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### **USING THE E-LEARNING LEARNING PLATFORM MOODLE AS AN EFFECTIVE WAY TO IMPLEMENT A DISTANCE FORM OF LEARNING IN THE PROFESSIONAL TRAINING PROCESS**

**Abstract.** The article highlights the problem of implementing the electronic learning platform Moodle to the method of implementing distance learning in the process of professional training of higher education applicants for EP «Management». A review of scientific sources has shown that the problem of using the Moodle platform is actively and variously studied. In particular, there is a thorough work on its effectiveness when working with students, future specialists in socioeconomic professions: linguists, teachers, but little has been found about the application of this method of working with managers, which makes our study relevant.

In the first phase of our study, in addition to reviewing the thematic scientific literature, we monitored the use of the Moodle learning platform in the world. The data obtained showed that Ukraine is not among the top countries in the use of this training platform. In the first positions of Europe, North and South America. This is due to the fact that until recently, the use of Moodle in domestic higher education institutions was a rare practice rather than a common occurrence. The catalyst for Moodle testing in Ukraine was forced lockdown, which prompted educational institutions to reformat the educational process, to adapt it to the realities of distance education. Under such circumstances, the use of new features of e-learning platforms has become an extreme necessity. The relative simplicity of the interface, the sufficient set of options and open access have made Moodle a resource that has transformed the learning process into a virtual learning environment.

The empirical part is the second stage of our research. We got acquainted with the peculiarities of training specialists in the specialty «Management of Organizations and Administration» at the State Institution «Luhansk Taras Shevchenko National University». We conducted a pedagogical experiment, involving 103 respondents, who were asked to answer the questions we suggested in the questionnaire «The effectiveness of Moodle: a student's view», as well as to express their opinions during the interviews. Our goal was to find out the attitude towards

distance learning in general and the Moodle learning platform in particular; identify the level of satisfaction / dissatisfaction; find ways to improve the current situation. The data obtained show that, in general, students appreciate the benefits of distance learning through Moodle, but the presence of skeptical respondents suggests that this form of learning still needs to be refined.

**Keywords:** Moodle learning platform, distance learning, higher education institutions, professional training, manager.

**JEL Classification** A22, C52, C88, I21, O39

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## **ВИКОРИСТАННЯ ЕЛЕКТРОННОЇ НАВЧАЛЬНОЇ ПЛАТФОРМИ MOODLE ЯК ЕФЕКТИВНИЙ СПОСІБ РЕАЛІЗАЦІЇ ДИСТАНЦІЙНОЇ ФОРМИ НАВЧАННЯ У ПРОЦЕСІ ПРОФЕСІЙНОЇ ПІДГОТОВКИ МЕНЕДЖЕРІВ**

**Анотація.** Висвітлено проблему впровадження електронної навчальної платформи *Moodle* як способу реалізації дистанційної форми навчання у процесі професійної підготовки здобувачів вищої освіти за ОП «Менеджмент». Здійснений огляд наукових джерел показав, що проблема застосування платформи *Moodle* активно і різнопланово досліджується. Зокрема, ґрунтовними є напрацювання щодо її ефективності під час роботи з майбутніми фахівцями соціономічних професій: філологами, педагогами, проте про застосування такого методу роботи з менеджерами з'ясовано небагато, що й робить наше дослідження актуальним.

На першому етапі дослідження, окрім огляду тематичної наукової літератури, здійснили моніторинг використання навчальної платформи *Moodle* у світі. Одержані дані показали, що Україна не входить у топ країн-лідерів у використанні згаданої навчальної платформи. На перших позиціях — країни Європи, Північної та Південної Америки. Це пояснюється тим, що донедавна використання *Moodle* у вітчизняних закладах вищої освіти

було скоріше поодинокую практикою, ніж буденним явищем. Каталізатором апробації *Moodle* в Україні став вимушений локдаун, що спонукав навчальні установи переформатовувати навчальний процес, адаптувати його до реалій дистанційної освіти. За таких обставин використання нових можливостей електронних навчальних платформ стало крайньою потребою. Відносна простота інтерфейсу, достатній набір опцій і відкритий доступ зробили *Moodle* ресурсом, що трансформував навчальний процес у віртуальне освітнє середовище.

Емпірична частина — другий етап нашого дослідження. Ми ознайомились з особливостями підготовки фахівців за спеціальністю «Менеджмент організацій і адміністрування» у Державному закладі «Луганський національний університет імені Тараса Шевченка». Провели педагогічний експеримент, залучивши 103-х респондентів, яким пропонували дати відповіді на запропоновані нами в опитувальнику «Ефективність Moodle: погляд студента» запитання, а також висловити свою думку під час бесід. Мета полягала в тому, щоб з'ясувати ставлення до дистанційного навчання загалом і навчальної платформи *Moodle*, зокрема; виявити рівень задоволення / незадоволення; знайти шляхи поліпшення наявної ситуації. Одержані дані показали, що, загалом, студентство оцінює переваги дистанційного навчання через *Moodle*, проте наявність скептично налаштованих респондентів свідчить, що така форма навчання все ж потребує доопрацювання.

**Ключові слова:** навчальна платформа *Moodle*, дистанційне навчання, заклади вищої освіти, професійна підготовка, менеджер.

Формул: 0; рис.: 2; табл.: 1; бібл.: 10.

**Introduction.** Education has always been and remains a litmus test of the dynamic metamorphoses in society that have prompted reforms in the education of children and youth. Global digitalization has also adjusted the educational process. Domestic education system in connection with a period of relative stagnation in the socio-political and economic life of the state for many years followed the educational system developed during the Soviet Union, incorporating the experience of leading countries of the twentieth century. Therefore, the need for its modernization and the search for new forms and means of education has been long overdue. The catalyst for this was the forced large-scale lockdown in the spring of 2020. It demonstrated the substantive need to create a new environment for teacher-student interaction. An important aspect was the possibility of unifying the requirements of traditional learning and distance learning systems.

The modern system of higher education had to adapt to the distance form of learning, ensuring the transition of the educational process in the online mode. This task was urgently tested through a number of electronic learning systems, among which the most popular both in the world and in Ukraine was the democratic learning platform Moodle. It is the popularity of this educational platform, relatively quickly adapted to the needs of the educational process in a number of educational institutions throughout Ukraine and determines the topicality of the mentioned question.

**Literature review.** The assimilation of traditional forms of learning and innovative technologies is not new for domestic scientists. The use of the Internet, the integration of various search engines and software in the educational process of institutions of general secondary and higher education is a problem extensively described and analyzed.

Approbation of the Moodle e-learning platform as an alternative to face-to-face learning by domestic institutions of higher education has actualized the problem of distance education. In particular, the coverage of the mentioned issue we find in the scientific heritage of the team of authors N. Holiver, T. Kurbatova, I. Bondar [1], where the capabilities of Moodle in content management and monitoring the activities of students both in general and for individual courses are analyzed; the capabilities of Moodle in the process of forming competencies of teachers of language disciplines are described by A. Avramchuk [2]; I. Lovianova [3] and colleagues focus on the features of using the learning platform in the training of specialists in socioeconomic professions; M. Zharova [4] and her colleagues focus on the use of Moodle platform in modern conditions of Covid-19 pandemic. Focusing on the use of Moodle in the training of specialists in a particular specialty are O. Beskorsa (training of German language specialists) [5], A. Dolina (training of

English language teachers) [6], a team of authors — O. Mukoviz, K. Kolos, N. Kolomiets (professional development of elementary school teachers) [7]. Along with significant developments in this area, the problem of professional training of managers in the form of distance learning through the platform Moodle is not investigated enough, which makes our study relevant.

**The purpose of the article** — the study of the peculiarities of the use of the electronic learning platform Moodle as an effective way of implementing distance learning in the process of professional training of managers.

To solve this problem, we identified the following **tasks**: to characterize the scientific heritage of the mentioned problem in the scientific literature; to identify the place of Ukraine in the world practice of using the Moodle platform in the educational process; to clarify the features of the electronic platform Moodle in the process of professional training of managers.

**Materials and Methods.** The methodological basis of the article are the principles of consistency, objectivity, comprehensiveness, continuity (succession). The following general scientific research methods were used in the process of research: analysis and synthesis, logical, axiological (value), method of comparison and analytical-synthetic processing of information. We used empirical methods of research: the experience of distance learning for students of the specialty «Management of organizations and administration» through the platform Moodle; diagnostic methods (questioning; testing; interview; survey; observation and analysis of lectures and practical classes); methods of mathematical statistics — to process and compare the results of quantitative and qualitative analysis of the data obtained. Together such methodological arsenal is focused on achieving the main goal of this article — to determine the effectiveness of Moodle e-learning platform in the professional training of managers.

**Results.** «Moodle (Modular Object-Oriented Dynamic Learning Environment) — is a modular object-oriented dynamic learning environment, as well as a learning management system (LMS), course management system (CMS), virtual learning environment (VLE) or just a learning platform» [8]. As a way to solve the problem of distance learning organization, it has proved itself perfectly, because user-friendly and understandable, even for beginners, the interface, extensive opportunities for working with graphics and files, the option of planning training work and structuring training material — this is almost all the advantages that are available in the online learning, both for teachers and students.

Wide use of the educational platform Moodle for distance learning in Ukraine began after its effectiveness in North America and Europe. However, if abroad such practice was quite common, until recently, domestic universities only mastered its basics.

It is obvious that distance education does not stand still, the capabilities of its platforms, in particular Moodle, are dynamically expanding and the methodology of use requires constant updating and updating. Let us demonstrate the power of Moodle platform and its prevalence in the world and Ukraine through the official statistics offered by the official site Moodlestatistics.

At present, Moodle has already been implemented in educational activities in 242 countries of the world. There are 183 255 sites based on this platform, with 38 732 300 courses created, 296 342 479 users registered, for which 1 660 098 483 course enrollments have been made. There are 326 018 554 developed resources for all courses, 5 680 308 861 evaluate questions have been generated and 658 719 503 forum posts have been written. Several recent versions of the platform are running in parallel. Thus, 32.7% of users use the most recent platform version 3.11; 14.2% use version 3.10; 18.1% use version 3.9; and 13.3% use version 3.8 [9]. As statistics show, the latest versions of Moodle are very popular. We believe that this is due to the updated content and advanced modern features. Nevertheless, a significant number of users still prefer the outdated versions. Partly, because of their testing and greater stability, partly — because of their inertia and unwillingness to study new modules of the platform extending its functionality.

Among European countries the most popular Moodle platform is used in Spain — 14453, Germany — 10101, France — 6285, Russia — 5952, UK — 4756 and Italy — 4529. Indicators among other countries are relatively lower. In particular, Ukraine has only 1292 sites based on Moodle, which can be seen in *Fig. 1*.

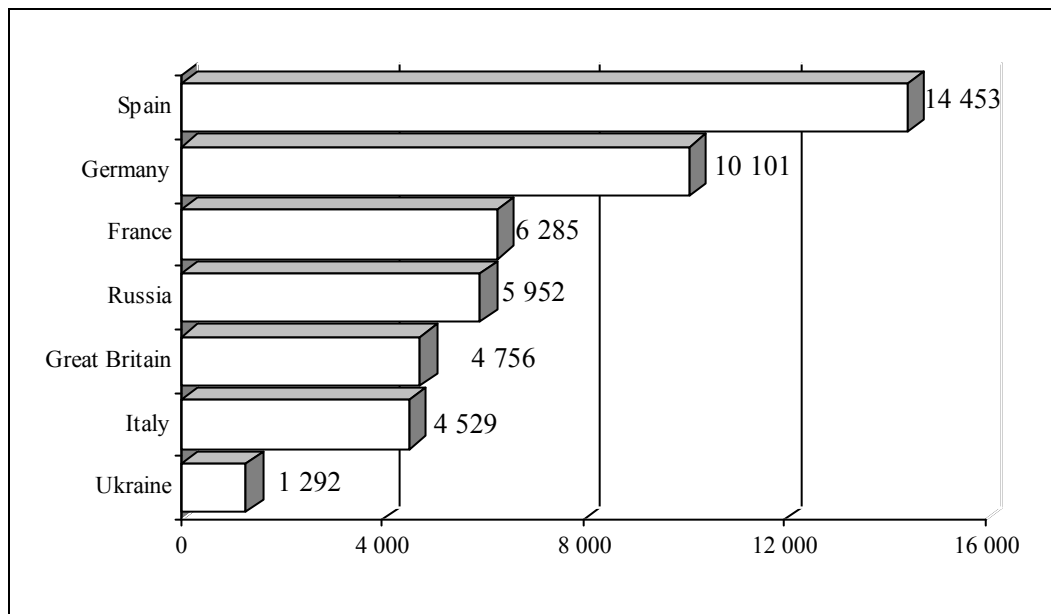


Fig. 1. Diagram «Ukraine’s place among European countries by the number of sites registered on the Moodle platform»

Source: according to the official site Moodle Statistics [9].

One of the reasons for such statistics we see in the presence of competitive platforms on which modern mass open MOOC distance courses are developed, characterized by the involvement in learning of a large number of people at the same time, as well as increased visibility of distance courses through the predominant use of video resources. Therefore, as Moodle statistics show, the overwhelming number of users of the entire Moodle platform, even not individual courses, is quite small, as shown in Table.

Table

Number of registered Moodle sites by the number of users

0-1 thous.	1-10 thous.	10-20 thous.	20-50 thous.	50-100 thous.	0,1-0,2 mln	0,2-0,3 mln	0,3-0,4 mln	0,4-0,5 mln	0,5-1 mln	more than 1 mln.
159 867	18 261	2 338	1 723	591	301	67	27	15	16	8

Source: compiled from data of the official site Moodle Statistics [9].

Along with statistical data, empirical findings are interesting. In academic circles there is no unequivocal attitude and single point of view to the effectiveness of the Moodle platform. In particular, M. Zharova and her colleagues note that before the spread of coronavirus infection, LMS Moodle was used by universities as an alternative and additional tool to support the learning process and demonstrated low efficiency, primarily due to the occasional use. The authors prove that the mass transition to distance learning in self-isolation led to an increase in demand for the platform, at the same time revealing the obvious problems of using this resource [4].

At the same time, we find a layer of research that positively evaluates the capabilities of Moodle as a distance learning method. Many of them describe the experience of training specialists in socio-economic professions, in particular, philologists [5; 6]. This trend is quite logical, because it is not difficult to present the theoretical part of the material or to check the level of students’ knowledge with the help of the electronic platform. More difficulties arise when it comes to working with students studying technical specialties, where theoretical material should be visually accounted for by concrete experiments, which require equipment and an appropriate learning environment. Although, of course, the training of future specialists in the sphere of «man-human» cannot be limited to the presentation of theoretical material and requires practical exercises.

It should be noted that the practical experience of using the Moodle platform was used during the lockdowns in all educational institutions of Ukraine. The introduction of the Moodle

learning platform for distance learning in the educational process allowed scientists, educators, and developers of modern technologies to evaluate its effectiveness in practice. To study the peculiarities of using the Moodle e-learning platform in the process of training managers, we partially analyzed the features of the organization of educational activities in the State Institution «Lugansk National Taras Shevchenko University» [10].

In 2020, the Moodle learning platform was recommended by the Ministry of Education and Science of Ukraine for wide implementation in the system of distance education throughout Ukraine. In particular, the Moodle online platform was used in the State Institution «Lugansk National Taras Shevchenko University». At the level of the educational institution approved the Regulation of the educational portal of «Lugansk National Taras Shevchenko University» (Order of the rector from 01/06/2020 № 66OD), part of which is an educational platform Moodle. The purpose of the educational portal is to ensure communication in the «teacher-student» system, access to training materials and monitoring of knowledge of education applicants [10].

The transformation from face-to-face to virtual reality provided continuity of the educational process for all specialties, regardless of the specifics of training specialists, in particular, this applies to students of the specialty «Management of organizations and administration» of the first (bachelor's) and second (master's) levels of higher education. Along with the educational platform Moodle, classes with students were conducted using Zoom, Skype, Telegram. Such multivariate communication channels between students and teachers ensured effective communication and productive cooperation. The final attestation of higher education applicants was also conducted online using digital technologies.

To empirically study the problem of training applicants for higher education in 073 «Management» by means of the electronic platform Moodle we chose a pedagogical experiment. The preparatory stage consisted in the development of the questionnaire «Moodle Effectiveness: Student's View» and the formation of a sample of respondents. A total of 103 applicants for higher education in «Management» of the State Institution «Lugansk National Taras Shevchenko University» took part in the study. The next stage involved collecting information by processing the students' questionnaire and their verbal responses. At the final stage we processed the obtained data [10].

An important indicator for the study was the students' subjective assessment of the level of effectiveness of using the Moodle platform in their professional training. The state results showed that the majority of respondents (74.7% — 77 people) positively evaluated the practice of implementing Moodle in the educational process. Slightly less respondents (20.3% — 21 people) noted that for effective implementation of communication between the teacher and the student should use different options of educational platforms and software, because not all necessary information can be provided in one format. A minority (5% — 5 people) called Moodle obsolete, requiring replacement with an alternative platform for learning. The results are shown in the chart in Fig. 2.

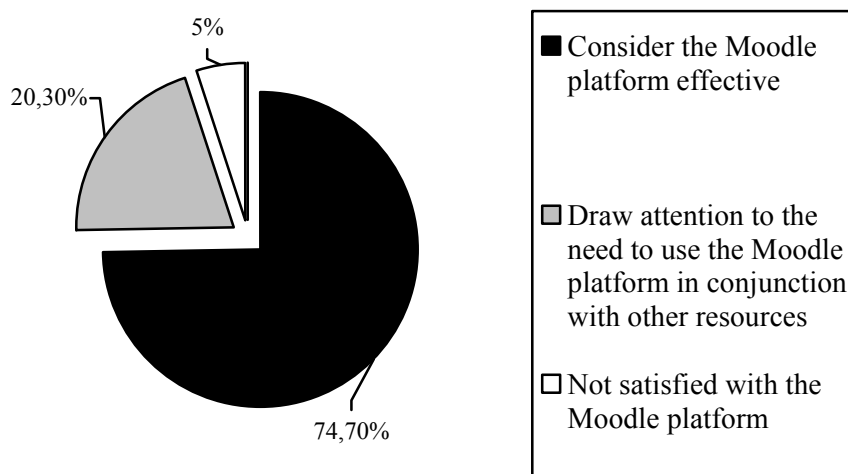


Fig. 2. Diagram «The results of the survey of students «Management» on the effectiveness of the learning platform Moodle»

Source: authors' own calculations.

The reasons for the polar positions become clear when analyzing the verbal, more extended answers. In particular, quite a significant number of respondents note that distance learning in general and the use of Moodle expand opportunities for students (no need to spend extra time and money on travel to the educational institution; it is possible to combine learning and distance work), at the same time, following the popular slogan «Stay at home!» will partially prevent the spread of the pandemic.

In particular, supporters of the opposite position draw attention to the ineffectiveness of distance learning in general. In their opinion, it is unmediated communication that is important for effective communication between the teacher and the student. In addition, respondents note that they do not always have access to the use of electronic educational environment.

**Discussion.** At the same time, the positions of the participants of the experiment and are their subjective judgments, it is surprisingly difficult to disagree with them, because they are insiders of the distance learning form. It is also obvious that distance learning in general, as well as the learning platform Moodle, in particular, better recommend itself among undergraduate students III—IV courses and masters, who already have basic professional knowledge and understand the meaning of the educational process in higher education. Year I—II students, who are just adapting to their new social status and new requirements from teachers, need more detailed explanations and opportunities for direct communication. As an alternative in this case, the use of the Moodle platform should be combined with other available programs and Internet resources.

It should be noted that the use of any educational tool should include a target component. In our case, the purpose of using a distance learning platform is to improve communication at the level of «teacher-applicant». The above-mentioned results of the survey indicate the demand for the actualization of the distance education platform. Especially since, under the constraints of the pandemic, there is an urgent need not even to develop communication, but at least to keep it at the proper level. Educational system Moodle has successfully coped with the challenges associated with the transfer of the educational process in a distance format.

**Conclusions.** Dynamic and unpredictable changes in society require flexibility and rapid adaptation to new conditions, both from the individual and from entire social institutions. This became evident with the onset of the 2020 pandemic. In order to ensure the continuity of the learning process, an educational platform was needed to streamline the distance form of learning as much as possible. Trivial traffic characteristics testify to the active use of Moodle system, and the feedback of applicants convinces of the relevance and usefulness of this tool. We can state that the educational platform Moodle is effectively implemented in universities that train specialists in different specialties, which indicates the universality of this educational tool. The possibility of not only teaching material, but also assessment of applicants differentiates knowledge control options. Application of information-technical tools of knowledge assessment minimizes the «human factor» and improves assessment criteria.

Despite the fact that compared to other countries Ukraine is not an active user of Moodle, certain developments, and tested results of the effectiveness of the learning platform are described by contemporary researchers. In particular, many of them focus on the work with the future specialists of the «human-human» sphere.

Our empirical study showed that the introduction of the Moodle learning platform in the training of specialists in «Management» has a positive effect. Most respondents do not experience difficulties in working in this educational environment and note that distance learning has more advantages than disadvantages. However, there are respondents for whom the use of Moodle causes difficulties and only worsens the level of perception of information.

There is no doubt that the key to effective distance learning is, firstly, the maximum possibility of communication between the teacher and the student, which is to provide appropriate equipment, software, Internet access, and secondly, the presentation of information in a variety of forms (text, diagrams, video, and audio materials, etc.) using different software.

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