsourcing does not fundamentally differ for organizations engaged in different types of activities; firstly, such outsourcing allows one to obtain economic benefits, and, secondly, to improve the quality of the educational process by concentrating the resources of the educational institution on it [11]; this direction is closely related to the concept of "lean" education, based on a constant desire to eliminate all types of waste [13]; in this article, the authors do not consider this direction of outsourcing

2. Educational outsourcing can also mean that an organization receives educational services for personnel based on outsourcing [14,15]; this direction of outsourcing is also not considered in this article, although it can be implemented by MOOC mechanisms [1,16]

3. Attraction of resources of third-party educational institutions for the organization of the educational process in new directions and specializations; this area is characterized not only by the involvement of third-party teaching staff (outstaffing), but also the acquisition of third-party training courses and programs from the best universities in a certain industry; this direction of outsourcing is considered in detail below and it is most fully implemented by means of MOOCs [10,17]

4. Cooperation with industry enterprises for targeted training of personnel; this direction provides for various types of attracting resources from external business, for example, such as conducting training practices and internships. This type of teaching practice is extremely effective, but to date, very little has been studied in the research literature, and according to the studied sources, it is mainly practiced in free MOOCs outside the university context [16,18,19]; from the point of view of outstaffing, which is the subject of this article, an important area is to attract business practitioners to conduct training sessions with students; large firms may establish their own use of training centers, training courses and programs, which are also external resources important for entrepreneurial education [16].

It should be noted that the considered interaction of educational institutions with industry enterprises and various kinds of business structures refers to a specific type of outsourcing, called crowdsourcing. Usually, crowdsourcing is understood as a synergistic exchange of resources, which consists in attracting a wide range of stakeholders...
to solve certain problems on a voluntary or low-paid basis [20]. In entrepreneurial education, crowdsourcing implies, first of all, participation in regional, national and international business communities for a more realistic understanding of business needs and the formation of possible ways to develop education [21].

The development of outsourcing in entrepreneurial education is closely related to the use of online learning and the shift of focus from passive learning models (supply model, when the learner perceives the proposed material) to active models (demand and competency models) [8,22]. Entrepreneurship is an active skill and learning involves actively involving students in the acquisition of skills. Since a significant part of business processes have migrated to the online environment, this makes it possible to organize practical training for students through online learning mechanisms from almost anywhere and at any time, without interrupting the main program of the university course [18]. This is done through the involvement of business representatives with entrepreneurial skills in the educational process (outstaffing) through, for example, MOOCs or other online learning methods, and through the creation of a business environment for students in which they can operate with minimal risks (outsourcing) [4,23].

Another important trend influencing the development of outsourcing mechanisms is the widespread use of online teaching technologies and the emergence of a fundamentally new business model of virtual universities, as well as network interaction of universities [24]. The Virtual University focuses on student engagement and learning [25]. At the same time, a virtual university's own teaching staff may be minimal [3]. Licenses for courses and programs can also be purchased from other universities in the form of massive online courses. For online classes in a synchronous mode, a virtual university can, on a contractual basis, attract a teacher from another university.

The network model of interaction between universities allows one to create a common base of educational materials [26]. This base can include both online courses and courses that are taught offline or blended [27]. Universities that are members of the network consortium can either extract ready-made online courses from the knowledge base, or organize their cooperative synchronous teaching, based on the distribution of responsibilities between universities [19].

The analysis has shown that in the well-known publications, both Russian and English, insufficient attention is paid to the use of outsourcing and outstaffing based on online training in the market of entrepreneurial education services. In addition, the publications lack data from empirical studies devoted to the analysis of the impact of outsourcing and outstaffing on the quality of entrepreneurial education.

1.2 Goal setting

Works devoted to the analysis of the phenomenon of outsourcing in entrepreneurial education, including based on online learning, are based, as a rule, on qualitative analytical research, and not on statistical data. Insufficient attention is paid to specific mechanisms for introducing outsourcing into the educational process, including, depending on the model of university functioning.
The purpose of this article is to analyze, based on new experimental data, the effectiveness of entrepreneurship education using outsourcing and outstaffing (O&O) mechanisms using MOOC mechanisms. The following tasks were solved in the work:

- Introduction of O&O on the basis of a single MOOC in the process of teaching entrepreneurship to students in three Russian universities
- Development of a questionnaire and conducting a statistical experiment to assess the effectiveness of O&O implementation based on MOOCs for teaching students on entrepreneurial programs
- Analysis of research results to test a number of hypotheses related to entrepreneurial education with elements of online learning: H1 "Implementation of O&O does not reduce student satisfaction with the educational process", H2 "Implementation of O&O does not reduce the level of students' understanding of theoretical teaching materials". H3 "Implementation of O&O does not reduce the level of students' understanding of practical learning tasks", H4 "The introduction of O&O has a positive impact on the business environment of the university". H5 "The introduction of O&O has a positive impact on the entrepreneurial intentions of students", H6 "The introduction of O&O does not reduce the level of students' achievements".

2 Methods and Materials

The study was conducted based on the results of MOOC application, created using the simplest mechanisms based on the free EdX platform. The main objective of this course was the implementation of outsourcing and outcrafting mechanisms in the educational process. MOOC has implemented the simplest functions, namely:

- Providing educational content online, in particular, through mobile platforms
- The ability to broadcast video and watch video or audio recording of lectures by invited teachers
- Access to comments and communication with all teachers
- The possibility of direct and simplified access to any additional materials using links in the MOOC system
- The opportunity to discuss and receive help from teachers and other students when completing assignments or searching for information.

The study was conducted through a survey of participants in 2019-2020 among undergraduate students enrolled in entrepreneurial programs in Management and Economics at three Russian universities: Vologda State University (VSU) - 67 people, Kalashnikov Izhevsk State Technical University (IzhSTU) - 79 people, Shadrinsk State Pedagogical University (SSPU) - 59 people. The average age of the respondents was: for VSU - 20.1 years, for IzhSTU - 20.7 years, for SSPU - 21.2 years. The average age of respondents for the three universities is 20.6 years.

The gender composition of the respondents was as follows: VSU - 39% of men and 61% of women, IzhSTU - 47% of men and 53% of women, SSPU - 34% of men and
66% of women. The average ratio across the three universities was 40% for men and 60% for women.

The questionnaire used for the survey included six sections with statements, which the students were to assess on a seven-point scale, from "1" ("strongly disagree") to "7" ("strongly agree"). The survey was carried out twice, the first time at the end of the second year of studies, after which O&O mechanisms were intervened in the educational process during the semester. At the end of the fifth semester of training, a second survey was conducted with subsequent comparison of the results. In order to study the correspondence to the hypotheses in the sections of the questionnaire, the correspondence to the following statements was analyzed:

- The statement “On the whole, I am satisfied with the way the training is organized” is used to test hypothesis H1 "Implementation of O&O does not reduce student satisfaction with the educational process"
- The statement “I understand the proposed theoretical material” is used to test hypothesis H2 "Implementation of O&O does not reduce the level of students' understanding of theoretical teaching materials"
- The statement “I understand the proposed practical tasks” is used to test hypothesis H3 "Implementation of O&O does not reduce the level of students' understanding of practical learning tasks"
- The statement “The university environment is favorable for becoming an entrepreneur” is used to test hypothesis H4 "The introduction of O&O has a positive impact on the business environment of the university”.

The fifth section of the questionnaire examines the intentions of students to create their own business to test hypothesis H5 "The introduction of O&O has a positive impact on the entrepreneurial intentions of students". In the sixth section of the questionnaire, the average examination score of students was determined on the basis of the results of two sessions, before the introduction of O&O into the educational process and after implementation. Thus, hypothesis H6 was tested: "The introduction of O&O does not reduce the level of students' achievements”.

3 Results

A statistical experiment related to the introduction of MOOC-based O&O in the educational process of three Russian universities (VSU, IzhSTU and SSPU) was carried out in 2019-2020 among undergraduate students enrolled in entrepreneurial programs of the directions "Management" and "Economics". The main objectives of this experiment, conducted in three universities, were as follows:

- Introducing O&O mechanisms with the help of MOOCs in the educational process;
- Improving entrepreneurial atmosphere at the university;
- Increasing students' motivation to engage in entrepreneurial activity;
- Ensuring students' satisfaction with the educational process;
- Ensuring the comprehensibility of educational materials
- Preventing a decline in academic performance.
When analyzing the results, the main focus has been on how students' opinions have changed after the introduction of O&O and online learning mechanisms in the educational process. In total, 187 questionnaires were accepted for processing, which amounted to 92% of the total number of respondents (see Table 1).

Table 1. Survey results

| Sections of the questionnaire                                      | VSU | IzhSTU | SSPU | Average |
|--------------------------------------------------------------------|-----|--------|------|---------|
| Number of valid questionnaires                                     | 64  | 72     | 51   | 62      |
| 1. On the whole, I am satisfied with the way the training is organized |
| Before the experiment                                               | 4.98| 4.82   | 5.02 | 4.93    |
| After the experiment                                                | 5.07| 4.92   | 5.12 | 5.03    |
| 2. I understand the proposed theoretical material                  |
| Before the experiment                                               | 5.14| 4.96   | 4.9  | 5.01    |
| After the experiment                                                | 5.21| 4.92   | 4.98 | 5.04    |
| 3. I understand the proposed practical tasks                       |
| Before the experiment                                               | 5.02| 5.04   | 4.85 | 4.98    |
| After the experiment                                                | 4.94| 5.01   | 5.01 | 4.99    |
| 4. The university environment is favorable for becoming an entrepreneur |
| Before the experiment                                               | 5.37| 5.43   | 5.23 | 5.35    |
| After the experiment                                                | 6.09| 5.99   | 5.82 | 5.98    |
| 5. Entrepreneurial intentions                                       |
| I already have my own business                                      |
| Before the experiment                                               | 6.3%| 9.7%   | 5.9% | 7.5%    |
| After the experiment                                                | 9.4%| 11.1%  | 11.8%| 10.7%   |
| I plan to become an entrepreneur right after graduation            |
| Before the experiment                                               | 18.8%| 19.4% | 19.6%| 19.3%   |
| After the experiment                                                | 25.0%| 23.6% | 27.5%| 25.1%   |
| I plan to become an entrepreneur within 5 years after graduation   |
| Before the experiment                                               | 57.8%| 55.6% | 54.9%| 56.1%   |
| After the experiment                                                | 59.4%| 59.7% | 54.9%| 58.3%   |
| I do not plan to open a business                                    |
| Before the experiment                                               | 17.2%| 15.3% | 19.6%| 17.1%   |
| After the experiment                                                | 6.3%| 5.6%   | 5.9% | 5.9%    |
| 6. Average examination score                                        |
| Before the experiment                                               | 3.74| 3.85   | 3.91 | 3.83    |
| After the experiment                                                | 3.93| 3.89   | 3.87 | 3.90    |
| Before the experiment                                               | 3.74| 3.85   | 3.91 | 3.83    |
| After the experiment                                                | 3.93| 3.89   | 3.87 | 3.90    |

Before the experiment, the average scores for the statement "On the whole, I am satisfied with the way the training is organized" were 4.98 (VSU), 4.82 (IzhSTU) and 5.02 (SSPU), and the average score for the three universities was 4.93. After the introduction of O&O mechanisms, the average scores for this statement increased slightly for all universities, and the overall average was 5.03, which is 2% higher than the original value. Thus, hypothesis H1 "Implementation of O&O does not reduce student
satisfaction with the educational process” was confirmed. However, students' satisfaction with the educational process did not significantly increase due to the introduction of online O&O mechanisms.

Before the introduction of MOOC-based O&O into the educational process, the average scores for the statement “I understand the proposed theoretical material” were 5.14 (VSU), 4.96 (IzhSTU) and 4.9 (SSPU). The average score for the three universities was 5.01. After the implementation of O&O, the average score for this statement for IzhSTU decreased slightly (by only 0.04), which can be explained by the statistical error. In the other two universities, the average score increased slightly, and the overall average was 5.04, slightly higher than the original value. Thus, the H2 hypothesis "Implementation of O&O does not reduce the level of students' understanding of theoretical teaching materials” was confirmed. However, the degree of students' understanding of theoretical materials did not increase.

Before the O&O intervention through the introduction of MOOCs, the average scores for the statement “I understand the proposed practical tasks” were 5.02 (VSU), 5.04 (IzhSTU) and 4.85 (SSPU), and the average score for the three universities was 4.98. After the introduction of O&O, the average score for this statement decreased slightly for VSU and IzhSTU, but increased for SPU (by 0.16). The decrease in the level of understanding for practical tasks can be explained by the lack of teaching skills among specialists attracted to universities from the business sphere. However, the average score for the three universities after O&O implementation was 4.99 (increased by 0.01). Thus, the hypothesis H3 "Implementation of O&O does not reduce the level of students' understanding of practical learning tasks” was confirmed. At the same time, the degree of students' understanding of practical tasks did not increase.

Before the experiment, the average scores for the statement "The university environment is favorable for becoming an entrepreneur” were 5.37 (VSU), 5.43 (IzhSTU) and 5.23 (SSPU), and the average score for the three universities was 5.35. After the introduction of online O&O mechanisms, the average scores for this statement increased significantly for all three institutions (from 10.3% to 13.4%), and the overall average was 5.98, which was 11.6% higher than the original value. Thus, hypothesis H4 "The introduction of O&O has a positive impact on the business environment of the university” was confirmed.

Before the introduction of O&O, students' entrepreneurial intentions were distributed on average for three universities as follows: 7.5% of students already had their own business, 19.3% of students planned to open their own business immediately after graduation, 56.1% wanted to open a business within five years after graduation, and 17.1% of students did not plan to open a business at all. After the introduction of O&O into the educational process, this ratio has changed significantly. During the control semester, 6 more students from different universities started their own businesses, which increased the average proportion of students with their own business to 10.7% (an increase of 43% over the initial indicator). The share of students planning to open their own business immediately after graduation increased to 25.1% (an increase of 30.6% compared to the initial indicator). The share of students planning to open their own business within five years after graduation increased slightly and amounted to 58.3%. At the same time, however, the number of students not planning to become
entrepreneurs has decreased by 2.9 times (to 5.9%). The change in the general picture was influenced by communication with business practitioners and participation in the real daily activities of business structures. Thus, hypothesis H5 “The introduction of O&O has a positive impact on the entrepreneurial intentions of students” was confirmed.

With regard to academic performance, the average exam score according to the results of the session changed from 3.83 (before the experiment) to 3.9 (after the experiment), which confirmed hypothesis H6 “The introduction of O&O does not reduce the level of students' achievements”.

4 Discussion

In Russian and foreign publications, there is no data on the details of the implementation of O&O types, including online training, in entrepreneurial education. Based on the survey results, the authors have managed to identify areas of online O&O mechanisms that are effective for training entrepreneurs, which are determined, firstly, by the type of borrowed resources, and, secondly, by the source of borrowing. The combination of types of resources and their sources determines the mechanism for introducing O&O using MOOCs into the educational process.

Partner educational institutions, including those working on network and virtual business models, network structures and communities, including cooperation between universities and business, as well as industry enterprises, can act as sources of borrowing resources using online learning technologies [1,2,10]. Borrowed resources can be:

- Professional teachers or employees of commercial companies conducting classes (in this case, outstaffing takes place)
- Training modules, courses and programs, as well as their methodological support, both in the form of MOOCs and in offline format
- Infrastructure components, such as laboratories, training centers, structural units, business incubators, etc.
- Organizational events, such as joint business projects, educational practices, internships, etc.

The conducted literature analysis did not reveal empirical data related to O&O in entrepreneurial education that would be relevant for direct comparison with the results of this article. However, one can use data from the report on the study of the entrepreneurial spirit of students, which covers 54 countries of the world, and 15 universities have been included in the study from Russian Federation (Global University Entrepreneurial Spirit Students Survey, GUESSS), as well as works on the impact of MOOCs on the success and psychological state of students [18,23,28].

For example, the GUESSS report provides student assessments of the university environment in terms of promoting entrepreneurship. Russian students in Management and Economics gave the university's entrepreneurial environment a score of 4.71 on a seven-point scale, while the current study participants scored the latter at 5.35 before O&O introduction and 5.98 after O&O introduction.
The difference in students' opinions can be partially explained by the fact that only 6.2% of Russian students, covered by the GUESSS research, study in entrepreneurship programs, and 63.1% of students do not have a single entrepreneurship course in their program.

However, it should be noted that the data on entrepreneurial courses in the GUESSS report are given for the entire sample of students, and the assessment of the university's entrepreneurial environment is differentiated by areas of study ("Management" and "Economics", natural sciences, social sciences). This contains a certain inaccuracy, which can be easily corrected for a more rational organization of the collected data. However, the present study results demonstrate that as a result of the introduction of O&O through the MOOC online learning environment, students have begun to perceive the university environment as more conducive to entrepreneurship. Researchers' observations indicate that the use of MOOCs also leads to improved motivation, personal interest in learning and improved academic performance within the university course [23].

Besides, the GUESSS report provides data on entrepreneurial intentions of students in the Russian Federation and other 53 countries, including the USA, Germany, Italy, France and others. In the Russian Federation, 6.9% of students already have their own business, and on average in the world, this figure is 11.2%. The results of the present study showed that 7.5% of students created their own business before the introduction of online O&O technologies and 10.7% of such students after O&O introduction. This indicator for the studied sample is significantly higher than that for the Russian Federation but slightly lower than the world average. In the sample of the GUESSS report, only 6.3% of Russian students and 10.7% of students in the world study in special entrepreneurial programs. The higher rate of having their own business for student entrepreneurs in the world can be explained by the fact that the average age of students in the current study sample is 20.6 years old, and the GUESSS sample is 23 years old, including more than 16% of respondents aged 25 to 31 years, and another 10% of respondents are over 31 years old. This age gap affects the experience and opportunities for starting a business before starting college.

The GUESSS report also allows one to compare data on those students who plan to start a business immediately after graduation or after a few years after graduation. The presented results separate data on students who plan to become founders of a business and students who plan to become successors in their parents' firm or in some other business. Both of these groups can be categorized as entrepreneurs. Taking into account the above, according to the GUESSS report, in the Russian Federation, 13.6% are going to become entrepreneurs after graduation, and another 56.5% - within 5 years after graduation. There are fewer such students in the international sample, 11.5% and 39%, respectively. In the present study's sample, before the introduction of O&O, 19.3% of students planned to become entrepreneurs after graduating from a university and 56.1% within 5 years after graduation. After the introduction of online mechanisms for attracting O&O, these figures were 25.1% and 58.3%, respectively. This indicates a higher level of entrepreneurial intentions supported by the MOOC O&O introduced into the educational process through online technologies, especially in the most active group of

[23]
potential entrepreneurs planning to create their own business immediately after graduation.

5 Conclusion

This study was conducted in 2019-2020 in order to obtain new experimental data and analyze the effectiveness of teaching entrepreneurship using outsourcing and outstaffing through online learning technologies within the framework of MOOCs. Thus, online learning mechanisms with O&O have been introduced into the process of teaching entrepreneurship in three Russian universities. The authors have managed to identify effective O&O directions for training entrepreneurs, which are determined, firstly, by the type of borrowed resources, and, secondly, by the source of borrowing. The combination of types of resources and their sources determines the mechanism for introducing O&O into the educational process.

Borrowed resources, access to which is provided by MOOC mechanisms, include teachers (professionals or employees of commercial companies), training modules, courses and programs, infrastructure components (laboratories, training centers, business incubators, etc.), organizational events (joint business projects, training practices, etc.). The sources of borrowing resources can be partner educational institutions, networks and communities, including cooperation between universities and businesses, as well as industrial enterprises.

The field study was conducted among 205 undergraduate students enrolled in entrepreneurial programs in Management and Economics at three Russian universities: VSU, IzhSTU, and SSPU. As a result of the study, the following hypotheses were confirmed. Namely, H1 "Implementation of O&O does not reduce student satisfaction with the educational process", H2 "Implementation of O&O does not reduce the level of students' understanding of theoretical teaching materials". H3 "Implementation of O&O does not reduce the level of students' understanding of practical learning tasks", H4 "The introduction of O&O has a positive impact on the business environment of the university". H5 "The introduction of O&O has a positive impact on the entrepreneurial intentions of students", H6 "The introduction of O&O does not reduce the level of students' achievements".

The practical significance of the results obtained in the article lies in the fact that the proposed approach allows one to effectively implement outsourcing and outstaffing using MOOC mechanisms and other online learning technologies for organizing entrepreneurial education.

The scientific novelty of the article lies in the fact that it analyzes the effectiveness of the implementation of outsourcing and outstaffing through MOOC technologies for organizing entrepreneurship training and confirms their effectiveness.

The results obtained can be applied in the process of teaching entrepreneurial disciplines using online outsourcing and outstaffing mechanisms in higher professional education institutions.
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