



Article

Implementation of Learning Management Systems (Moodle): Effects on Students' Language Acquisition and Attitudes towards Learning English as a Foreign Language

Husam Ahmad Qaddumi ^{1,*} and Matt Smith ²

¹ Department of Languages, Faculty of Humanities, Al Istiqlal University, Jericho P.O. Box 10, Palestine

² School of Education, University of Wolverhampton, Wolverhampton WV1 1LY, UK; matt.smith@wlv.ac.uk

* Correspondence: dr.hussamqadomi@pass.ps; Tel.: +00-972598013110

Abstract: Among the most popular learning management systems (LMS) available worldwide is Moodle. This current study examines how learners' attitudes toward English as a foreign language (EFL) and their language proficiency are affected by Moodle's interactive language-learning activities. Thirty-three undergraduate students participated in this study. We investigated the effects of engaging language-learning exercises that were practiced on Moodle using an experimental research design. To find out if the experimental and control groups differed significantly from one another on pre- and post-measures regarding the development of language skills and attitudes toward language classrooms, a number of statistical tests were employed. We conducted a data analysis using SPSS software. The results demonstrated that there were differences favoring the experimental group in the development of language skills and the attitudes of learners toward the language classroom. There were no apparent differences in forming structures, speaking, or listening compared to the control group's learners. On the other hand, there were notable differences in the overall score, writing and reading skills, and lexical item mastery. Additionally, significant differences in the language acquisition growth of the experimental and control groups were found using an independent-sample *t*-test in the post-test, with the experimental group benefiting.



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1. Introduction

This paper looks at how learners' attitudes toward English as a foreign language (EFL) and their language proficiency are affected by interactive language-learning activities available through Moodle [1]. Developments in information and communication technology (ICT) have accelerated, especially when it comes to language teaching [2]. The Ministry of Higher Education (MOHE) in Palestine has implemented numerous innovations in ICT for education through professional development programs; however, teachers express dissatisfaction when surveyed [3]. Even in virtual classrooms, the instructor is the only one speaking [2], while students remain seated, listen mainly in silence, and take notes to commit to memory in a non-interactive manner. Numerous detrimental effects on students' language proficiency may result from this teacher-centered learning environment [4–6]. In traditionally didactic teacher-led learning, there are few opportunities for authentic classroom interactions; as a result, students rarely utilize their language skills in real-world contexts [7]. In Palestinian university contexts, research on how well learning management systems (LMSs) work to accelerate language learning and how they affect learners' attitudes toward language acquisition is still extremely uncommon.

1.1. Problem Statement and Research Questions

Research on the use of LMSs and their effects on language acquisition and learners' attitudes has not been conducted in Palestinian education. So, this study aimed to find out

whether and how using an LMS (Moodle) affects the language proficiency of Palestinian students. This study also aimed to demonstrate how learners' attitudes toward English language instruction and the classroom are affected by the use of LMSs. By putting the following theories to the test, this study aimed to close the gaps.

Hypotheses:

H1: *There are no apparent shifts in the experimental group's learners' attitudes or their progress in their English language proficiency between pre- and post-tests.*

H2: *Regarding the participants in the control group, no significant differences exist in the attitudes or the English language development for the learners in either the pre- or post-test.*

H3: *There are no significant differences in learners' development of English language skills based on a post-measure between the experimental and control groups.*

H4: *No significant variations exist among the experimental and control groups' pre- and post-measure student attitudes regarding the English language.*

1.2. Literature Review

We contend that the growth of social media and ICT has increased the opportunities for academic success. Given today's unrestricted access to vast amounts of information, creative pedagogical approaches are required to help students navigate digital content and gain knowledge on their own [8]. Utilizing educational technologies could help teachers and students identify the unique learning obstacles that arise in different settings and at different times. Purwanto [9] asserts that students can visit and access their classes from anywhere at any time. ICT is used in every educational process in the third decade of the 2000s [10,11]. In the virtual learning environment, the new web-based learning model presents challenges and opportunities for both educators and students. Online English learning is one example of how digital educational websites can help improve teachers' methods of illustrating content. Students should be ready to pick up ideas from reputable websites and the instructor's example. In order to conduct virtual classes online as effectively as in traditional classrooms, the teacher's role in delivering the lesson is crucial [12].

Modern educational institutions, ranging from elementary to advanced levels, use technological tools and educational websites such as networks for learning to manage teaching tasks [13]. Every subject that students learn in school or at university is supported in this manner. To avoid leaving students without direction during the recent critical pandemic era, the majority of educators worldwide turned to digital education [14,15]. Since technology is ubiquitous, this century is known as "the age of technology" and its advancements have had an impact on all facets of human life, particularly education. Teachers across the globe are encouraged to use technology in their lessons because it affects students' academic performance. As a result, teachers need to support and insert technology into their lesson plans [16].

Technology is used by educational institutions at all levels to facilitate distant instruction and learning, such as the teaching and learning of English [17]. People are encouraged to use technology even more in this era of globalization [18,19]. Consequently, educators need to integrate it into their lesson plans [20]. In the wake of the current pandemic, this is still true. Therefore, one of the most important strategies for encouraging students to study English online and increase their achievement is to use technology to emphasize the quality of teaching and learning resources [21].

English proficiency has become essential, certainly in Palestine, since it can be used for international communication anywhere in the world. In addition, learning English can improve relationships across the nation, among other benefits. In Palestine, English is thus taught in preschool, elementary school, secondary school, and tertiary education. Studying at every level leads to new objectives and deeper learning. English is taught to kindergarten

and elementary school pupils through simple exercises and hands-on games [22]. The primary level concentrates on learning grammar and vocabulary associated with a range of subjects, such as families, animals, food and drink, sports, and games [23]. At higher levels, it has been noted that academic skills and increasing students' ability to meet expectations should be included in the English course requirement in secondary high schools [24].

Because they can be finished at any time, and thus take less time and dedication than in-person learning environments, online courses are frequently preferred by students [25]. Social networking sites have drastically changed how people communicate and exchange knowledge within communities [26]. They have spread over most of the world and have eliminated many national boundaries, allowing people in most countries to express their own opinions as well as learn about the beliefs and lifestyles of others [27]. Instructors and students can stay in touch with each other through web applications at any time of day or place, even outside of the classroom. A multitude of tools are at one's disposal to facilitate the acquisition and integration of educational materials. Due to the widespread use of social networking, websites and apps of this kind can be integrated with smartboards to offer educators and students alike exciting and safe environments for collaborating, developing interest, discussing, and sharing data [28].

Academic activities, such as teaching and learning, were significantly impacted by the start of COVID-19 [29]. To provide easy and safe access to online learning through digital sites for students and instructors without necessitating in-person interaction, the Palestinian educational institutions directed that teaching should be conducted digitally [30]. Following the widespread shift to online learning, numerous analysts highlighted several significant advancements that were, in some ways, invigorating—things surfaced that may otherwise have remained suppressed for a long time, and modifications are underway which some see as past due [15]. Since the pandemic, there has been a return to some semblance of normalcy, and in many cases, home study is encouraged to keep students actively learning in the modern digital world. It is imperative that educators and students be equipped to handle both present and future crises, including those involving Palestine and the Ukraine [6,31,32]. With today's technology, students can study online without having to interact with teachers directly [33]. These days, educational advanced technologies include software, digital sites, and web-based media [34]. An institutionally-specific educational framework; content, sessions, opportunities for interaction, dialogue, and co-creation; assessments, and spaces for students to upload work are all provided by the learning management system (LMS) platform, a digital platform that serves as a foundation for student interactions with their education. This has been referred to as a "one-stop shop" [35].

There are evident effects on learners' attitudes and language acquisition when using online digital classrooms [36]. While in-person classes in Palestine used chalkboards to support the teaching–learning process, learning management systems are very beneficial to higher education institutions, and this was especially true during the pandemic. Post-secondary education makes prolific use of online learning management systems, which are intended to engage students through a variety of pedagogical and communicative methods [37]. Even though each LMS has unique qualities, they can be customized to meet the needs and circumstances of particular institutions [35]. Moodle has emerged as the most widely used LMS for managing teaching and learning procedures, especially for English courses [38].

Moodle is an online learning environment that helps students improve their comprehension and abilities by assigning meaningful tasks that foster collaboration, creativity, problem-solving, and interaction in English classes [39]. Online learning can be made easier with feedback by using Moodle as a digital learning tool [40]. The most recent official statistics from Moodle [1] show that more than sixty percent of schools and institutions use Moodle for both online and offline teaching methods.

With its ability to let teachers and students collaborate to enhance the learning environment, Moodle has positioned itself as a tool of immense importance in the educational process. By utilizing the Moodle learning platform, students may also be able to build

information relevant to their level from other educational sources. The fact that LMSs significantly affect the current interactive learning environment is another benefit of using them. By fostering independence and empowering students to be more flexible in their learning, especially while studying the English language, LMSs can boost students' engagement.

In order to help students better comprehend English courses and prepare for their future professions, the vocational stream of English language instruction aims to help them. In addition, four English language skills are the main focus of English language instruction in Palestine [41]. A seamless interactive learning pace in the classroom is accelerated by effectively and efficiently using an interactive online platform. This makes it possible for students to work with English topics digitally. Given the speed at which technology is developing, learning management systems could be a suitable way to provide and access web-based educational resources [42].

Through LMSs such as Moodle, English teachers can give their students instructional resources, including videos, written material, recorded materials, and webpages [43], and these, alongside a wider use of technological tools, have the potential to make the educational environment better [44]. According to a study by Annisa et al. [45], students believe that the English language is a crucial subject that they concentrate on to eventually pass their final exams and achieve better grades. Furthermore, the vast majority of students said that studying English will help them achieve their academic objectives in the future. They recognized that, in order to improve their performance, they needed to increase their self-efficiency in emergency preparation, motivation, and consciousness. One important factor that is expected to boost motivation in Moodle-based online courses is the attitude concept.

The students responded in a positive and favorable way to the questionnaire and interview sessions. The most efficient way to carry out educational tasks, such as studying the English language, according to subjects in the COVID-19 outbreak, was through e-learning. In terms of language learners using Moodle, Setlik and da Silva [46] looked at the impact of teacher preparation. A positive influence came to light. It was determined that the Moodle platform's teacher training had a positive influence on the students' progress in learning English as a second language. More specifically, Logroño and Costelo-Abrea [47] investigated how EFL students perceived the difficulties they encountered using Microsoft Teams and Moodle for their coursework. The findings showed that some of the students' opinions about online learning were unfavorable. Some of the difficulties they reported encountering included the lack of social interaction, technical issues, and distractions.

Regarding Moodle's significant impact as an online learning platform, more research is required to examine Moodle's dependability in the Palestinian educational institutions during the crisis. Consequently, the present research examined how university students experience using the Moodle platform as an interactive tool for learning, with an emphasis on English language classes.

2. Materials and Methods

2.1. Design, Participants, and Procedures

This study used two groups: an experimental group and a control group. It was thought that a quasi-experimental research design would be the most useful for such a setting. We used pre- and post-implementation designs to investigate how learners' attitudes and language proficiency develop in relation to an LMS (Moodle). We used Moodle, an online learning platform that gives students the ability to participate, communicate, interact, and provide quick feedback, to instruct the experimental group. Concurrently, the control group participated in traditional lectures where the lecturer was the focal point of the class: often referred to in Palestine as "the sage on the stage" [48]. The experiment took place at an anonymous university in Palestine over the course of one semester (15 weeks). We employed Wilks' lambda measure, the Pearson correlation coefficient, and the Sidak post hoc test as the statistical techniques in this study.

A. Study Participants

Two participant classes from the university's English language course were chosen. Out of the 35 participants, 33 gave their consent and agreed to participate in the research. There were 17 participants in the experimental group and 16 in the control group. We used the intelligence quotient (IQ) as a control variable to ensure the participants' internal consistency and equivalence (as explained below).

B. Participants' Age

All the students were approximately of the same age: between 230 and 240 months.

C. Participants' Intelligence Quotient

To guarantee internal consistency and equivalency among the participants, we employed the participants' intelligence quotient, or IQ, as a control variable. We ensured that the participant groups' natural intelligence levels were equal by controlling the IQ disparity between the two groups.

D. Measure of the Study Variables

In studies such as this, it is best to control the experiment and ensure that the groups are equivalent so as to avoid bias and to ensure equivalence. In order to determine whether there were any differences, we calculated the mean values for each research group. For every language skill, we used the total achievement test score.

2.2. Data Collection

2.2.1. Instrumentation Development

In this study, we developed two instruments: one to measure students' development and the other to record students' attitudes. To determine the students' progress, we designed a test to see whether students developed after both forms of instruction. We developed a survey questionnaire so that we could determine the students' attitudes about their language classes, the classroom environment, and their language skills.

2.2.2. Achievement Test

To check for any differences in language development between the groups, we created an exam to assess the learners' language-learning progress. The test was carried out twice: once via Moodle prior to instruction and again after the instruction. We created achievement test questions in order to reinforce the exam's validity. After that, we sent the test to a number of experts at Palestinian institutions for revision. We requested that the reviewers verify whether the test was appropriate for the students' level. Every recommendation that was offered was taken into account.

The reviewers proposed, for instance, that the attitudinal questionnaire be split into categories, such as the learners' attitudes toward developing language skills and attitudes about the English language classroom. We examined the difficulty factor and indexing to make sure the test items were not too simple or too hard for the participants. We estimated the factors based on the conclusion made by Roohollah et al. [49] that the optimal range for the test difficulty factor is between 50% and 80%. The test's difficulty index ranged from 0.50 to 0.83, and its ability-to-discriminate factor varied from 0.1 to 0.8. These measures of discrimination and difficulty were appropriate for use in the study's test. We employed the test-retest approach with Cronbach's alpha (0.81) to verify the test's reliability.

There were 100 items on the test. The test was multiple choice throughout and included aspects on speaking, listening, writing, and structural patterns. We integrated the instructional design of the LMS application into the lessons taught by the experimental group. The instructional materials provided in the course were used to instruct both groups. The control group's instructions and activities were exactly in line with the conventional didactic approach. Our goal was to evaluate the language proficiency of the experimental and control groups.

We complied with several protocols when we first began to design the test. First, we went over the language lessons and the units covered in the *Textbook for Intermediate English*. Subsequently, we converted the content analyses of the first three units into lesson counts and language proficiency. Next, we created a table of specifications based on how many lessons each skill was distributed across in the textbook. According to the analysis and distribution of the textbook, we assigned a set of questions to each language skill. We made sure the test was free of grammatical errors and covered all the necessary material.

2.2.3. Questionnaire

According to earlier research, using learning management systems (LMSs) such as Moodle encourages students to view learning positively [44,50,51]. We used the relevant literature (e.g., [52–54]) to gather ideas to create a five-point Likert survey questionnaire.

After collecting all the materials, our research team decided to include a questionnaire with 25 items divided into four sections. Section 1 collected data on demographics. The participants were asked to score the questionnaire items in the final three sections on a scale of 1 to 5. The students' attitudes toward the English language instruction were gauged in the second section (items 1–6); their attitudes toward acquiring the fundamentals of language were gauged in the third section (items 7–14); and their attitudes toward Moodle were gauged in the fourth section (items 15–25). Using internal consistency, we adjusted each item's correlation coefficient to assess the credibility of the questionnaire. Two forms of the survey questionnaire were created by us. With the exception of Section 4, which gauged students' opinions of Moodle, the two versions were identical. This second edition was distributed to the experimental group only when they used Moodle in their studies.

3. Results and Discussion

We implemented tests so that we could analyze the data. For example, the degree to which the experimental group's attitudes and language abilities grew from before to after the tests was determined using Wilks' lambda. The means are displayed in Table 1 below, and the Wilks' lambda results are explained in Table 2.

Table 1. The experimental group's students' language skills development (means and SD for both the pre- and post-tests).

Development	Pre		Post	
	M	SD	M	SD
The ability to speak	4.69	1.56	7.00	1.06
The ability to listen	3.66	0.61	9.52	0.48
New lexical items	8.66	4.57	15.56	3.29
Structure formation	11.55	3.31	16.52	3.61
Reading comprehension	14.11	5.00	17.48	6.57
Rhetoric	4.15	1.95	4.90	2.56
Total	46.82	16.95	70.98	17.57

As demonstrated by the figures in Table 1, there were variations between the experimental group's pre- and post-test results, and the students' language underwent a notable development. Table 2 illustrates how we employed the Sidak post hoc test to pinpoint the precise variations in language development that were present.

The above table's Sidak post-hoc test results on total score demonstrate that there were notable variations in the experimental group students' English proficiency between the pre- and post-test results. The variance for the experimental group showed clear progression in the post scores. This result could have been influenced by interactive language learning activities, since students are learning in a risk-free setting with their peers. The environment

that is created by students using technology is one in which high levels of inspiration and engagement are easily observed [55]. According to Tai & Chen [56], there is an improvement among the advancement of learners and the Moodle-based lesson plans [57], indicating that the engaging technological setting promotes deeper content understanding. The students' reading abilities significantly improved, according to the post-measure results. Furthermore, learners' development was positively impacted by Moodle's interactive language learning activities more so than by traditional teaching methods [58]. When writing skills were tested, the results showed a significant impact at the post-measure stage; this suggests that online and more collaborative learning environments are better for students' acquisition of writing skills.

Table 2. Results of the Sidak post hoc test on the experimental group's post-measure of learners' English language proficiency.

English Language Skills Development	Post-Measure
The ability to speak	-1.24
The ability to listen	-4.90
New lexical items	-5.01
Structure formation	-4.01
Reading comprehension	-3.31
rhetoric	-0.69
Total score	-22.83

According to Karaaslan et al. [59], the result confirms that Moodle's instructional interactive language learning exercises have an effect on students' performance. A Sidak post-hoc test was used to identify minor variations in learners' development that were significant in relation to speaking ability on the post.

Tests of listening abilities revealed an improvement in posttest results. This result emphasizes how important it is to teach listening skills using Moodle during the pandemic, as these skills are primarily neglected in in-person instruction. In post-measures, students who received instruction through the LMS demonstrated improved listening skills. Additionally, students in the control group—where instruction is given in a conventional manner—showed less advancement in their language proficiency [60].

Following the assessment, there were no noticeable differences in vocabulary development. According to Zainuddin et al. [61], Moodle provided a range of interactive language exercises for students in the group that participated in the experiment. There were no discernible changes in the structural patterns in the post-measures. This outcome demonstrates that students using Moodle to learn English will be motivated to learn the language and make an effort to attend all of their classes.

The above table's Sidak post-hoc findings on total score show that noticeable differences in the experimental group's students' advancement in their English-speaking proficiency between the pre- and post exist. The experimental group experienced a positive difference at post-measure. We used the Wilks' Lambda test for the repeated measures as indicated in Tables 3 and 4.

There was no apparent distinction in the control group's students' speaking, listening, or structural pattern proficiency among pre- and post-test scores. There was a slight variation in the overall score, writing, reading, and terms scores between both tests results.

Table 3. The means and the SD of the control group's learning development, for each of the pre- and post-measures.

English Language Skill Development	Pre		Post	
	M	SD	M	SD
The ability to speak	4.01	1.50	3.55	2.04
The ability to listen	3.05	1.45	2.45	1.75
New lexical items	10.10	3.75	15.35	4.47
Structure formation	13.90	4.29	15.24	4.00
Reading comprehension	16.05	3.32	19.45	5.05
Rhetoric	3.88	1.04	4.00	2.10
Total	50.99	15.35	60.04	19.41

Table 4. Results of Wilks' lambda test, showing variations in the growth of learners in both the pre- and post-measures for the control group.

English Language Skill Development	Wilks' Lambda	F	DF	Error	Sig.
The ability to speak	0.93	0.41	2.00	24.00	0.62
The ability to listen	0.91	1.00	2.00	24.00	0.34
New lexical items	0.37	17.46	2.00	24.00	0.0001
Structure formation	0.87	1.25	2.00	24.00	0.26
Reading comprehension	0.68	4.85	2.00	24.00	0.01
Rhetoric	0.72	3.81	2.00	24.00	0.02
Total score	4.48	28.78	2.00	24.00	0.0001

We tracked the control participants' advancement with their English language skills both before and after the intervention using Sidak post-hoc. There were not any notable deviations from the ones mentioned. Nonetheless, a variation in the reading proficiency of the students was found in the post-measure. We hypothesize that this is because the control group received traditional instruction in reading skills, with teachers modeling questions and answers through memorization and translation. When comparing the scores between Tables 2 and 5 (-22.83 as opposed to -7.66), it is clear that in an educational environment where the primary source of knowledge is the teacher, the conventional instructional effect is worse when carried out by the teacher [62]. The overall result demonstrates that while traditional instruction does not particularly promote speaking or dialogic skills, it does aid in the development of some receptive skills, such as reading. On the other hand, Moodle provides ample chances where students interact and practice their listening skills through forum discussions [63] and dialogic co-creation of assignments [64].

Table 5. Results of the Sidak post hoc analysis pertaining to variations in the growth of EFL progress in the control group's pre- and post-test.

Language Skills and Areas	Post-Test
New lexical items	-5.22
reading comprehension	-3.30
rhetoric	-0.12
Total score	-7.66

As demonstrated by Table 6's results, there are no significant differences among the views of both groups about their classes or English-speaking abilities. However, the experimental group performed better overall on the post-test, showing a variance among the two groups' perceptions of their ability to speak English. The findings confirm with the research carried out by Ghazal et al. [65] with students, which discovered that Moodle-based learning significantly improved students' attitudes toward learning the English language. It is clear that instructors and students alike have enthusiastic opinions about using Moodle to teach and learn English. On the other hand, students display a wide range of attitudes. The findings of Indriani & Widiastuti [66] are further supported by the findings of our investigation. Both studies came to the conclusion that Moodle can have an impact on promoting and assisting learners in becoming self-sufficient. The results also suggest that language is perceived positively by learners that use Moodle to enhance their language proficiency.

Table 6. Students' attitudes toward English language instruction in the classroom and their proficiency in the language in the post-measure of control and experimental group.

Variables	Experimental (17)		Control (16)		<i>t</i>	Sig.
	M	SD	M	D		
Learners' Attitudes (the English classes)	4.10	0.65	4.05	0.55	0.73	0.41
Learners' Attitudes (skills)	4.01	0.51	3.70	0.41	2.18	0.02
Total scores	4.05	0.58	3.75	0.48	1.62	0.21

4. Implications, Limitations, and Future Steps

The findings of this study have several implications for English-as-a-foreign-language educators, curriculum developers, and institutional policymakers. The higher posttest scores attained by the experimental group suggest the potential for the wider use of LMS-based learning and teaching on EFL language-learning programs. We posit that educators can leverage the potential of LMSs such as Moodle for enhanced language-learning experiences that support EFL learners, especially in the development of speaking, listening, and foreign language dialogic skills, further promoting engagement and motivation in language acquisition.

We suggest that curriculum developers consider incorporating the opportunities for off-site, asynchronous, and group work that learning management systems offer to create effective language-learning environments that support autonomous learning behaviors among EFL learners. Policymakers can further use these implications to advocate for the wider use of LMSs in their institutions to leverage their potential to transform language education practices; address the evolving needs of language learners in the digital age; and, in Palestine particularly, offset some of the difficulties inherent in the tense and fractious geopolitical context.

Whilst we support the findings of this study, we also acknowledge certain limitations. The study's specific context and sample size may have led to a limited generalizability of the results: the study was conducted in a single educational setting with a particular group of EFL learners. This research could be usefully replicated in a wider range of settings and with a larger sample size of participants (both experimental and control) to boost the external trustworthiness and transferability of the findings to other contexts and settings. 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.

5. Conclusions

This study investigated the attitudes of a select number of students toward language classes and the effectiveness of using Moodle to teach English language skills. Even though the study only looked at a small number of participants and examined these variables for a short period of time, stakeholders and educational policymakers can clearly learn from these findings if larger and more comprehensive studies confirm them. It seems that students pick up English more quickly and effectively when an LMS such as the Moodle platform is integrated through the method of instruction, especially when it comes to speaking, listening, reading, and writing. It also serves to inspire students and provide them with opportunities to engage in critical thinking in English through discussion boards and idea sharing.

To sum up, our study's findings imply that utilizing Moodle for English instruction in the classroom may improve students' language skills. Additionally, it encourages students to interact with the technology, which results in increased motivation, reading proficiency, vocabulary acquisition, and comprehension of grammatical structures; improved speaking, debate performance, and fluency; clear pronunciation; and coherent writing. Our experimental findings show that, when language educators employ an LMS—in this case, Moodle—especially in emergency situations, they not only facilitate English learning, but they also appear to encourage student interaction. Through the utilization of the course's language immersion activities, students can engage in active learning where they can exchange ideas, listen to and record themselves in the language, ask questions on the forum, and restate their opinions. These exercises can all assist students in changing their mindset regarding their English language education.

These peer-to-peer activities may enhance and magnify students' speaking abilities. 6 and 21] provide two instances of this in Palestine. The use of the Moodle platform's interactive language-acquisition activities, as opposed to teacher-directed tasks, appears to have the potential to assist shy learners in overcoming the difficulty of communicating in a foreign language through the interaction with and discussion of co-created content on topics of their own choosing.

These findings demonstrate a strong correlation between students' increased speaking proficiency and their use of Moodle. It was clear from comparing the two groups' means that the experimental group grew more than the control group. Without a doubt, the Palestinian Ministry of Education must play a significant role in encouraging instructors and students to use LMSs in their classrooms. It is advised that university instructors take into account pedagogical innovations, such as Moodle, to support Moodle-based interactive learning activities. This will enable them to play important roles in utilizing Moodle for language learning, encouraging students to use the Moodle platform for language learning, using technology to get students involved, and influencing students' attitudes.

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