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Student Perceptions of Assessment Techniques in E-Learning for Different LMSs in English Language Teaching (ELT)

Shabina Tabassum
https://orcid.org/0009-0008-6918-2689
Lecturer, Department of Foreign Languages, Jazan University, Kingdom of Saudi Arabia.
Email: stabassum@jazanu.edu.sa

Abstract

This study provides a comparative analysis of assessment methods in four major Learning Management Systems (LMS)—Moodle, Blackboard, D2L Brightspace, and Canvas—used in English Language Teaching (ELT). The central research question guiding this study is: Which LMS assessment techniques are most effective in supporting second language learning across the four skills of reading, writing, listening, and speaking? A comparative research design was employed, involving 100 students who responded to a structured questionnaire assessing their perceptions of assessment methods across the four LMS platforms. The results reveal significant differences in student agreement with assessment techniques: Blackboard received the highest approval at 49%, followed by Canvas at 26%, Moodle at 16%, and D2L at 9%. These findings suggest that Blackboard and Canvas provide more effective assessment features for promoting online EFL learning. The study also highlights the relevance of LMS-based assessment in the context of increasing reliance on technology in education, accelerated by the global pandemic. Based on these findings, pedagogical recommendations are proposed to enhance online EFL instruction, including integrating interactive assessments and providing timely feedback. This research provides valuable insights for EFL learners, teachers, and online course designers, while also offering directions for future research on optimising LMS platforms for language education.

Keywords: Learning management systems (LMS); English language teaching (ELT); Technology in education; Student perceptions; Assessment techniques

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1. Introduction

Towards the end of the twentieth century, technological innovations transformed education, evolving from traditional distance learning to e-learning or virtual learning. As education became increasingly accessible, the demand for efficient online learning environments grew. Learning Management Systems (LMS) emerged as essential tools that facilitate e-learning by allowing the sharing of study materials such as videos, audio files, documents, and webinars across various skill areas. LMSs provide virtual classrooms that support real-time communication through chats and discussion forums and integrate automation tools like quizzes, self-assessments, and peer evaluations. Some even extend beyond formal education, offering forums for specialised interests such as crypto games. Overall, LMS has become a

cornerstone technology in modern education.

1.1 Background of Study

In the 1960s, communicative practice rather than classroom observation became the focus of attention in teaching English as a foreign language (ELT), and new attention was given to how linguistic models described reactions in terms of gradual processes. In the 1970s, visual technology was encouraging change in ELT and programs such as Walter and Connie brought television-based instruction to ELT through situations that replicate authentic English use. Such developments provided the basis for Communicative Language Teaching (CLT) (Richards & Rodgers, 1986) and allowed ELT to move away from drill and learning by rote, towards a more interactive approach that privileged the learner's own needs. Such development also led to an expanded view within ELT, creating sub-areas such as English for Specific Purposes (ESP) and English for Academic Purposes (EAP), further emphasising the need for flexible, purpose-centred language teaching. The 1980s saw the beginning use of computers in language classes, which occurred with such programs as Computer-Managed Instruction (CMI), Computer-Based Instruction (CBI), Computer-Assisted Instruction (CAI) and Computer-Assisted Language Learning (CALL). These approaches focused on interactivity via tutorials, sims, and games that tap into the power of multimedia for enhanced comprehension and engagement (e.g., words, sounds, pictures and moving images). DVD players, interactive whiteboard (IWB), and computers brought in a new education phase that used technology combined with traditional courses for both formal and informal types of teaching practices and led to more advanced Learning Management Systems (LMS) that later on developed full-fledged platforms for online learning.

1.2 Statement of the problem

Given the current global trend of moving from conventional teaching systems to e-learning, driven by evolving technology and COVID-19, it is imperative to determine how best LMS tools may be leveraged. As students went home, many schools around the world, including in Sweden, were unprepared for a quick change to digital teaching environments. This rapid shift, as Dhawan (2020) calls it, is a 'stress test' for educational systems. Numerous teachers and students confronted limited experience navigating the online realm, highlighting the paramount role of pedagogy while harnessing technology. "As Warschauer and Meskill (2000) put it, successful integration of technology with language teaching is more about "humanware" - teachers creating purposeful digital learning experiences – than hardware or software". So, it is necessary to analyse how various LMS could be utilised for the evaluation of English with specific affordances (i.e. tests, quizzes and peer assessment), also in terms of the learning environment best suited to this goal.

1.3 Relevance of the Study

As Davis, Carmean, and Wagner (2009) simply describe, "scholarship is saying that they are 'porting' classical live courses to the computer where they are created for delivery via communicative

computers." This progress highlights the centrality of LMS technology in English Language Teaching (ELT). The present study adds to this area by considering the needs of educators in addition to those of learners when examining instructional design and delivery. Attention is given to re-shaping teacher-learner dynamics and identifying specific LMS features that are conducive to language learning. "Time is then the biggest distance to be crossed" (p.290). But traditional dependence on text-alone resources and written testing still prevails—particularly when limited availability hampers instructor development—and when the cost of meaningful leadership training is too expensive (in the form of credentialing packages with no after-the-course support). Another format is virtual classrooms where teachers act as facilitators and integrate collaborative work in the form of chat rooms, forums or video conferences. These spaces support students being engaged while reducing the anxiety associated with language and easy communication in the target language (TL). The study will contribute to an understanding of how LMS can be adjusted to offer a more realistic solution that fulfils learners' practical needs, enabling better peer interaction and contributing to the successful learning of the English language in a computer-mediated environment.

1.4 Research Question

Which LMS assessment methods (in Moodle, Blackboard, D2L, and Canvas) do students perceive as most effective for learning the English Language?

2. Literature Review

Early applications of computers in English language teaching (ELT) focused on drills and tutorial exercises, with evaluation primarily based on learners' correct reproduction of L2 concepts, such as in cloze tests (Stockwell, 2020). Over time, computer-assisted language learning (CALL) evolved to include more sophisticated feedback mechanisms, error analysis, and adaptive remedial activities, which allowed for personalised learning paths and greater learner autonomy (Hsu et al., 2021).

Recent studies highlight that technology-enhanced learning environments can improve student engagement, lower anxiety, and foster self-directed, student-centred learning (Chen et al., 2022). Hsu, Ching, and Grabowski's (2021) meta-analysis further supports this, showing that web-based environments significantly improve learner autonomy and comprehension across language skills.

In addition, recent studies point to the expansion of CALL as a technology-integrated trend in ELT, which underscores how LMS-supported environments are part of a broader pedagogical shift toward digital and blended learning (Sharma & Sharma, 2022)

Despite these advancements, there remains a lack of comparative research evaluating how specific assessment techniques in LMSs impact English language acquisition from the students' perspective. Most studies focus on general engagement, motivation, or academic performance, leaving a gap regarding the effectiveness of LMS assessment tools specifically for ELT skills (e.g., reading, writing, speaking, listening).

2.1 Evaluative Techniques Employed by LMSs

The expansion of Learning Management Systems (LMSs) has redefined the practice of assessment in education, incorporating digital tools for task design, student tracking and analytics-complemented feedback (Erben, 2013; Zhang & Zheng, 2021). "LMS platforms are increasingly a part of online and

blended environments, so they provide teachers with various means to deliver, assess and monitor student work. With the proliferation of LMSs for language teaching and learning, it is necessary to explore the extent to which their facilities meet or do not meet ELT pedagogical needs" (Al-Fraihat et al., 2020). As such, this article explores the assessment tools of four popular LMSs – Moodle, Blackboard, D2L (Brighter), and Canvas through the optics of their applicability and efficacy in ELT settings to foster language skills.

Firstly, Moodle is an open-source learning management system that was released in 2002 and supports collaborative learning for over 80 languages, offers assessment tools such as certificate settings, assignment modules, time constraints, feedback and even self-assessment. Its issues reporting and analytics also help instructors and learners track performance live. However, studies have shown that despite its vocabulary and grammar learning, the automated quizzes function of Moodle functions relatively well, only rarely are its tools for assessing productive skills – speaking and writing – applied, thereby not being able to fully develop productive language competencies in online environments (Fidalgo-Blanco et al., 2021; Erben, 2013).

Secondly, Blackboard -which, as most people know, was first known as Web Course Tool- offers strong assessment affordance capabilities, i.e., automatic grading, random quizzes stemming from a question pool and plagiarism detection via SafeAssign. Despite these functionalities, research has shown minimal participation by students with Blackboard's own types of communication and collaboration tools, which limit learners' ability to develop communicative competence while using ELT. Although such a system helps implement assessment automation, especially in large classes, the limited support for human interactions of teaching and learning activities has decreased its pedagogical effectiveness (Sang et al., 2020; Zhang & Zheng, 2021).

Thirdly, D2L (Brightspace), released in 1999 with a viable set of assessment features: integrated e-Portfolios, and the development of the Engagement Plus and Performance Plus tools. Through its rubric-based evaluation and analytics capabilities, the platform systemizes the monitoring of learning progress – but at the same time, it shares a less intuitive interface, potentially dampening student motivation and involvement. In addition, its weak support for productive and English skills, such as speaking and writing, indicated a necessity to empirically investigate the appropriateness of the ELT (Al-Fraihat et al., 2020; Sang et al., 2020).

Finally, Instructure offers a Cloud-based LMS named Canvas that combines content delivery tools with assessment and collaboration through features such as the SpeedGrader authoring tool, rubric-based teaching evaluation and shared learning resources over Canvas Commons. Canvas's specific, analytic rubric feedback has helped assess and provide feedback on formative work and collaborative writing. However, with respect to its effect on the oral communicative dimension and pronunciation assessment,

there is still very little evidence, suggesting that productive language skills are still relatively under-researched (Erben, 2013; Zhang & Zheng, 2021).

2.2 Critical Synthesis and Research Gap

Across these LMSs, assessment, feedback, and analytics are well-supported, particularly for receptive skills (reading/listening) and grammar. Gaps remain in:

1.Supporting productive skills (writing, speaking) with automated feedback and peer assessment.

2.Comparative studies evaluating student perceptions of LMS assessment tools in ELT contexts.

3.Integration of AI-driven adaptive assessment for personalised language learning paths.

Thus, while LMSs offer a robust environment for ELT assessment, further empirical research is needed to identify which features most effectively support higher-order and productive language skills.

3. Materials and Methods

This study has used a quantitative comparative survey approach in evaluating students' perspectives on the assessment tools provided by four LMSs: Blackboard, Moodle, Canvas and Desire2Learn (D2L). Thus, the aim is to identify which LMS best supports evaluation in English Language Teaching (ELT), referring to students' four macro language skills: reading, writing, listening and speaking.

3.1 Participants

The targeted population for the study was undergraduate students in the Preparatory Year Studies (PYP) program at several universities in KSA. They were selected because they have regular and sustained experience with LMS for language learning. Students were recruited across a variety of sites to broaden the generalizability of findings, with a random sample extracted from students in 6 institutions. The participants were users of one type among the four LMS platforms reported in this study. Data on gender, institution and major were not collected for ethical reasons to ensure anonymity of the responses.

3.2 Instrument: Digital Questionnaire

The information was collected with a predefined digital questionnaire by Google Forms. The aim of this questionnaire was to measure how students would evaluate their LMS for ELT assessments.

The questionnaire consisted of two sections:

Section A: Demographics

- Current LMS used
- Time (time spent on learning) (in semester terms) using LMS

Section B: Perceptions of LMS Assessment Tools

- Ease of Use
- Assessment Effectiveness
- Feedback Quality
- Variety of Assessments
- Technical Reliability
- Learner Engagement

Table 1

(Rated on a 5-point Likert scale: Strongly Disagree to Strongly Agree)

1. The LMS provides effective assessments for reading skills.
2. The LMS helps me improve my writing through assignments and feedback.
3. The LMS supports listening practice and comprehension quizzes.
4. The LMS includes tools for speaking or oral communication tasks.
5. The assessment methods used are fair and clearly graded.
6. I receive timely and useful feedback on my work.
7. The platform makes assessment easy to access and complete.
8. I feel confident using the LMS for my language learning progress.

3.3 Validity and Reliability

For content validity, two specialists in English language education and educational technology examined the questionnaire, leading to slight modifications to increase clarity and match with areas of ELT skills. To ensure clarity, usability and time to completion, a pilot study using ten students (not included in the final sample) was carried out, which resulted in two items being modified following feedback. Reliability analysis of Internal consistency was analysed by calculating Cronbach's Alpha, where it was obtained 0.84 which indicated high reliability of the scale.

Figure 1

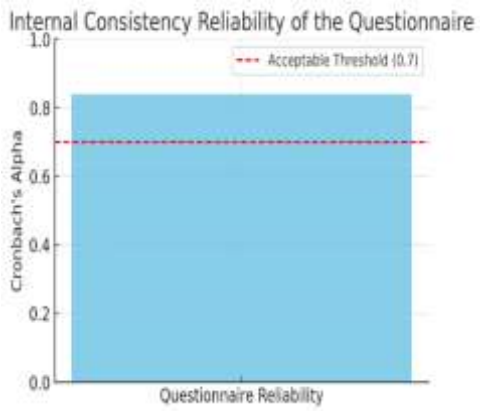
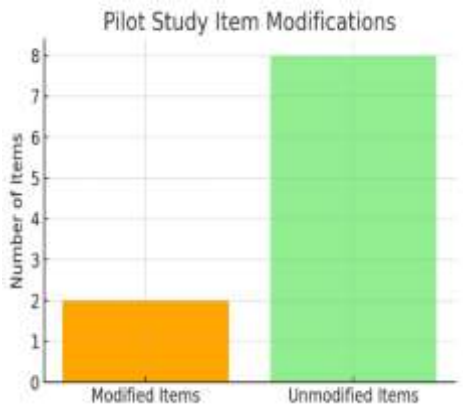


Figure 2



3.4 Data Analysis Tools

Responses obtained through Google Forms were exported and analysed in Microsoft Excel with the SPSS (Statistical Package for Social Sciences) software.

The following analytical approaches have been applied:

• Summary Statistics: To calculate means, frequencies, and percentages of student agreement per LMS.

• Comparative Analysis: To compare student satisfaction scores across LMSs.

• Data Representation: Bar-graphs and pie charts were used to provide unambiguous illustrations of the percentage agreements.

3.5 Summary of LMS Covenant Agreement Levels

Table 2

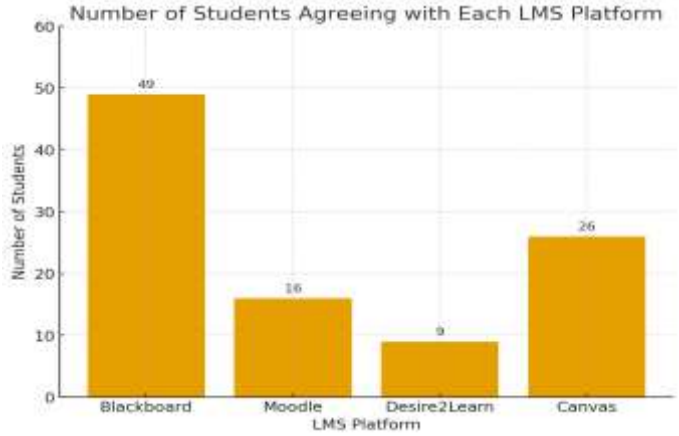
LMS Platform	Consensus (%)	No. of Students
Blackboard	49%	49 students
Moodle	16%	16 students
Desire2Learn	9%	9 students
Canvas	26%	26 students

These findings provide the groundwork for the comparative analysis explored in the subsequent section.

3.6 Data Collection and Analysis

The data gathered from the questionnaire were analysed within broader contexts, focusing on how effectively the e-learning grading system supports English language teaching standards.

Figure 3



3.6.1 Report: Student Agreement with LMS Platforms

The bar graph illustrates the percentage of student agreement with four different Learning Management System (LMS) platforms: Blackboard, Moodle, Desire2Learn, and Canvas. The data appears to be based on a survey of 100 students.

Key Observations:

Blackboard:

- Holds the highest level of student agreement at 49%, suggesting that nearly half of the respondents favor or support Blackboard as their preferred LMS.
- This indicates a strong acceptance and familiarity with Blackboard among students.

Canvas:

- Achieves a second-place percentage at 26%.
- Although it has a considerable user base, this figure is notably lower than that for Blackboard, indicating a moderate level of preference.

Moodle:

- Receives an agreement rate of 16%.
- This comparatively low number may reflect limited usage, potential usability challenges, or decreased

familiarity among students.

Desire2Learn:

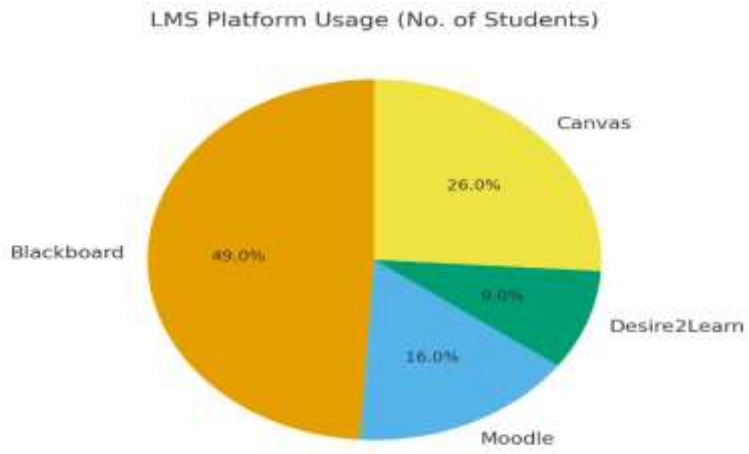
- Records the lowest student agreement at just 9%.
- This suggests minimal adoption or recognition among students compared to other LMS options.

4. Results and Discussion

4.1 Overall Findings and Comparative Analysis

Blackboard was identified as the most favorably regarded platform, with 49% of students expressing support for it. Respondents noted improvements in communication with instructors, better organisation, and greater engagement with course materials and grading systems. These findings are consistent with Erben (2013) and Jain et al. (2025), who observed that Blackboard's integrated grading and feedback functionalities enhance learner motivation while alleviating anxiety in online language learning environments.

Figure 4



Conversely, Canvas (26%) and Moodle (16%) were appreciated for their flexibility and customisation capabilities but were perceived as less user-friendly regarding assignment tracking and feedback retrieval. D2L (9%) demonstrated lower levels of student engagement despite offering robust e-Portfolio features and rubric-based assessments, aligning with observations made by Topuz et al. (2022).

4.2 Key LMS Features and Student Insights

4.2.1 Flexible Deadlines and Progress Tracking (Blackboard)

The results indicate that students place significant value on flexibility and transparency in managing their coursework through tools for tracking deadlines and grades provided by Blackboard. This aligns with previous studies highlighting monitoring functions as essential for fostering learner motivation and accountability (Gikandi, Morrow, & Davis, 2011). One participant remarked, *"I can see exactly what assignments are due and when - it keeps me on track for my English writing tasks."*

4.2.2 Easy Access Across Devices

Accessibility across various devices emerged as another critical theme. Both Blackboard and Canvas received praise for their mobile-friendly designs that enable students to engage with educational content beyond classroom settings.

Garcia and Qin (2020) also emphasise how mobile-compatible LMS features promote 'anytime, anywhere' practice - an essential component in maintaining daily language learning habits. *As one student shared, "I can review listening exercises on my phone while commuting - it really helps me practice daily."*

4.2.3 Collaborative Work and Self-Guided Learning

Students highlighted the importance of collaboration alongside self-directed study opportunities facilitated by these platforms. Tools such as discussion boards, peer review mechanisms, and resource-sharing capabilities were seen as effective means to foster engagement and community building among users. *One participant noted, "Working on group projects in Blackboard feels smoother than Moodle because I can upload files, comment instantly, and receive immediate feedback."* This observation aligns with research underscoring how integrated communication tools can enhance both collaborative efforts and self-directed learning experiences (Nguyen, 2021). Nguyen emphasises that peer-driven activities supported by LMS tools not only boost engagement but also enhance intercultural competence along with communicative skills within EFL contexts. These findings also correspond with recent work emphasising that digital collaboration fosters intercultural competence, a skill increasingly recognised as central to effective EFL communication in online environments (Sharma, 2020). In summary, these findings illustrate that student perceptions not only corroborate existing research but also offer detailed insights into how different LMS platforms influence learning experiences, particularly highlighting progress tracking capabilities, mobile accessibility features, and collaborative tools which balance individual autonomy against peer interaction within digital learning frameworks.

Conclusion

This paper aims to work toward such an understanding by focusing on students' experience of assessment in four popular LMSs, Blackboard, Canvas, Moodle and D2L Brightspace, in the field of English Language Teaching (ELT). Results: Almost half of all students (49%) indicated a preference for Blackboard, whereas Canvas was preferred by one-quarter (26%), and Moodle and D2L were viewed less favorably (16% and 9%, respectively). What mattered most was having features that could provide them with a sense of direction, approval and accessibility, such as tracking facilities, timely feedback information, and portability across devices (Garcia & Qin, 2020; Zhang & Zheng, 2021).

But at the same time, some students pointed out a gap that often goes overlooked. The issue is that LMS systems often do quite well with handling the reading and writing basics, yet they lag far behind when it comes to speaking and listening, the activities of which really make language learning communicative and real. This parallels a criticism often made in the literature, that online tools favour receptive skills over reproducing "natural" interaction. This recommendation is also aligned with Sharma and Holbah's (2022) explanation that reading and writing should not be looked at in isolation for online second language testing, but as providing routes to potential inclusive or productive skills, such as speaking and pronunciation. Readers were clear: They want more than just another quiz. They need opportunities to talk, listen and work with others and to receive the feedback that can catalyze their own growth (Hsu et al., 2021).

The takeaway here is that it's not about design; it's about how instructors employ the LMS. Although Blackboard and Canvas provide different technological tools, their added value is found in the hands of educators able to design engaging and interactive evaluations supportive of inclusion (Sang et al., 2020; Fidalgo-Blanco et al., 2021).

5.1 Recommendations

In the future, there are several measures that can be taken in order to improve the effectiveness of assessment on LMS. Number one: platforms need to support speaking and listening better. Oral-presentation or peer-feedback tools, or pronunciation practice tools would help redress the current imbalance (Sharma & Holbah, 2022).

Second, feedback must remain central. Students repeatedly said that seeing the cusp of their knowledge and skills, in clear, timely, personalised feedback, made them feel motivated. Research shows that feedback is not only corrective, but it is also a form of engagement (Zhang & Zheng, 2021). Teachers should be empowered, and if necessary coached, to blend automated grading with formative human-formed 'learning activities'. Stockwell (2020) points out that "In these early applications there was a heavy reliance on rote learning exercises and structured drills, but later the focus shifted to interactive communicative studies that we now take for granted in modern LMS-assisted ELT".

Third, mobilisation of access is a must. Since students depend on mobile devices for their schoolwork, designing with mobile friendliness in mind helps learning to be more convenient and accessible (Garcia & Qin, 2020). By making it cross-device compatible, we automatically break down barriers and make it natural for assessment to be part of everyday learning rather than something tied to a desktop.

Institutional investment in teacher training is the fourth. The best LMS features are nothing if teachers don't know how to use them. Professional learning, around the crafting of multimedia assessments, using analytics to drive instruction, or constructing collaborative tasks, can support teachers in making the most of available tools (Sang et al., 2020). And, at last, developers and educators need to come together in the spirit of collaboration. As Fidalgo-Blanco et al. (2021) note, assessment should be competency-based rather than technology-based. Learning management systems should take into consideration the needs of language learners so that platforms support pedagogy, rather than being designed in a vacuum.

5.2 Final Reflection

The pandemic accelerated our reliance on digital tools while highlighting a fundamental truth: assessment transcends mere measurement. When executed effectively, it can influence learning and ignite motivation, empowering students to gain confidence in applying language in practical situations. By integrating technology with intentional teaching strategies, higher education institutions can create online environments that nurture all four language skills, reading, writing, listening, and speaking, equally. Achieving this equilibrium is essential for Learning Management Systems (LMS) to evolve from simple testing platforms into authentic collaborators in the process of language acquisition.

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The author hereby declares that this manuscript is free from plagiarism and that the contents were not generated, assisted, or paraphrased by any artificial intelligence tool.

Conflicts ofInterest

The author declares that there is no conflict of interest regarding the publication of this article.

Author Contributions

The author is solely responsible for conceptualising the study, analysing the data, and writing the manuscript.

References

Al-Fraihat, D., Joy, M., & Sinclair, J. (2020). Evaluating E-learning systems' success: An empirical study. *Computers in Human Behavior, 102,* 67–86. https://doi.org/10.1016/j.chb.2019.08.004

Chapelle, C. A. (2001). *Computer applications in second language acquisition: Foundations for teaching, testing, and research.* Cambridge University Press.

Chen, X., Xie, H., & Hwang, G.-J. (2022). Personalised learning in technology-enhanced environments: A review of research trends. *Educational Technology Research and Development, 70*(2), 483–507. https://doi.org/10.1007/s11423-021-10064-5

Davis, B., Carmean, C., & Wagner, E. D. (2009). *The evolution of the LMS: From management to learning.* The eLearning Guild Research.

Dhawan, S. (2020). Online learning in COVID times: Panacea to students' problems and integral component of future education. *Pedagogy of Learning, 7*(2), 1–8. https://doi.org/10.1177/0047239520934018

Erben, T. (2013). *CALLing all foreign language teachers: computer-assisted language learning in the classroom*, Bloomsbury Academic.

Fidalgo-Blanco, Á., García-Peñalvo, F. J., & Sein-Echaluce, M. L. (2021). Moodle-based assessment for competency development in higher education. *Journal of Computers in Education, 8*(3), 379–401. https://doi.org/10.1007/s40692-021-00193-y

Garcia, P., & Qin, J. (2020). Mobile-assisted language learning: Student perceptions and outcomes. *Interactive Learning Environments, 28*(3), 299–315. https://doi.org/10.1080/10494820.2018.1528285

Gikandi, J. W., Morrow, D., & Davis, N. E. (2011). Online formative assessment in higher education: A review of the literature. *Computers & Education, 57*(4), 2333–2351. https://doi.org/10.1016/j.compedu.2011.06.004

Hsu, L., Ching, Y.-H., & Grabowski, B. (2021). Web-based learning environments for language acquisition: A meta-analysis. *Interactive Learning Environments, 29*(8), 1162–1178. https://doi.org/10.1080/10494820.2019.1702068

Jain, A., et al. (2025*). Concepts and applications of brain-computer interfaces: Enhancing eLearning with brain-computer interface in education. IGI Global Scientific Publishing. (pp. 461–474*) http://DOI: 10.4018/979-8-3693-7427-6.ch028

Nguyen, T. (2021). Enhancing collaborative learning in digital classrooms: Evidence from LMS-supported EFL instruction. *Education and Information Technologies, 26*(5), 5431–5450. https://doi.org/10.1007/s10639-021-10589-3

Richards, J. C., & Rodgers, T. S. (1986). *Approaches and methods in language teaching: A description and analysis.* Cambridge University Press.

Sang, H., Wang, T., & Gu, X. (2020). Exploring LMS usage and engagement in language learning. *Computers & Education, 150,* 103839. https://doi.org/10.1016/j.compedu.2020.103839

Sharma, M., & Sharma, V. (2022). Exploring the possibilities of CALL: A technology-integrated emerging trend

in English language teaching. *The Seybold Report, 17(11),* 2508–2517. https://doi.org/10.17605/OSF.IO/UYVPE

Sharma, V. (2020). Developing Communication Skills through Raising Intercultural Competence in EFL Classroom. *ASR Chiang Mai University Journal of Social Sciences and Humanities, 7*(1), 1-10. https://doi.org/10.12982/CMUJASR.2020.005

Sharma, V. K., & Holbah, W. A. (2022). Online language assessment: The exception, not the rule: For inclusive language learning. *Arab World English Journal (AWEJ) Special Issue on CALL, 8,* 299–313. https://dx.doi.org/10.24093/awej/call8.20

Stockwell, G. (2020). CALL and the development of L2 skills: Past, present, and future. *ReCALL, 32*(2), 123–142. https://doi.org/10.1017/S0958344020000039

Topuz, A.C., Saka, E., Fatsa, Ö.F. *et al.* Emerging trends of online assessment systems in the emergency remote teaching period. *Smart Learn. Environ.* 9, 17 (2022). https://doi.org/10.1186/s40561-022-00199-6

Warschauer, M., & Meskill, C. (2000). Technology and second language teaching. In J. W. Rosenthal (Ed.), *Handbook of undergraduate second language education* (pp. 303–318). Lawrence Erlbaum Associates.

Zhang, X., & Zheng, L. (2021). LMS-supported formative assessment in higher education: A comparative study. *British Journal of Educational Technology, 52*(4), 1523–1538. https://doi.org/10.1111/bjet.13111