# MOODLE IN LANGUAGE TEACHING AND TESTING. THE EMBEDDED ANSWERS QUESTION TYPE

## Ioana-Claudia HOREA

Department of International Business, Faculty of Economic Sciences, University of Oradea, Oradea, Romania <a href="mailto:ioanahorea@gmail.com">ioanahorea@gmail.com</a>

Abstract: The Moodle platform has been used a lot lately in higher education not only for distance learning but also in hybrid classes and as an accessory to the regular form of instruction. This article discusses the usefulness of Moodle in producing tests for language teaching and learning. Allowing several selfevaluation tests and scheduled practice, learning through discovery and through practice is ensured if more attempts are set available. Final testing can also be safely implemented, but this empirical study shall particularly focus on how Moodle can be made into an invaluable tool, useful for innumerable types of language learning areas, from vocabulary to grammar aspects, through the provision of timesaving and appealing quizzes, beneficial both to language teachers and to students. The various tests or quizzes, after being created and implemented, set available within the application, shall then forth render instant, accurate, useful feedback to the students accessing and solving them, as well as to the teacher. Thus. Moodle quizzes are at the same time valid practicing instruments in classes or individual sessions, and means of regular assessments as well, being equally valuable in progress checking and self-checking. The exemplification in this article refers to one of the quiz question types that is most offering and at the same time most elaborate, both in producing it and in its outcome, namely the embedded answer question type. The expertise of the author in creating and using such an exercise type may be of help to other teachers who have the opportunity to use Moodle in their work and could make good use of the examples provided here.

**Keywords:** Moodle; language testing; quizzes; embedded answers question type.

1. Moodle in language teaching and learning - chronology of the past decade A decade ago, Moodle was still considered as lacking what would be needed to be quite proper for language teaching/ learning but its potential for future developments towards this goal was already visible: "Having in mind that it was not primarily created for language learning, Moodle platform cannot be the perfect tool for English language teaching and learning, regardless of the willingness and efforts of both students and teachers. However, as it is constantly being improved in all aspects, there are indications that in the future the Moodle platform might be an even more successful tool by which English language skills can be acquired." (Bošković et al. 2014, p.482)

# 1.1. A timely shift in perspective

Half a decade ago, the pluses that e-learning could bring in language teaching

were already renowned and Moodle now "contributes to the improvement of the efficiency of target language knowledge formation through the introduction of upgraded teaching educational materials; stimulates interest in the study of target languages using innovative information and communication technologies; responsiveness of the feedback and the possibility of direct consultation with the teacher in the educational environment of the Moodle platform." (Bilotserkovets & Gubina, 2019, p.17) Also, the researchers noted the personal development, sense of responsibility, independence, and self-discipline that the platform helped build in the young generations that benefited from its implementation: "We join the opinion that working with Moodle enables students to develop self-discipline and habits to work independently with a target language learning materials, that includes recognizing the need for separate self-study without the help of a teacher; to develop the ability to learn through the integration of formal (regular courses and content uploaded on the Moodle platform) and informal learning outside the classroom and beyond the control of the teacher" (Bilotserkovets & Gubina, 2019, p.25)

More and more developments were witnessed in the use of Moodle for teaching languages, with users proclaiming opportunities and advantages as the following positive aspects mentioned in a paper not long before the start of the Covid pandemic: "ensuring effective independent work of students", "optimal implementation of the content", "the creation of a fairly extensive resource base", "educational and methodological materials [...] in a more accessible and convenient electronic format", "flexibility and mobility of learning", "taking into account the specificities of students", "opportunity to study at an individual pace" and "perform tasks at a convenient time" a.s.o. (Butova et al., 2019, p.52)

## 1.2. The useful must in the pandemic era

The necessity of extensively and exclusively resorting to distance learning devices in 2020 during the COVID pandemic meant a two-direction evolution about the use of Moodle in education. On one hand, Moodle was luckily already implemented to some extent in many institutions - as they had distance learning programs which were based on the e-learning platform - and this made it possible for them to soon, with a proper mobilization, resume and continue their activity. On the other hand, digitalization could no longer remain just an item in a good practices plan for future development, if not an instant 'must', to thoroughly master, rapidly apply, and make use of, so as activity could go on. Then, fortunately, this development somehow reached a point of no return: e-learning features, initially thought as a compromise, a temporary solution, only forcedly resorted to, turned to being recognized as handy facilities and useful tools in regular classes as well, and were kept in use along with the classic approaches. And thus, it was here to stay, not only for distance learning but as aid in full-time education as well.

The attractiveness of the online and of the e-learning platform is one important point that implements Moodle welcomed and advisable, as the more appealing a teaching-learning tool, the more likely it is to be effective as well: "While observing students' work in Moodle on different cases, projects, quiz tasks, we noticed that students demonstrated higher activity in virtual classes, which indicated an increase in motivation and interest. The level of readiness for virtual classes had increased." (Ivanova, 2021, P.348)

As aforementioned, the Covid Pandemic had already hit by this time and with it,

Moodle became a necessity in many educational institutions around the world. As practice makes perfect and appetite develops by eating, it thus happened that a challenging and uncomfortable 'must' became slowly a much-appreciated instrument of real help.

Most benefits that would be enough to advocate for Moodle usage in language teaching, despite old opinions that it cannot be effective as it had not been designed for languages, are concisely put together by another group of researchers in 2021:" Moodle appears an effective tool to organize, maintain and assess the independent work of undergraduate students. The application of the Moodle platform has shown several advantages over the traditional forms like the accessibility of the materials, a wide range of interactive activities, the implementation of a student-centered individual approach, and sustainable motivation throughout the course. From the point of view of the instructor, the platform has also demonstrated some benefits more organized, unified, and logical structure of the tasks for independent work, the economy of time and effort for the marking, and clear and straightforward analytics, which makes the assessment and feedback less time-consuming and more individual." (Gudkova et al., 2021, p.9)

## 1.3. Current state

More recent developments allowed Moodle to be used in a targeted manner and directed to specific usages, i.e. with particular applications designed for precise purposes, from vocabulary introduction to language and communication practice or various grammar aspects reinforcements, as, for instance, remarked by Suriaman's survey on students' views, just a little more than one year ago: "effective teaching media are somehow urged to assist students to learn grammar. Moodle is assumed to give a positive contribution in relation to time and space issues as students can practice to use language independently wherever and anytime, they have." (Suriaman, 2023, p.21) also students "have chances to practice language via Moodle as it presents several quizzes and assignments, [...] may control their study progress. [...] Students' progress study is not controlled by the teacher only. It is automatically that students have conducted the self-assessment process." (Suriaman, 2023, p.22)

Of course, there is always room for better, as many researchers notice in their investigations that while some attributes of Moodle are extensively used, many of its facilities just stay idle: "The lack of utilization of Moodle resources, particularly Book and Label, and Moodle activities such as asynchronous Chats, Group Choice, Database, Glossary, Lesson, Questionnaire, Survey, Workshop, Wiki, and SCORM is evident and emphasizes the need to explore a wider range of tools to enhance teaching and learning through Moodle." (Horváthová, 2023, p.84) Merely noted and exemplified here, this situation holds with most users.

Currently, four years since Covid, the usefulness of Moodle in language learning and teaching is no longer a matter of if, but a question of how, to be most effective. "An essential factor in teaching foreign languages, regardless of platforms, methods, and implementation specifics, is the use of interactive technologies. [...] Scholars often discuss issues related to problem-based learning, using varied methodologies and tools for word memorization, improving grammatical skills, etc. [...] Teaching foreign languages through the Moodle learning platform has several undeniable advantages, including speed, quality, accessibility, and adaptability" (Hnatyshena et al., 2024, p.21)

As for what is to come in this respect, there will no doubt be a new great leap, with the current trends in information technology and artificial intelligence. IT is becoming nowadays if not always the engine of human activities, then at least the fuel of most, for sure. The AI emergence is skyrocketing particularly in the most innovative fields, and education, as one, obviously has to keep up with this explosion. "Future research could also explore a wider range of the possibilities offered by LMS platforms, such as the integration of mobile applications, gamified learning, and natural language processing tools. Investigating this broader set of opportunities could allow researchers, curriculum designers, and policymakers to better understand the potential benefits and any limitations of the wider use of learning management systems for language learning." (Qaddumi, 2024, p.268).

## 2. Effectiveness of Quizzes in Moodle

Moodle proves most effective with regard to using the quiz device. It can spare loads the time that would normally have been wasted with physical checking and correcting tests. The application once 'programmed' shall provide instant feedback to innumerable students at the same time, and this not only for one class but for years to come when the same curriculum is applicable to future generations.

Many types of exercises ensure not only diversity but also the possibility to assess linguistic competence by probing most various aspects of language acquisition, from vocabulary and morphology to grammar, syntax, or even translations. Exercises of matching, true or false, yes or no, multiple choices, or filling in the gaps can provide the base for the testing of whatever aspect of the language is desired. Here we can enumerate as many issues as one can think of: word-building with affixation or compound formation, family of words and changing the grammar value, synonyms, antonyms, homonyms, choice of words or accuracy of translation, modals, auxiliaries, verbal tenses, phrasal verbs, countability and plural of nouns, adjectives and adverbs usage and so on.

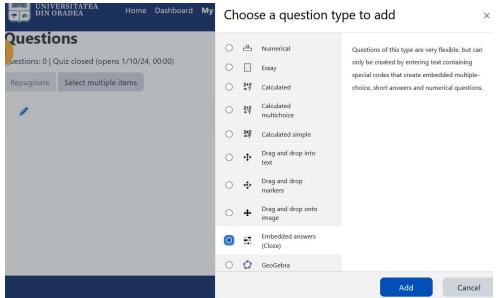
Whatever the purpose, the first condition is that the exercises are properly designed and smartly employed. This will take a dedicated, creative, and technically skillful language instructor, i.e. teacher, who will, firstly, have to be willing to put in quite a lot of effort to then be able to produce valid, relevant as well as appealing quizzes, put the facilities provided by Moodle to good use, even in this field that might seem as not related to technicalities, namely language teaching, and learning.

The more the language instructor invests in the process, the more spectacular the results, first in the layout of the tests on the page of the discipline created for the students, then in the applicability of these tests along the teaching and learning process during regular classes, and ultimately and most importantly, in the usefulness of these quizzes for various circumstances that represent steps to the final goal of developing language skills - from self-evaluation, learning through testing and repetition, on-going assessment of language acquisition a.s.o., to even final examination.

## 3. Producing embedded answers (cloze) questions

A complex type of exercises that Moodle can provide is that of the embedded answer (cloze) question type.

After the creation of the quiz, when editing the questions for it, the embedded answer type can be selected from the question types window, by selecting the specific button as seen in Figure 1.



**Figure 1:** Quiz question selection page – Embedded answers Source: intrinsic on the page of the discipline for distance learning 2024-2025 https://e.uoradea.ro/course/view.php?id=70942

Once this desired type is selected, the question creation page opens and the teacher can begin to encode. Directions and explanations on the Moodle site shall be needed to be able to create such exercises but luckily the platform provides direct access to the necessary webpage, directly from the encoding page, at the question mark button, as seen in Figure 2.



**Figure 2:** Question button directing to the explanatory Moodle page Source: intrinsic on the page of the discipline for distance learning 2024-2025 https://e.uoradea.ro/course/view.php?id=70942

The aforementioned Moodle page, with indications specific for creating embedded answer questions open when pressing "More help" and all necessary information on how to encode these exercises can be learned from there. Figure 3 shows the menu and Figure 4 is the first part of the information provided within one of the titles in the menu.

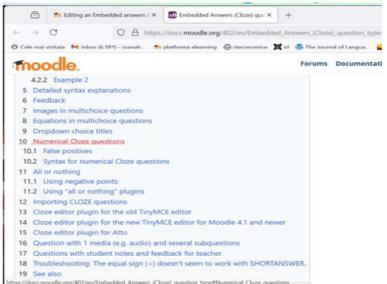
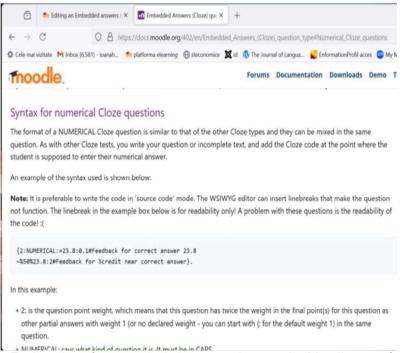


Figure 3. Menu of Moodle page for Embedded answers

Source: caption from

https://docs.moodle.org/402/en/Embedded Answers (Cloze) question type



**Figure 4.** Explanations for numerical cloze questions on the Moodle page for Embedded answers

Source: caption from

https://docs.moodle.org/402/en/Embedded Answers (Cloze) question type

#### 3.1. 'Multichoice' and 'Short Answers'

The creation of an exercise based on two of the most common coding instructions for the embedded answers exercises, the MULTICHOICE and respectively the SHORTANSWER can be seen in Figure 5.

Choose from the 5 numbered structures those 3 that fit in the blanks (writing the corresponding number in each blank), select the correct variant from those given for the 5 option gaps (selection boxes with arrows) in the text and write the synonyms next to the 5 words beneath the fragment (as you can find them in the text):

1. short of money 2. well-appointed 3, paying in cash 4, youth hostel 5, out of pocket

As a reporter, he often had to travel extensively (1:MUTCHOCE hadn't he-had he = didn't he-isn't it)?. He always tried to find affordable accommodation because a (1:NUMERICAL:=2) apartment was too expensive and (1:NUMERICAL:=5) expenses were not very often

(1:MUTCHOCE payment of back paid in-paying back from = paid back by-backing paid by) the company. When (1:NUMERICAL:=3), he was always very careful, almost suspicious, (1:MUTCHOCE = wasn't-sin't-didn't-was-did-is) he? People say that he used to check his

(1:MUTCHOCE exchange-cash = change-money-currency) several times, which means he (1:MUTCHOCE = is said to have been-was said to be-is said to be-was said to have been-was said he was-says he is) a rather cheap person.

pricey=(1:SHORTANSWER = expensive)

frequently=(1:SHORTANSWER = suspicious)

verify=(1:SHORTANSWER = check)

individual=(1:SHORTANSWER = person)

**Figure 5:** Question text - Encoding for an Embedded answers exercise – using the instructions MULTICHOICE and SHORTANSWERS Source: own design on the page of the discipline for distance learning 2024-2025 <a href="https://e.uoradea.ro/course/view.php?id=70942">https://e.uoradea.ro/course/view.php?id=70942</a>

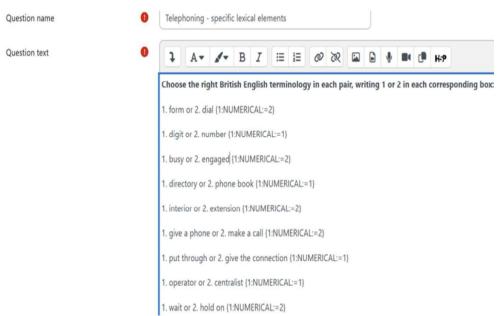
The resulting test page, as it appears to the students accessing the test is visible in Figure 6. One of the arrow buttons was kept pressed when making the screenshot so that the variants for that gap could be also seen, variants from which the students will have to choose the right one to fill in that particular gap.

Question 1  Not yet answered  Marked out of 13.00	Choose from the 5 numbered structures those 3 that fit in the blanks (writing the corresponding number in each blank), select the correct variant from those given for the 5 option gaps (selection boxes with arrows) in the text and write the synonyms next to the 5 words beneath the fragment (as you can find them in the text):  1. short of money 2. well-appointed 3. paying in cash 4. youth hostel 5. out of pocket
	As a reporter, he often had to travel extensively ?. He always tried to find affordable
	accommodation because a apartment was too expensive and expenses were not very
	often the company. When he was always very careful, almost suspicious,
	he? People say that he used to check his several times, which means he
	a rather cheap person.
	pricey= exchange cash
	frequently= change
	distrustful= money currency
	verify=
	individual=

**Figure 6:** Embedded answers exercise of MULTICHOICE and SHORT ANSWERS – quiz page resulted (with one arrow button pressed, for visualization of variants) Source: own design on the page of the discipline for distance learning 2024-2025 <a href="https://e.uoradea.ro/course/view.php?id=70942">https://e.uoradea.ro/course/view.php?id=70942</a>

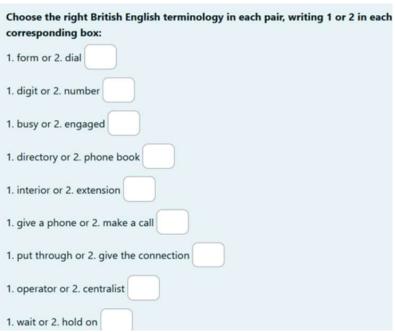
# 3.2. 'Numerical'

The creation of another exercise based on again a common coding instruction for the embedded answers exercises, the NUMERICAL one, can be seen in Figure 7. The resulting test page, as it appears to the students accessing the test is visible in Figure 8.



**Figure 7:** Question text - Encoding for an Embedded answers exercise – using the instruction NUMERICAL

Source: own design on the page of the discipline for distance learning 2024-2025 <a href="https://e.uoradea.ro/course/view.php?id=70942">https://e.uoradea.ro/course/view.php?id=70942</a>



**Figure 8:** Embedded answers exercise – NUMERICAL – quiz page Source: own design on the page of the discipline for distance learning 2024-2025 <a href="https://e.uoradea.ro/course/view.php?id=70942">https://e.uoradea.ro/course/view.php?id=70942</a>

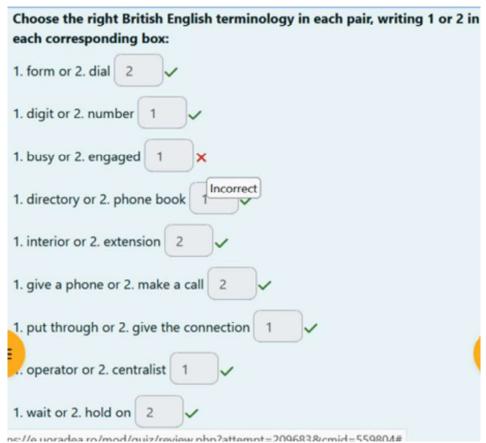
In Figure 9 we can see the test page that resulted. The image shows its layout while being completed by the tested student (the instructor in this case, for exemplification purposes).



**Figure 9:** Embedded answers exercise – NUMERICAL – quiz page being completed

Source: own design on the page of the discipline for distance learning 2024-2025 https://e.uoradea.ro/course/view.php?id=70942

Figure 10 shows the feedback page provided by the application after test completion, with the mistake identified and shown as such. The wrong answers generally appear as seen here, as crossed in red instead of ticked in green, and positioning the cursor on the explanation "incorrect" appears. In this case, it is clear that if this answer is incorrect the other one out of two would have been the correct one. In other circumstances, when the right answer is not so obvious from the context, the application also explicitly returns the correct answer in the feedback page.



**Figure 10:** Embedded answers exercise – NUMERICAL – test feedback page with an evident wrong answer

Source: own design on the page of the discipline for distance learning 2024-2025 <a href="https://e.uoradea.ro/course/view.php?id=70942">https://e.uoradea.ro/course/view.php?id=70942</a>

# 4. Conclusion

Moodle, the platform that many institutions use for distance learning or as a helping tool in regular classes, can be a very useful device. For exemplification, this study focused on a complex exercise type that can be created within the application for online quizzes, employing the models and instructions provided by the application itself.

Several examples of exercises that can be produced and implemented using the embedded answer question type prove its adaptability and hence applicability for numerous purposes in language acquisition assessment. The dissemination of the process of production of such exercises, here provided by rendering the exact encoding method and showing the precise way of using the most common instructions available, can be of much help to other language instructors who use Moodle in their activity.

#### References:

## Articles:

- [1]. Bilotserkovets, M. A., & Gubina, O. (2019). "Target language teaching by means of e-learning: a case study". Revista Romaneasca Pentru Educatie Multidimensionala, 11(4), 17-29. <a href="https://doi.org/10.18662/rrem/154">https://doi.org/10.18662/rrem/154</a> [Online], Available: <a href="https://lumenpublishing.com/journals/index.php/rrem/article/view/1481">https://lumenpublishing.com/journals/index.php/rrem/article/view/1481</a> [Oct 16, 2024]
- [2]. Bošković, Valentina; Gajić, Tijana; Tomić, Ivana. (2014) "Moodle in English Language Teaching", Sinteza 2014 Internet and education, DOI: 10.15308/SInteZa-2014-480-483, pp.480-483. [Online], Available: https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://portal.sinteza.singidunum.ac.rs/Media/files/2014/480-483.pdf&ved=2ahUKEwjg2rWK9JWJAxUJg\_0HHW3NAP4QFnoECBIQAQ&usg=AOvVaw1DhYAJEm0kHcSsoSzNAY-z [Oct 17, 2024]
- [3]. Butova, Anna V.; Dubskikh, Angelina I.; Kisel, Olesya V.; Chigintseva, Elena G. (2019) "Electronic Educational Environment Moodle in English Language Training", DOI: https://dx.doi.org/10.24093/awej/vol10no1.4, Arab World English Journal (AWEJ) Volume 10. Number 1. March 2019, pp. 47-55, [Online], Available: <a href="https://awej.org/electronic-educational-environment-moodle-in-english-language-training/">https://awej.org/electronic-educational-environment-moodle-in-english-language-training/</a> [Oct 12, 2024]
- [4]. Gudkova, Yana; Reznikova, Svetlana; Samoletova, Maria; Sytnikova, Elena. (2021) "Effectiveness of Moodle in student's independent work", E3S Web of Conferences 273, 12084 (2021), INTERAGROMASH 2021, https://doi.org/10.1051/e3sconf/202127312084 [Online], Available: https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.e3s-conferences.org/articles/e3sconf/pdf/2021/49/e3sconf\_interagromash2021\_12084.pdf&ved=2ahUKEwjg2rWK9JWJAxUJg\_0HHW3NAP4QFnoECB8\_QAQ&usg=AOvVaw0cPWUatBfV1KDaY5YHJ2td\_[Oct 15, 2024]
- [5]. Hnatyshena, Iryna; Petrenko, Oksana; Dobrovolska, Nataliia; Frumkina, Aryna; Chykalova, Maryna. (2024) "Application of the Moodle Learning Platform in Teaching Foreign Languages" DOI: <a href="https://doi.org/10.33543/1401391822">https://doi.org/10.33543/1401391822</a>, indexed Scopus, WoS, AD ALTA: 14/01-XXXIX. AD ALTA: Journal of Interdisciplinary Research, 2024, MAGNANIMITAS, № 1, p. 18-22. <a href="https://ouci.dntb.gov.ua/en/works/4yXZZLg7/">https://ouci.dntb.gov.ua/en/works/4yXZZLg7/</a>, [Online], Available: <a href="https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.magnanimitas.cz/ADALTA/140139/papers/A 03.pdf&ved=2ahUKEwifi9Xao4mJAxVKhf0HHaJPKm4QFnoECBQQAQ&usg=AOvVaw118IB1136kHm QtVb-SgaN [Oct 8, 2024]
- [6]. Horváthová, Božena. (2023) "Philological study programs in the digital age: A comprehensive analysis of Moodle integration and utilization" Journal of Language and Cultural Education, ISSN 1339-4584, Volume 11 (2023): Issue 2 (October 2023) DOI: <a href="https://doi.org/10.2478/jolace-2023-0017">https://doi.org/10.2478/jolace-2023-0017</a> [Online], Available: <a href="https://sciendo.com/article/10.2478/jolace-2023-0017">https://sciendo.com/article/10.2478/jolace-2023-0017</a> [Oct 16, 2024]

- [7]. Ivanova, N. (2021). "Integrating Online Teaching English as a Foreign Language" SOCIETY. INTEGRATION. EDUCATION. Proceedings of the International Scientific Conference, 5, 340-350. <a href="https://doi.org/10.17770/sie2021vol5.6241">https://doi.org/10.17770/sie2021vol5.6241</a> [Online], Available: <a href="https://journals.ru.lv/index.php/SIE/article/view/6241/5200">https://journals.ru.lv/index.php/SIE/article/view/6241/5200</a> [Oct 13, 2024]
- [8]. Qaddumi, H.A.; Smith, M. (2024) "Implementation of Learning Management Systems (Moodle): Effects on Students' Language Acquisition and Attitudes towards Learning English as a Foreign Language", DOI: <a href="https://doi.org/10.3390/higheredu3020016">https://doi.org/10.3390/higheredu3020016</a>, Trends in Higher Education, 2024, 3, Academic Editor: Hani Morgan, MDPI, Basel, pp. 260–272, [Online], Available: <a href="https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.mdpi.com/2813-4346/3/2/16&ved=2ahUKEwjwl9GGqImJAxVYg\_0HHX5aGUkQFnoECBUQAQ&usg=AOvVaw1DvlvKbfowdb9TBw0ERaXE">https://www.mdpi.com/2813-4346/3/2/16&ved=2ahUKEwjwl9GGqImJAxVYg\_0HHX5aGUkQFnoECBUQAQ&usg=AOvVaw1DvlvKbfowdb9TBw0ERaXE</a> [Oct 5, 2024]
- [9]. Suriaman, A. (2023). "Students' Perception on the Implementation of Moodle Web-Based in Learning Grammar". IJOTL-TL: Indonesian Journal of Language Teaching and Linguistics, 8(2), 14-24. <a href="https://doi.org/10.30957/ijoltl.v8i2.537">https://doi.org/10.30957/ijoltl.v8i2.537</a> [Online], Available: <a href="https://ijotl-tl.soloclcs.org/index.php/ijoltl/article/view/537">https://ijotl-tl.soloclcs.org/index.php/ijoltl/article/view/537</a> [Oct 18, 2024]

# Web pages:

[10]. https://docs.moodle.org/

[11]. https://docs.moodle.org/402/en/Embedded Answers (Cloze) question type

Page on the Institutional e-learning Platform (Moodle):

[12].Page of the discipline of "Foreign Language for Business I.1 – English", for first year study programme in distance learning 2024-2025 (original title: "Limba străină pentru afaceri I.1 2024-2025)": <a href="https://e.uoradea.ro/course/view.php?id=70942">https://e.uoradea.ro/course/view.php?id=70942</a>