

# The Quantitative Analysis of Massive Open Online Courses (MOOC) for Learning English

Tetiana Sharova\*, Oksana Filatova, Lidiia Kavun, Alina Zemlianska, and Viktoriia Donii

**Abstract**—English is an international language for intercultural communication on the Internet, in the field of business and trade. MOOC are an effective means of the formation of English language skills in the conditions of distance learning and blended learning. The purpose of THE research is a quantitative analysis of the online courses for learning English, which are presented on the international (Udemy, Alison, FutureLearn, edX) and Ukrainian (Prometheus and EdEra) online platforms. During the research, we used quantitative research methods, which involved direct observation of the number of online courses on popular MOOC platforms as of January 2023. The similar criteria for comparing MOOC were the number of online courses, level of training, cost, and type of the course completion document. The analyzed online platforms contain 1675 courses on learning English. On the analyzed MOOC 1350 online courses (80.5%) are payable. Users can enroll on the courses of such levels as Beginner (699 courses, 41.7%), Intermediate (336 courses, 20.1%), Advanced (66 courses, 3.9%), and the courses without a specified level of training (574 courses, 34.3%). It was found that online courses provide additional options like Subtitles, Quizzes, Practice Tests, and Video Transcript, which help to learn English better. In the future, it is planned to study the influence of some elements of online courses on the quality of students' training and their educational motivation during blended learning.

**Index Terms**—MOOC, online courses, training, language, English.

## I. INTRODUCTION

Today we live in the era of globalization and internationalization of the information society. This process is characterized by the wide use of digital technologies, overcoming communication barriers at a distance, formation of new partnership ties at the international level. An important condition for international interaction is knowledge of a foreign language, which will allow you to communicate effectively and make mutual decisions. Ament [1], Finardi and Tyler [2] emphasize the importance of English for international communication and social integration. English is studied at schools, universities, and enterprises, which is

demonstrated in the works by Lo and Lin [3], Zhang [4], Rafiq and Hashim *et al.* [5] correspondingly. Thus, the educational need for learning foreign languages, in particular English, is constantly growing.

Modern digital technologies provide broad opportunities for learning and social interaction within the global virtual space. According to Marek and Chew *et al.* [6], distance technologies were especially relevant in the conditions of the COVID-19 pandemic when they became the main means of educational activity. For learning foreign languages, Shahrol and Sulaiman *et al.* [7] recommend using mobile technologies, Wen and Yang [8] suggest using learning management systems (LMS), Milthorpe and Clarke *et al.* [9] advise combining LMS and mobile technologies, Zhang [4] pays attention to the use of authors' online platforms. A promising electronic resource for learning English is massive open online courses (MOOC). Jitpaisarnwattana and Darasawang *et al.* [10] consider that MOOC can be used independently in non-formal education or as an additional tool for blended learning. Moreover, the work by Swai and Mangowi [11] draws attention to the use of MOOC during face-to-face learning with the use of corresponding teaching strategies.

Due to their popularity, language MOOC (LMOOC) attract the attention of many researchers. We can conventionally divide the research works on LMOOC into several groups. The examples of research in the first group are the works by Negre and Diego *et al.* [12], Perifanou and Economides [13], which concern the quality parameters; the works by Wong [14], Gómez [15], Donitsa-Schmidt [16], which concern pedagogical possibilities of MOOC, including those ones in the context of the COVID-19 pandemic. The second group of research includes the works by Gilliland and Oyama *et al.* [17], Uchidiuno [18], which analyze the design of online courses and the video content. The next group of research concerns the experience of using LMOOC by teachers, which is demonstrated in the works by Rubaai and Hashim [19], Len-Urritia and Cobos *et al.* [20]. Also, this group includes the research by Meri-Yilan [21], Duru and Sunar *et al.* [22], Dogan and Sunar *et al.* [23], which demonstrates the experience of using LMOOC by students, taking online courses depending on their previous language training. The research by Zawacki-Richter and Bozkurt *et al.* [24] is included into the fourth group, which deals with the analysis of the current state of research on MOOC in recent publications. Since learning a foreign language is a complex and specific process, the following group of works includes the research by Salinas and Burbat [25], which highlights the weaknesses of using MOOC for learning foreign languages.

It should be noted that MOOC platforms are constantly being improved and filled with new educational content, and the number of online courses is growing rapidly. It proves the

Manuscript received March 3, 2023; revised April 13, 2023; accepted June 2, 2023.

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relevance of online education in the conditions of the information society development. The growing interest in MOOC opens wide opportunities for language education, in particular for learning English. At the same time, an important task for the student is to choose the optimal platform and online course according to his/her own educational abilities and wishes. Therefore, the goal of our research is a quantitative analysis of online courses for learning English on well-known MOOC platforms. It will allow users to choose the most optimal online platform in terms of cost, level of training, number of courses, etc.

## II. BACKGROUND RESEARCH

### A. *The Importance of the English Language in the Context of Globalization*

Language is one of the main means of communication between people and it is a reflection of national culture. Knowledge of the state language helps you understand national traditions, history of the state formation, and it allows you to distinguish yourself among other nations. According to the work by Sharova and Bodyk *et al.* [26], communicating with native speakers of a foreign language and enriching your foreign language vocabulary helps you to learn gradually the specific features of another culture. In this way, intercultural interaction and strengthening of international ties are ensured in the conditions of globalization and international processes.

The widespread use of the English language as the main means of intercultural communication is associated with the development of information technologies and the rapid spread of the Internet [2]. Since a significant amount of information resources is presented in English in the virtual space, knowing English allows you to get many advantages. First of all, it concerns conducting business and trade at the international level [3]. Knowledge of English, at least at a minimal level, is a necessity, as it is used for making curricula vitae (CV), filling out questionnaires, and in business communication as well. Speaking about research work, we remember that English is the generally accepted language of publications in highly cited peer-reviewed journals. Communication of researchers from all over the world through social networks and specialized electronic resources is also carried out in English.

The ability to communicate in English affects the competitiveness of specialists and their performance of professional duties [5]. For example, in Ukraine, when applying for management positions at the state level, you are required to have fluency in English. English is necessary for employees who implement collective projects together with foreign partners. As an example, IT specialists often deal with the implementation of projects in a team of programmers from different countries. Symonenko and Zaitseva *et al.* [27] state that usually a team of developers is formed according to the professional qualifications and competences of each programmer for the implementation of a specific project. For effective communication, each team member must have developed communication skills and know at least one international language, which is usually English. In addition, most languages and programming environments are presented

in English. Therefore, knowledge of English is a necessary component of the programmer's productive work, which is mentioned in the work by Sharov and Kolmakova *et al.* [28].

Since English is known as the language of international communication, it also affects the education system. On the one hand, foreign language training allows students and teachers to participate in various programs of academic mobility (international internship, practice, etc.), scientific, social and educational projects at the international level. On the other hand, teachers' command of English allows attracting foreign students to a higher educational institution. This fact, in turn, affects the ranking and income of the university [1], which can change its status to the national university. In Ukraine, students must take the English exam to be enrolled for master's and postgraduate studies. The curriculum of almost all specialties includes the study of a foreign (English) language in a professional area. In the context of non-formal education, it is possible to improve a foreign language competence with the help of online/offline tutors, master classes, trainings and language courses. In addition, a variety of Open Educational Resources (OER) and services for learning English are available to everyone.

### B. *Key Features of Using MOOC in Language Learning*

MOOC are one of the typical representatives of OER which offer freely accessible digital learning materials on a free or partially free basis [22]. They are multimodal online platforms that allow using different data formats (text, video, images and their combinations) and provide a cumulative learning effect. MOOC have become especially relevant in the context of the COVID-19 pandemic [15, 16] when students cannot communicate personally and learn online. The same applies to students with special educational needs who are physically unable to attend classes [9, 17].

Learning a foreign language is provided by a significant number of online courses on various MOOC platforms which differ in design, educational content, payment methods, etc. Most of the courses deal with learning English [14, 26]. In addition, most of online platforms offer educational content in English, which once again confirms its importance as an international language. MOOC are characterized by the following general advantages: independence from geographical location, economic advantage (free or minimal payment for online learning) [17, 19]; self-paced character of taking the online course [5, 16]; an opportunity to get higher education; development of additional competences that will be needed in professional activity [15]; an opportunity to receive a certificate after successful completion of the course. According to S. W. Chong, the advantage of MOOC is a wide selection of online courses which are focused on different levels of student training [29].

At the same time, in addition to providing free access to the virtual learning environment, MOOC should meet students' educational needs [21]. In this context, the effectiveness of language training is ensured by the use of authentic materials [10], language practice in groups [9], etc. An important component of language training, according to Agonács and Matos [30], is communication with native speakers. Therefore, the use of LMOOC has certain difficulties which include insufficient interaction or its absence between the

students and the developers of the online course [13], imperfect evaluation methods used for the results of language training [16]; low quality of individual online courses; limited opportunities for students to discuss learning material [14]. As a result, some studies show a very pessimistic view of the MOOC potential as for learning a foreign language [25].

In our opinion, the use of electronic educational resources is a current demand that cannot be ignored. Therefore, weaknesses in the use of MOOC should be taken into account and gradually strengthened. In this context, we follow the opinion of Shahrol and Sulaiman *et al.* [7] and consider the provision of optimal educational technology as a key success factor in learning and teaching English. As a result, the search and validation of effective techniques for using LMOOC is reflected in numerous research works. Perifanou and Economides [13] carried out the quantitative analysis of LMOOC according to 6 dimensions: content; pedagogical interaction; assessment of student achievements; social interaction; technical capabilities and usability; funding and tuition fees. According to the author, this will allow determining the main elements of an online course that will help to learn a foreign language effectively.

The effectiveness of taking an online course is affected by the level of students' language training. Duru and Sunar *et al.* [22] note that those users for whom English is their native language will be more successful in taking the course (meaning activity and the number of items completed). Another part of students will face greater difficulties in completing the online course. It is especially true in case the course is taken independently, without the help of a native speaker. To solve this problem, researchers suggest dividing students into groups and using different learning strategies. The following approaches are used to distinguish different groups: determining the users' location [23]; development of user interaction with educational content [18]; using patterns of regular expressions [22], etc. In addition, most of modern MOOC have a multilingual interface which allows students from different countries to learn English.

An important factor in the successful completion of an online course is the availability of high-quality educational content, authenticity and copyright protection. Usually, MOOC mean that students should watch videos, read lecture material, and complete test tasks. At the same time, each of the educational elements of the online course should be aimed at developing language skills in different contexts. Agonács and Matos [30] think that they are best developed through receptive activities. Therefore, in LMOOC, important attention should be paid to the video content which is considered the most powerful educational component of the online course. The video should provide subtitles and transcripts [21], contain visual support in the form of the text, figures, demonstrations [18], etc. Audio files, including authentic English songs [3], are also effective educational content for learning English. In this context, Estebas-Vilaplana and Solans [31] applied the method of studying phonetics with the help of MOOC, during which the stress and rhythm of musical and literary forms are studied. Sometimes online courses offer practical tasks with further verification by the course developer.

To ensure interactive communication between students, researchers suggest using discussion boards [17], comments and surveys [21], discussion forums [22]. Otherwise, the majority of students will remain passive "spectators" and not active "performers", as it is stated in the work by Martín-Monje and Castrillo *et al.* [32]. So, MOOC developers must improve the capabilities of online platforms according to the user requests.

### III. METHODOLOGY

During the research, we used the analysis and generalization of scientific literature on the subject of MOOC, which made it possible to determine the peculiarities of learning English with online courses. The quantitative (descriptive) research method involved direct observation of the number of online courses on various MOOC platforms as of January 2023. This method allowed us to obtain static data, which later were grouped according to several criteria: the number of online courses, level of user training, cost, and type of the course completion document. For this, international (Alison, FutureLearn, Udemy, edX) and Ukrainian (EdEra, Prometheus) online platforms were analyzed. The selection of MOOC for analysis was based on the previous research by Sharova and Bodyk *et al.* [26] (international online platforms) and Sharov and Pavlenko *et al.* [33] (Ukrainian online platforms). It was assumed that in addition to the criteria that are the same for all the MOOC, each platform has specific features related to the display and organization of the educational content.

The selection of online courses was formed on the basis of thematic headings related to the study of English.

The search for online courses on Alison platform was carried out in the thematic block "Explore Diplomas & Certificates" – "Language" where 245 online courses for learning Italian, Spanish, French and other languages are available. The sample for the analysis consisted of 116 online courses which are in the thematic heading "Language" – "English language". For a more detailed analysis, filtering of courses was used according to the following criteria: subjects, type, level, duration.

The selection of online courses on Udemy platform was carried out on the basis of the thematic section "Categories" – "Teaching & Academics" – "Language Learning" – "English language". This section contains 1501 online English courses. In the research we used the following criteria for the quantitative analysis of online courses: video duration, topics, subcategory, level, price, subtitles, etc.

In order to search for and quantitatively analyze online courses on FutureLearn platform, you should use the sequence of thematic sections "Subject" – "Language" – "Learn English". There are 21 online English courses and a program called "ExpertTracks" which consists of 4 courses. In order to get additional information about the course (developer, duration, number of students, rating, etc.), you need to go to the page of each analyzed course.

On edX online platform, online language courses are available in the section "Courses" – "Language" where 549 courses are offered to the user. Unfortunately, it is very

difficult to make a selection of online English courses using this section manually. Therefore, for the quantitative analysis, a sample was formed according to the following sequence of sections: “Courses” – “All subjects” – “Language” – “English”. In this way, 27 separate online courses and 4 language training programs were found, which involve the completion of a complex of 2–4 courses. In order to get additional information about the course (developer, duration, level, cost, etc.), you need to go to the page of each analyzed course.

The selection of online courses on EdEra platform was carried out manually according to the analysis of the course titles. In this way, 3 online courses for learning English were found. A selection of 7 online courses on Prometheus platform was formed according to the category “Courses” – “English”. To obtain additional information about the course, you need to go to the page of each analyzed course.

The quantitative analysis was carried out in several stages: a) collection of information about the number of online courses on a specific online platform according to various criteria that were available for analysis; b) presentation of the received data in tabular form for each MOOC platform; and c) grouping and presentation of received quantitative data on all the MOOC platforms in tabular form. In order to calculate total quantitative data according to various criteria and to present them in the form of charts we used Microsoft Excel and its built-in functions.

#### IV. RESULTS

The total number of online foreign language courses on Alison platform is 245 courses, which are available in the “Language” section. The interface of Alison platform is available in English, Spanish, French, Italian and Portuguese. Owing to the multilingual user interface and advanced filtering service, you can quickly find the course you need and start learning. The user is offered 116 English courses, which is 47% of the total number of online language courses on Alison platform (Table I).

TABLE I: NUMBER OF ONLINE ENGLISH COURSES ON ALISON PLATFORM

Indicators	Number of online courses
<i>Course Level</i>	
Beginner	59
Intermediate	35
Advanced	22
<i>Course Type</i>	
Certificate	112
Diploma	4
<i>Course Duration</i>	
2–3 hours	104
3–4 hours	8
7–10 hours	2
11–15 hours	2
<i>Course Language</i>	
English	116
<i>Cost of training</i>	
Free	116

The analysis of Table I showed that all of the analyzed online courses are free, and they are available in English.

Most of online courses (104 courses, 89.6%) will take 2–3 hours of learning. A significant amount of learning time (7-10 hours and 11-15 hours) is required only for 4 courses. A useful criterion for the selection of English courses is the level of training. All courses are designed for three levels of difficulty: Beginner, Intermediate, and Advanced. In this way, differentiation of online courses is ensured according to the language training of users. We can also see the dependence of the number of courses on the level of training. There are 59 online courses (51%) for Beginners, 35 online courses (30%) for the Intermediate level, and 22 online courses (19%) for the Advanced level. Thus, we can conclude that online courses for beginners that contain short video content prevail on Alison online platform.

The majority of online courses (112 courses, 96%) on Alison platform provide a certificate upon their successful completion. It should be added that the free version of the certificate contains the “Sample” watermark. You have to pay for a full-fledged certificate without the watermark. Only 4 courses offer taking a course and getting a diploma. Of them, 3 online courses (75%) are designed for advanced users. All of them successfully passed certification in a specific field of activity: Hospitality Management, Tourism and Business. Only one course out of four is designed for beginners.

For convenience, Alison online platform offers the user relevant subjects that contain online courses related to the topic. In the “English language” section, the user is offered the following subjects: Front Desk, Tefl, Esl, Languages, English Vocabulary, English Grammar, English Writing. Individual courses are duplicated in different categories, but all of them are part of Alison’s overall selection of online courses.

The interface of Udemy platform is available in 19 languages, including English, German, Spanish, French, Italian, and Polish. It allows reducing language difficulties for those users for whom English is not their native language. There are 1501 online English courses on the online platform. Compared to August 2021 [26], the number of online English courses on Udemy platform has increased by 66 courses. Each online course, in turn, refers to topics, subcategories. The subcategory “Language Learning” is the most significant since it includes 1378 online courses. The most common topics are “English Conversation” (25 online courses), “English Grammar” (24 online courses), “English Vocabulary” (21 online courses), “English Pronunciation” (17 online courses). Similarly to Alison online platform, all online courses on Udemy platform are designed for different levels of student training (Table II).

TABLE II: NUMBER OF ONLINE ENGLISH COURSES ON UDEMY PLATFORM

Level	Coun t	Paid	Free	Subtitles	Quizzes	Practice Tests
Beginner	603	513	90	163	159	39
Intermediate	281	253	28	115	94	20
Expert	44	43	1	6	10	5
All levels	573	528	45	169	111	72
Total	1501	1337	164	453	374	136

The analysis of Table II showed that Udemy online platform offers paid (1337 online courses, 89% of the total) and free (164 online courses, 11% of the total) educational

content. If we take into account the level of student training, then most of the online courses are designed for the Beginner level (603 online courses, 40% of the total number). There are least of all online courses for Expert users (44 online courses, 3%). Some of the courses on learning English (573 online courses, 38%) do not consider the level of student training. Most of the educational material in online courses is presented in the form of video lectures with the length of 1 to 17+ hours (Fig. 1).

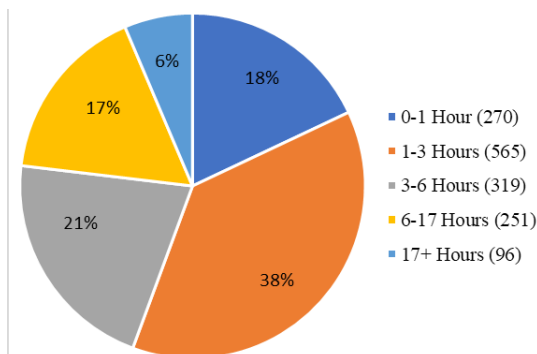


Fig. 1. Number of online courses by the volume of video content on Udemy platform.

As we can see from Fig. 1, video files with the length of 1–3 hours are the most frequent on Udemy platform (565 online courses, 38% of the total number of online courses). With the simultaneous use of two filters (the level of training and length of video), we have the following indicators for video files with the length of 1–3 hours: 259 (46%) online courses for the Beginner level, 111 (20%) online courses for the Intermediate level, 16 online courses (3 %) for the Expert level. There are 179 (31%) online courses which do not consider the level of language training. There is the least number of video lectures that are longer than 17 hours (96 online courses, 6% of the total number of online courses).

For quality learning of English, online courses offer additional opportunities in the form of Subtitles (453 online courses, 30% of the total number), Quizzes (374 online courses, 25% of the total number), Practice Tests (136 online courses, 9% of the total number online courses on learning English). It should be added that certain online courses have several functionalities, so it is not possible to obtain a total quantitative indicator for each of them. Subtitles are offered in different languages. For the Beginner level, most of subtitles are in English (148 courses), Spanish (112 courses) and Portuguese (87 courses). For the Intermediate level, most of subtitles are in English (149 courses), Turkish (21 courses) and Spanish (20 courses). For the Expert level, most of subtitles are in Turkish (19 courses), English (13 courses) and French (3 courses).

All of the online English courses on FutureLearn platform are available in the section “Learn English”, which allows you to find the desired course quickly and familiarize yourself with its features. The course page contains information about the start date, lecturers, requirements for the level of students’ training, etc. FutureLearn interface is available in English. The online platform offers 21 online English courses from well-known universities and educational centres. All courses have a high popularity rating, which lies in the range of

4.4–4.9 points. The majority of online courses are designed for 4 weeks (10 courses, 48% of the total number of online courses) or 3 weeks (6 courses, 28% of the total online). The weekly workload in most cases is 3 hours (11 courses, 52%) or 4 hours (7 courses, 33%). The amount of time to study one online course can vary from 6 to 18 hours. Other information about online English courses is presented in Table III.

TABLE III: NUMBER OF ENGLISH COURSES ON FUTURELEARN PLATFORM

Level	Count	Paid	Free	Quizzes
Introductory	7	4	3	2
Intermediate	13	8	5	7
All levels	1	1	0	1
Total	21	13	8	10

The analysis of Table III showed that there are paid (13 courses, 62% of the total number of online courses) and free (8 courses, 38%) online courses on FutureLearn platform. Most of the online courses (13 courses, 62%) are designed for the Intermediate level of training. Only one course does not specify the level of training. There are no online English courses for the Advanced level on FutureLearn platform.

There are some important indicators which prove the success of an online course. They are the number of registered students and the number of reviews on the course. The largest number of registered users (832,878 students) is on the online course “Basic English 1: Elementary” (developed by King’s College London). Among the total sample, there are 4 new online courses which do not have registered users yet. The largest number of reviews are for the online courses “Basic English 1: Elementary” (5313 reviews) and “Basic English 2: Pre-Intermediate” (3963 reviews). New courses have no feedback from users.

The information about the developers and their reputation is important when choosing an online course. 10 educational institutions joined the development of online courses on FutureLearn platform. Most courses were developed by Macquarie University (6 online courses, 29%), Chasing Time English (4 online courses, 19%), King’s College London (3 online courses, 14%). Other universities developed 1 online course each (Fig. 2).

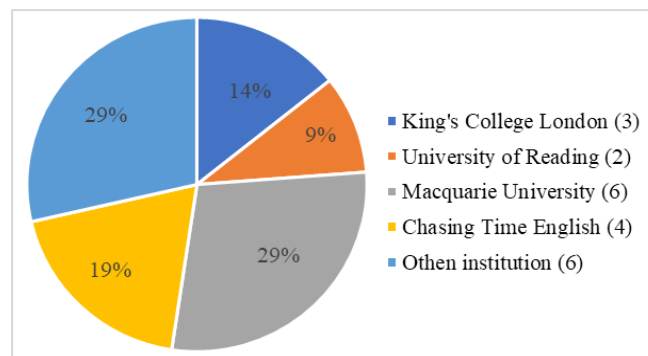


Fig. 2. The number of developers of online courses on FutureLearn platform.

EdX online platform offers 27 online courses for learning English. On the course page, you can find information about the developers, duration, cost, etc. The edX interface is available in English and Spanish. Most online courses are designed for 4 weeks (8 courses, 30% of the total number of online courses) or 6 weeks (6 courses, 22% of the total

number). In most cases the weekly workload is 3–5 hours (10 courses, 37%) or 3–4 hours (5 courses, 18%). All online courses are self-paced. All video material is presented in English with English transcript. Similar to other online platforms, edX language courses are designed for different levels of student training. 74% (20 courses) provide the Introductory level, 26% (7 courses) are designed to train students at the Intermediate level. There are no online English courses for the Advanced level on edX platform.

All courses on edX online platform are conditionally free. That is, the user can register for courses and learn English. However, for the free version there are restrictions as for the access to the educational material. In addition, obtaining a certificate after completing an online course is available only for the paid version. The cost of online courses varies in different ranges: 1–49 USD (7 courses, 26% of the total number of online English courses), 50–99 USD (10 courses, 37%), 100–149 USD (4 courses, 15%), 150–199 USD (6 courses, 22%). In addition, the user can sign up for 4 language training programs that offer several online courses (2–4 courses) for 4-8 months. The training programs cost less than paying for each online English course. The cost of programs is in the range of 180–465 USD.

Similar to FutureLearn, edX online platform offers users online courses from leading educational institutions and training centres. 13 educational institutions joined the development of online courses on edX platform. The largest number of online courses was developed by Universitat Politècnica de València, University of California, University of Washington (4 online courses each), Tsinghua University (3 online courses), Educational Testing Service, The Hong Kong University of Science and Technology, United Arab Emirates University (2 online courses each). Other universities developed 1 online course each (Fig. 3).

The impetus for the emergence of Ukrainian MOOC was the desire to create quality educational content in the Ukrainian language. The first online courses appeared on Prometheus platform in 2014, on EdEra platform in 2015, and on the Open University of Maidan (OUM) platform in 2016. Today, they remain the most popular in the Ukrainian-speaking region. EdEra’s online courses are more focused on school, professional and civic education. This platform is supported by the Ministry of Education and Science of Ukraine, international partners IREX, VOX, etc. MOOC Prometheus contains courses on a wide range of topics which are aimed at personal development, business, civic education and educational activities. The platform actively cooperates with well-known foreign MOOC, international organizations, and government institutions [33]. Since the OUM online platform does not have online English courses, we analyzed only EdEra and Prometheus platforms.

Today, MOOC EdEra offers users 96 online courses on various topics. The online platform does not have a search and filter tool which can be considered a functional drawback. The user interface is in Ukrainian.

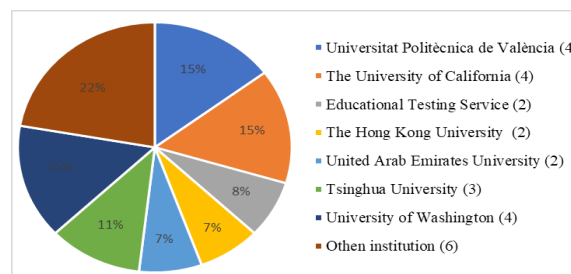


Fig. 3. Number of developers of online courses on edX platform.

Only 3 courses are offered for learning English (Table IV).

TABLE IV: NUMBER OF ENGLISH COURSES ON EDERA PLATFORM

The course title	Free	Number of modules	Certificate, hours	Amount of video	Level
Exam Strategies from A to Z	+	5	20	15	Beginner
IZI ZNO. The English language	+	8	30	45	Beginner
The English language: parts of speech	+	6	35	12	Beginner

TABLE V: QUANTITATIVE INDICATORS OF ONLINE ENGLISH COURSES

Indicators	MOOC						Total
	Udemy	Alison	FutureLearn	edX	Prometheus	EdEra	
Total	1501	116	21	27	7	3	1675
<i>Course Level</i>							
Beginner	603	59	7	20	7	3	699
Intermediate	281	35	13	7	0	0	336
Advanced	44	22	0	0	0	0	66
No level	573	0	1	0	0	0	574
<i>Cost of training</i>							
Paid	1337	0	13	0	0	0	1350
Free	164	116	8	0	7	3	298
Conditionally free	0	0	0	27	0	0	27
<i>Course Type</i>							
Certificate	1501	112	21	27	7	3	1671
Diploma	0	4	0	0	0	0	4

The analysis of Table IV showed that all of the offered courses are free; they are aimed at the Beginner level of students and allow you to receive a certificate after successful completion of the course. Within the course you can take 5–8 thematic modules. Considering the small number of modules,

developers give 20 to 40 hours for taking the course.

The Ukrainian platform Prometheus is more developed than EdEra. Everyone is invited to use the filtering module for online courses which will allow them to search for the desired course. The Prometheus interface is available in English and



Ukrainian. Among 312 online courses on various topics, users are offered 7 free online courses on learning English. It should be added that 5 courses (71% of the total number of English courses) are duplicates of the original courses taught on Coursera. They are designed for 5 weeks and are provided in English.

The generalized data on English courses that are located on various online platforms are presented in Table V.

The analysis of Table V showed that there are 1675 English courses on the analyzed MOOC platforms. Most of the online courses are located on Udemy (1501 courses) and Alison (116 courses) platforms. Unfortunately, the smallest number of online courses for learning English is presented on the Ukrainian online platforms Prometheus (7 courses) and EdEra (3 courses). All online platforms allow you to get a certificate after successfully completing the course. Additionally, Alison offers to take 4 advanced training programs and receive diplomas.

All of the online platforms take into account different levels of student training. The maximum number of the Beginner level courses are presented on such online platforms as Udemy (603 courses), Alison (59 courses) and edX (20 online courses). FutureLearn MOOC is mostly aimed at the Intermediate level of users (13 online courses). Online courses for the Advanced level are available only on Udemy (44 courses) and Alison (22 courses) online platforms. Ukrainian platforms offer online courses only for the Beginner level.

If we compare the cost of online courses on different MOOC platforms, we can see 100% free courses on such online platforms as Alison (116 courses), Prometheus (7 courses) and EdEra (3 courses). The majority of paid courses are presented on Udemy (1337 courses, 89%) and FutureLearn (13 courses, 62%) platforms. On edX platform, you can take 100% of the online courses, but they have restrictions regarding the certificate and access to the learning materials. Therefore, they are classified as a separate group of conditionally free courses.

## V. DISCUSSION

In the context of the active implementation of online education, the issues related to ensuring the quality of educational content, students and teachers' support, and the choice of the optimal technological platform remain relevant [24]. To solve these problematic issues, the capabilities of LMS [8], author's online resources [4] and other software solutions are used. In this context, MOOC is considered an alternative/additional means of studying academic disciplines, professional and advanced training [5, 28], and lifelong education. Despite the fact that some researchers have low opinion of certain LMOOC [13] and pessimistic views of their usefulness [25], in recent years MOOC have become more functional and they have taken into account the disadvantages of distance learning.

Researchers draw attention to some weaknesses of MOOC for learning a foreign language. They involve the lack of direct communication with native speakers, lack of language practice [14], low motivation of students to take the course

[19], etc. Some difficulties may arise for non-native speakers of English [17, 22]. In this case, a promising direction for improving the quality of online language courses is the use of personalized [23] or adaptive [12] approaches. The personalized trajectory for the successful completion of the online course is ensured by taking into account the level of student training, the variety and number of practical tasks [32], the use of various forms of educational material presentation and means of feedback, and a multilingual user interface.

While doing the research we found that most MOOC have a multilingual interface. For example, Alison's interface is available in 5 languages, Udemy's interface is available in 19 languages, edX and Prometheus' interface is available in 2 languages. Some of the online platforms diversify online English courses through additional educational components. You can find detailed information about these opportunities on such platforms as Udemy (availability of Subtitles, Quizzes, Practice Tests), edX (availability of video transcript), FutureLearn (availability of Quizzes), EdEra (availability of tests, exam). All of this makes the process of taking an online course and mastering the necessary competences much easier.

Modern LMOOC have significantly advanced towards differentiating learning according to the students' level of English. In this context, most of the analyzed online platforms (Alison, Udemy, edX, EdEra and Prometheus) focus on the beginner level of language skills. For more advanced users, we recommend visiting FutureLearn online platform where most online courses provide the Intermediate level. Differentiation of learning is also provided due to the different number of weeks for taking an online course and different weekly workload. We found out that Alison and Udemy platforms differentiate courses on the number of hours required to take a particular course. Alison favors 2–3 hour courses while Udemy mostly designs 1–3 hour courses. FutureLearn and edX platforms differentiate online courses by the number of weeks and the number of hours per week. Most of FutureLearn courses are 3–4 weeks long while edX prefers courses that take 4–6 weeks. Most of online courses on EdEra and Prometheus platforms are designed for 5 weeks.

In our opinion, the choice of an online platform and online course depends on the educational capabilities and goals of a particular user. For users who have the Beginner level of language skills, we recommend to choose free online courses of the Beginner level or without any specified level, which are located on the platforms where the language interface is in the user's native language. For more advanced users, we recommend using Udemy, Alison, FutureLearn platforms. Before signing up for the course, you should read carefully the accompanying information and learn about the topics that will be covered, about the passing score for obtaining a certificate, as well as about the availability of additional options (Subtitles, Quizzes, Practice Tests, etc.).

The best option, in our opinion, is to use MOOC during blended learning. In this case, MOOC will allow us to expand the possibilities of face-to-face learning [15] and ensure a balance between that learning and online education [16]. As it is stated in the work of Estebas-Vilaplana and Solans [31], the implementation of MOOC at the level of regulatory documents is quite a problematic task, since the curriculum

has permanent educational components. We believe that according to the principle of academic freedom, every teacher within the limits of his/her discipline can encourage students to take online courses. For example, based on the online course you can create training exercises [9], tasks for joint learning and assessment of language skills [29]. Moreover, a course completion certificate can be accepted as a form of assessment for a specific educational topic or module. Using MOOC in this way is considered promising and needs further research.

## VI. CONCLUSION

Thus, in the conditions of society globalization and internationalization, English performs the role of an international language of communication. It is a necessary component of intercultural communication on the Internet, in the field of business and trade, in the process of professional training for certain specialties. As a result, learning English is introduced in educational institutions of different accreditation levels, and the level of English is important for employability.

MOOC are considered an effective means of learning English in the conditions of blended and distance learning. For this, students should choose the right platform and find the right online course, taking into account their own needs and abilities. They can use well-known international online platforms, such as Udemy (1501 courses), Alison (116 courses), FutureLearn (21 courses), edX (27 courses) and Ukrainian online platforms, such as Prometheus (7 courses) and EdEra (3 courses), which contain 1675 courses on learning English. On the analyzed MOOC 1350 (80.5%) online courses are payable. The largest number of payable courses are presented on such platforms as Udemy (1337 courses) and FutureLearn (13 courses). On such online platforms as Alison, Prometheus and EdEra all the courses are free. Users can enroll on the courses of such levels as Beginner (699 courses, 41.7%), Intermediate (336 courses, 20.1%), Advanced (66 courses, 3.9%), as well as on the courses without a specified level (574 courses, 34.3%). For better learning of English, online courses have additional options like Subtitles, Quizzes, Practice Tests (Udemy), Quizzes (FutureLearn), video transcript (edX), tests, exam (EdEra), etc.

Based on the analysis of quantitative indicators, it can be concluded that such online platforms as Udemy and Alison provide most opportunities for learning English. They have the largest number of online courses, they are designed for different levels of user training, they have a multilingual interface, and they allow you to use free educational content, including video lectures.

In our research, we paid attention only to quantitative indicators. We found out that the same indicators for all the analyzed MOOC are the expected level of training, the cost of the online course, and the type of the document at the end of the course. At the same time, on some platforms there is no information on such indicators as duration of training, number of hours per week, length and number of video lectures, or developers. In the future, we plan to study the influence of

individual elements of the online course on the quality of students' training and their educational motivation during blended learning.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

## AUTHOR CONTRIBUTIONS

Tetiana Sharova developed the structure of the article, wrote and refined the paper, analyzed the Alison platforms. Oksana Filatova collected and analyzed the information on the online courses on the Udemy platform. Lidiia Kavun analyzed the Prometheus and EdEra platforms. Alina Zemlianska analyzed the courses on the FutureLearn and edX platforms. Viktoriia Donii generalized the data and drew up the References. All the authors approved the final version.

## REFERENCES

- [1] J. Ament, "The role of internationalization and English as a lingua Franca in English-medium instruction in higher education," *Atlantis*, vol. 43, no. 2, pp. 219–231, 2021, <https://doi.org/10.28914/ATLANTIS-2021-43.2.12>
- [2] K. R. Finardi and J. R. Tyler, "The role of English and technology in the internationalization of education: Insights from the analysis of Moocs," in *Proc. Edulearn15 Conf.*, 2015, pp. 11–18.
- [3] C. F. Lo and C. H. Lin, "The impact of English learning motivation and attitude on well-being: Cram school students in Taiwan," *Future Internet*, vol. 12, no. 8, pp. 1–15, 2020, <https://doi.org/10.3390/FI12080131>
- [4] L. Zhang, "Development of an information-based online foreign language teaching platform with ASP.NET," *International Journal of Emerging Technologies in Learning*, vol. 14, no. 13, pp. 117–128, 2019, <https://doi.org/10.3991/ijet.v14i13.10711>
- [5] K. R. Rafiq, H. Hashim, and M. Md Yunus, "MOOC for training: How far it benefits employees?" *Journal of Physics: Conference Series*, vol. 1424, 2019, <https://doi.org/10.1088/1742-6596/1424/1/012033>
- [6] M. W. Marek, C. S. Chew, and W. C. V. Wu, "Teacher experiences in converting classes to distance learning in the covid-19 pandemic," *International Journal of Distance Education Technologies*, vol. 19, no. 1, pp. 89–109, 2021, <https://doi.org/10.4018/IJDET.20210101.oa3>
- [7] S. J. M. Shahrol, S. Sulaiman, M. R. Samingan, and H. Mohamed, "A systematic literature review on teaching and learning english using mobile technology," *International Journal of Information and Education Technology*, vol. 10, no. 9, pp. 709–714, 2020, <https://doi.org/10.18178/ijiet.2020.10.9.1447>
- [8] J. Wen and F. Yang, "Use of Moodle in college English language teaching (Reading and listening) in China: A narrative review of the literature," *International Journal of Information and Education Technology*, vol. 10, no. 6, pp. 466–470, 2020, <https://doi.org/10.18178/ijiet.2020.10.6.1408>
- [9] N. Milthorpe, R. Clarke, L. Fletcher, R. Moore, and H. Stark, "Blended English: Technology-enhanced teaching and learning in English literary studies," *Arts and Humanities in Higher Education*, vol. 17, no. 3, pp. 345–365, 2018, <https://doi.org/10.1177/1474022217722140>
- [10] N. Jitpaisarnwattana, P. Darasawang, and H. Reinders, "Delving into personalisation behaviours in a language MOOC," *International Journal of Learning, Teaching and Educational Research*, vol. 21, no. 1, pp. 92–108, 2022, <https://doi.org/10.26803/ijlter.21.1.6>
- [11] C. T. Swai and S. E. Mangowi, "Mining school teachers' MOOC training responses to infer their face-to-face teaching strategy preference," *The International Journal of Information and Learning Technology*, vol. 39, no. 1, pp. 82–94, 2022, <https://doi.org/10.1108/IJILT-07-2021-0102>
- [12] C. A. Negre, Á. R. Diego, and C. T. Cornejo, "MOOC quality as a challenge for language teaching in digital environments," *Circulo de Linguística Aplicada a La Comunicación*, vol. 76, pp. 49–66, 2018, <https://doi.org/10.5209/CLAC.62497>
- [13] M. A. Perifanou and A. A. Economides, "MOOCs for foreign language learning: An effort to explore and evaluate the first practices," in *Proc. 8th International Technology, Education and Development Conf.*, 2014, pp. 3561–3570, 2014.



- [14] B. T. Wong, "A survey on the pedagogical features of language massive open online courses," *Asian Association of Open Universities Journal*, vol. 16, no. 1, pp. 116–128, 2021, <https://doi.org/10.1108/AAOUJ-03-2021-0028>
- [15] F. G. Gómez and P. M. Gómez, "Use of MOOCs in health care training: A descriptive-exploratory case study in the setting of the covid-19 pandemic," *Sustainability*, vol. 13, no. 19, pp. 1–16, 2021, <https://doi.org/10.3390/su131910657>
- [16] S. Donitsa-Schmidt, R. Ramot, and B. Topaz, "Shaping the future of distance learning in teacher education: MOOCs during COVID-19," *Perspectives in Education*, vol. 40, no. 1, pp. 250–267, 2022, <https://doi.org/10.18820/2519593X/PIE.V40.I1.15>
- [17] B. Gilliland, A. Oyama, and P. Stacey, "Second language writing in a MOOC: Affordances and missed opportunities," *TESL-EJ*, vol. 22, no. 1, pp. 1–25, 2018.
- [18] J. Uchidiuno, K. Koedinger, J. Hammer, E. Yarzebinski, and A. Ogan, "How do English language learners interact with different content types in MOOC videos?" *International Journal of Artificial Intelligence in Education*, vol. 28, no. 4, pp. 508–527, 2018, <https://doi.org/10.1007/s40593-017-0156-x>
- [19] N. Rubaai and H. Hashim, "Polytechnic ESL lecturers' acceptance of using massive open online course (MOOC) for teaching English as a second language (ESL)," *International Journal of Innovative Technology and Exploring Engineering*, vol. 8, no. 9, pp. 114–121, 2019, <https://doi.org/10.35940/ijitee.i7530.078919>
- [20] M. Len-Urritia, R. Cobos, and K. Dickens, "MOOCs and their influence on higher education institutions: Perspectives from the insiders," *Journal of New Approaches in Educational Research*, vol. 7, no. 1, pp. 40–45, 2018, <https://doi.org/10.7821/naer.2018.1.252>
- [21] S. Meri-Yilan, "The online interface and social inclusion: A MOOC study in Turkey," *Journal of Interactive Media in Education*, no. 1, pp. 1–10, 2020, <https://doi.org/10.5334/jime.558>
- [22] I. Duru, A. S. Sunar, S. White, B. Diri, and G. Dogan, "A case study on English as a second language speakers for sustainable MOOC study," *Sustainability*, vol. 11, no. 10, pp. 1–24, 2019, <https://doi.org/10.3390/su11102808>
- [23] G. Dogan, A. S. Sunar, I. Duru, and S. White, "Who is the English as a second language speaker in this MOOC?" *International Journal of Information and Education Technology*, vol. 8, no. 3, pp. 213–217, <https://doi.org/10.18178/ijiet.2018.8.3.1035>
- [24] O. Zawacki-Richter, A. Bozkurt, U. Alturki, and A. Aldraiweesh, "What research says about MOOCs - An explorative content analysis," *International Review of Research in Open and Distance Learning*, vol. 19, no. 1, pp. 242–259, 2018, <https://doi.org/10.19173/irrodl.v19i1.3356>
- [25] M. J. V. Salinas and R. Burbat, "Foreign language learning with MOOC: Back to the future?" *Revista de Linguística y Lenguas Aplicadas*, vol. 12, pp. 151–159, 2017.
- [26] T. Sharova, O. Bodyk, V. Kravchenko, A. Zemlianska, and N. Nisanoglu, "Quantitative analysis of MOOC for language training," *International Journal of Information and Education Technology*, vol. 12, no. 5, pp. 421–429, 2022, <https://doi.org/10.18178/ijiet.2022.12.5.1636>
- [27] S. V. Symonenko, N. V. Zaitseva, and V. V. Osadchyi, "Communicative patterns for IT professionals as means of mastering communication skills," *Journal of Physics: Conference Series*, vol. 1946, 2021, <https://doi.org/10.1088/1742-6596/1946/1/012020>
- [28] S. Sharov, V. Kolmakova, T. Sharova, and A. Pavlenko, "Analysis of MOOC on programming for IT specialist training," *TEM Journal*, vol. 10, no. 4, pp. 1884–1894, 2021, <https://doi.org/10.18421/TEM104-52>
- [29] S. W. Chong, M. A. Khan, and H. Reinders, "A critical review of design features of LMOOCs," *Computer Assisted Language Learning*, pp. 1–21, 2022, <https://doi.org/10.1080/09588221.2022.2038632>
- [30] N. Agonács and J. F. Matos, "Understanding language MOOC learners: The issue of capability development," *International Journal of Emerging Technologies in Learning*, vol. 14, no. 11, pp. 123–137, 2019, <https://doi.org/10.3991/IJET.V14I11.10205>
- [31] E. Estebas-Vilaplana and M. Solans, "The role of a pronunciation lmoooc in higher education studies," *Journal of Interactive Media in Education*, no. 1, pp. 1–10, 2020, <https://doi.org/10.5334/jime.589>
- [32] E. Martín-Monje, M. D. Castrillo, and J. Mañana-Rodríguez, "Understanding online interaction in language MOOCs through learning analytics," *Computer Assisted Language Learning*, vol. 31, no. 3, pp. 251–272, 2018, <https://doi.org/10.1080/09588221.2017.1378237>
- [33] S. Sharov, A. Pavlenko, T. Sharova, and O. Chorna, "Analysis of developers of online courses on Ukrainian platforms of MOOC," *International Journal of Emerging Technologies in Learning*, vol. 16, no. 5, pp. 201–213, 2021, <https://doi.org/10.3991/ijet.v16i05.18581>

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