



Semarak International Journal of Current Research in Language and Human Studies

Journal homepage:
<https://semarakilmu.my/index.php/sijcrlhs/index>
ISSN: 3083-9572



Challenges in Utilizing LMS Tools to Enhance Collaborative Learning in Open and Distance Learning (ODL) Environments

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ARTICLE INFO

Article history:

Received 18 August 2025

Received in revised form 29 August 2025

Accepted 30 September 2025

Available online 9 October 2025

Keywords:

Collaborative learning; higher education;
language learning; Learning
Management Systems; online learning;
Open and Distance Learning

ABSTRACT

This study explores the challenges faced by lecturers on the use of Learning Management Systems (LMS) tools. It focuses on the effective collaboration process among the instructor and learners in Open and Distance Learning (ODL) within higher education settings in the field of language education. Despite the potential of LMS platforms in facilitating collaborative learning, drawbacks have been identified in both study and practice. The study employs a qualitative method, with semi structured interviews with three language lecturers gather insights into the challenges they face. The data was thematically analyzed using Braun and Clarke's (2006) approach. The findings indicate that the lecturers face several challenges when using LMS tools in the ODL environments. These challenges emerged from technical and pedagogical aspects such as internet issues, lack of student participation, students' disengagement, and the lecturers own lack of understanding of LMS tools that leads to underutilization of LMS tools, lack of knowledge of LMS tools, and time management issues. This study highlights the importance of digital pedagogical competencies and the integration of LMS tools to enhance collaborative learning in the field of language education within ODL settings.

1. Introduction

Open and Distance Learning (ODL) courses have grown significantly in popularity with the rapid advancement of technology. They cater to diverse learners throughout the world and provide greater access to educational opportunities.

In recent years, Learning Management Systems (LMS) have become increasingly popular in ODL courses, particularly in higher education institutions, due to their flexibility, accessibility, and mobility [1]. In ODL, the LMS has various features for educators and learners to utilise, such as content delivery, real-time communication tools, collaborative learning tools, discussion forums, online assessments, and group projects. These features allow educators to facilitate collaborative learning,

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<https://doi.org/10.37934/sijcrlhs.4.1.4149>

develop interaction among students and educators, promote student engagement, and enhance learning experiences and knowledge construction.

Consequently, they create an engaging environment where learners can share diverse perspectives and ideas, ultimately leading to productive engagement and social presence [2-7]. As noted by Strauß, [8], LMS platforms enhance collaborative learning by incorporating collaborative tasks and tools for group awareness that promote interaction among learners. In ODL environments, these functionalities improve productive engagement and social presence, allowing for deeper knowledge construction and developing collaboration abilities. Similarly, a study revealed that [9] LMS platforms such as Moodle improves student performance, satisfaction, and engagement, especially in higher education. Moreover, it is progressively utilized as a medium for adaptive and collaborative learning, as well as to improve online assessments. However, these can only happen, when the LMS tools are used effectively by the educators.

1.1 Open and Distance Learning (ODL) in Malaysia

The rapid growth of Open and Distance Learning (ODL) in Malaysia has been rapidly growing, particularly in the aftermath of the COVID-19 pandemic. In Malaysia, the government and educational institutions have acknowledged the potential of Open and Distance Learning (ODL) to improve educational access and quality, resulting in the widespread implementation of ODL programs, particularly at the postgraduate level. Higher education institutions such as Universiti Sains Malaysia (USM), Universiti Teknologi Malaysia (UTM), Universiti Putra Malaysia (UPM), Open University Malaysia (OUM), Universiti Kebangsaan Malaysia (UKM), and Universiti Malaya (UM) have initiated a range of ODL postgraduate programs to address varied student needs [10].

In ODL settings, postgraduate education is rapidly increasing to meet the diverse needs of students, particularly working professionals and those unable to attend physical classes due to geographical or time constraints. According to Adnan *et al.*, [10], ODL courses provide flexibility and accessibility that make them a significant option for postgraduate students who want to balance their education with their profession and personal commitments.

Malaysian higher education institutions have adopted diverse technological platforms in the implementation of ODL, particularly learning management systems (LMS). Platforms such as Moodle, Google Classroom, Blackboard, and the university's LMS have become central for delivering educational content and assessments, managing courses, and increasing student engagement [10-12].

These platforms provide flexible environments for teaching and learning in synchronous and asynchronous modes, allowing for flexibility beyond geographical and time boundaries [10-12]. Furthermore, institutions have allocated resources to digital libraries and electronic materials to ensure that students have access to a diverse range of academic contents [10], thereby promoting inclusion and reducing obstacles to learning in ODL environments.

1.2 Challenges in Open and Distance Learning (ODL)

Despite the potential of ODL, obstacles persist in its execution in higher institutions. As noted in Yacob *et al.*, [13], issues related to technology, internet access, devices, and skills have significantly affected the use of LMS for distance education. This has resulted in students preferring mobile learning platforms like WhatsApp and Google Classroom over traditional LMS. Moreover, concerns regarding educational quality, academic integrity, and student participation continue to exist. Adnan *et al.*, [10] found that institutions must consistently assess and improve their ODL strategies to

address such issues and ensure the efficacy and sustainability of their programs. University students enrolled in ODL faced several challenges. A study in Almaiah *et al.*, [14] identified four key categories: technology issues, individual challenges, cultural differences, and difficulties related to courses or subjects. The study also highlighted that the instability of internet connectivity remains a persistent challenge for teaching and learning in ODL environments.

As noted in Adnan *et al.*, [15], certain students may experience difficulties engaging in collaborative and cooperative learning with their peers. The transition from physical to ODL caused challenges in maintaining interaction with lecturers and peers. Other studies have also reported similar concerns pertaining to students' online learning experiences. For example, Kedraka *et al.*, [16] discovered that some individuals may not feel comfortable studying in their home environment compared to in-person learning. This finding aligns with Henaku [17], which argued that the home environment is not conducive to effective online learning.

Therefore, lecturers and academic administrators need to identify strategies to periodically enhance the ODL sessions. Student feedback about ODL issues and challenges should be carefully taken into account to provide better learning environment and experiences for students. Research in Jena [18] and Wenzel [19] also supported that strengthening collaborative and cooperative practices in teaching and learning can benefit both lecturers and students.

1.3 Collaborative Learning (CL) in Open and Distance Learning (ODL)

According to Beltrán [20], technology-based collaborative learning, also known as online collaborative learning (OCL), has become increasingly prevalent in higher education for various factors, such as the need to increase student engagement and the prevalence of constructivism as a teaching and learning philosophy. ODL supports collaboration in higher education by providing a flexible platform that enables students to interact with instructors and peers virtually, thereby removing geographical barriers. When collaborative learning strategies are integrated into ODL environments, students' active participation, sense of community, and overall learning quality are enhanced. ODL facilitates collaboration in higher education by offering a flexible platform that allows students to interact with instructors and peers virtually, thereby removing geographical restrictions. When collaborative learning strategies are incorporated into ODL environments, students' active involvement, sense of community, and overall learning quality are enhanced.

This statement is supported by a systematic literature review in Saw and Maslawati [6], which reviewed the effectiveness of collaborative learning in ODL contexts. The review highlighted that ODL has arisen as a flexible educational approach that facilitates online collaboration among learners, overcoming geographical limitations. Within ODL, the integration of collaborative learning approaches has garnered considerable attention for its ability to improve educational quality and cultivate a feeling of community among learners. The authors further argued that cooperative learning in ODL is a pedagogical method that promotes active engagement among learners, instructors, and course materials to facilitate knowledge construction. It employs various technologies and online platforms to facilitate interactions among learners, thereby creating a virtual classroom that overcomes geographical barriers. In higher education settings, such techniques use a variety of technologies to promote interactions, which in turn improves student engagement, motivation, retention, and academic performance that allows learners to engage and collaborate in with peers and instructors in online environments, regardless of location and time [6].

1.3 Online Collaborative Learning in Language Learning

Education systems and teaching strategies shifted from traditional face-to-face instruction to online learning environments, especially after the pandemic of COVID-19. Within this context, collaboration and cooperative learning methods became increasingly essential. Collaborative learning, as an educational approach grounded in social interaction, encourages students' active participation in their studies [21]. For example, a study in Chen [22] found that group-based tasks are a common feature of both cooperative and collaborative learning, where learners engage as peers through activities such as teamwork, peer tutoring, and knowledge sharing during English language lessons for EFL learners. Further support for this notion can be found in Beltrán *et al.*, [23], which revealed that in online English language courses, collaborative tools function as applications that support teaching and learning by enabling students to work in pairs or groups, brainstorm solutions, listen to one another, and exchange ideas. Therefore, to achieve learning goals, such activities necessitate both instructor facilitation and student-to-student communication.

The advancement of digital technologies has provided educators with platforms that allow language learners to collaborate, form groups, and solve problems effectively [24]. Research on collaborative learning has grown significantly recently, influenced by the social constructivist view of learning in language education. From this perspective, students support one another's performance, and in online contexts, mutual assistance with linguistic and strategic knowledge promotes a sense of partnership and belonging within the learning community. According to Jeong [24], learners engaged in collaborative tasks often develop more positive attitudes and value mutual learning because of the connectedness it promotes. Moreover, learners' explanations, discussions, negotiations, and peer feedback within collaborative groups directly influence language learning outcomes. Therefore, guiding learners toward meaningful interactions is essential for ensuring that collaborative practices in online learning environments contribute to significant language learning outcomes [24].

1.4 Challenges in Learning Management Systems (LMS)

In higher education, LMS is pivotal in ODL, enabling the distribution of learning materials and fostering interaction between students and educators. It provides a web-based platform for communication, material sharing, and online assessments [25]. LMSs which enable self-regulated learning and flexible access to educational resources, are essential to ODL. They assist students in cultivating crucial self-regulation skills, which are crucial for successful online learning. According to Bunsu and Abd Halim [1], students in an ODL course actively utilized the LMS, resulting in a notable increase in engagement during class activities and discussions, hence improving their learning experience and fostering lifelong learning.

Despite the potential of LMS platforms in facilitating collaborative learning, drawbacks have been identified in both study and practice. These can be broadly classified into technological, pedagogical, and learner-related concerns. Technological challenges are among the most commonly cited barriers. In many ODL environments, especially in higher education, students face technological barriers such as network accessibility, digital infrastructure, and technical skills [6,26].

According to previous research, systematic reviews [6,26] have consistently identified technological barriers as major impediments to collaborative learning in LMS-supported ODL environments.

Many learners continue to experience a sense of isolation in ODL environments. Concurrently, educators face persistent challenges in effectively integrating LMS tools to foster meaningful

collaboration among students[27-30]. Furthermore, even with the presence of collaboration tools, the majority of interactions take place via different communication channels, which restrict meaningful engagement [31]. Although LMS platforms provide various functionalities, they frequently remain underused. According to Gamage [32], many educators and students primarily use LMS as a storage space for course materials, instead of fully utilizing its capabilities for interactive and collaborative learning. It is essential to understand the obstacles lecturers face while using LMS tools in order to improve the quality of online teaching.

Hence, to address these challenges, this study aims to explore the challenges lecturers encounter when utilizing LMS features, specifically collaborative learning tools in ODL environments, with the aim of examining the usability obstacles that hinder effective teaching and learning practices. To address these challenges, this study aims to investigate obstacles faced by language lecturers when utilizing the LMS features, particularly the collaborative learning tools in ODL environments.

2. Methodology

2.1 Research Design

This study adopted qualitative research design. It was conducted to explore the challenges faced by lecturers when utilizing LMS tools to facilitate collaborative learning in ODL environments. The data was collected by using a semi-structured interview method. The participants were three language lecturers from a higher learning institution that teach in ODL courses. The focus of the interview was on the lecturers' practical experiences and perceptions of LMS usability, particularly in using collaborative learning tools. This approach enabled for an in-depth exploration of the various challenges faced in real ODL teaching environments.

2.2 Sampling

The participants in this research were selected using a purposive sampling technique, which is a widely used sampling method in qualitative research. The method of purposeful sampling refers to sampling that is conducted deliberately based on the requirements of the research. The respondents of this study consisted of language lecturers selected from higher institutions in Malaysia. As language lecturers, the courses involved were individuals with sufficient experience in using LMS in ODL environments. These lecturers were active users of LMS in the context of ODL settings. Hence, they were vital for their ability to provide the necessary information for the research.

2.3 Instrument

The instrument used in this study is semi-structured interviews. The interview questions were adapted from Annamalai *et al.*, [12] to align with the context of LMS in ODL environments. The semi-structured interviews were conducted to obtain answers to questions related to the participants' utilization of LMS tools in ODL courses, challenges in utilizing LMS tools for collaborative learning, student engagement and participation in ODL tasks or activities, and strategies to cope with challenges encountered in ODL environments.

2.4 Data Analysis

The data was thematically analyzed using the thematic analysis approach [33], which assisted in identifying themes relevant to LMS-supported collaborative learning and instructional challenges in

ODL environments. The accuracy of the data was re-checked during the process of analysis. As the data was relatively straightforward, the idea of majority authority was implemented. This indicates that the predominant responses from the participants were documented or emphasized as themes corresponding to each interview question.

3. Results

This section discusses the issues and challenges impeding collaborative learning during the use of LMS tools in ODL environments. The study found various factors that impede collaborative learning in ODL environments. The study identified six themes that emerged from the findings: (a) LMS usage, (b) familiarity with collaborative tools, (c) technical obstacles, (d) time management, (e) student participation and engagement, and (f) strategies. The themes are being discussed in the section below.

3.1 LMS Tools Pattern

On the use of the LMS tools, the participants stated that it is used mainly to upload learning course materials and assessments and grade students' tasks. Collaborative tools are rarely used, which shows that the focus more on content delivery rather than interaction and student engagement.

3.2 Familiarity with Collaborative Tools

The participants stated that due to lack of training they have limited knowledge of LMS tools, particularly for effective collaborative learning such as shared document tools and collaborative applications or software.

3.3 Technical Obstacles

Technical issues such as unstable internet connectivity especially on the students' side were highlighted. Furthermore, the participants mentioned that they experience occasional lag and glitches on the computer or laptop due to high bandwidth usage or high-resolution video during online teaching.

3.4 Time Management

The participants also revealed that preparing collaborative tasks requires extra time and careful planning, therefore the respondents may not use often utilize LMS collaborative tools and other features that focus on student engagement and collaboration.

3.5 Student Participation and Engagement

According to the participants, student participation and engagement in asynchronous discussions is low. Many students prefer to work individually and only engage with others when instructions are given and activities graded. There is also a lack of motivation and interaction during online group discussions as students often do not turn on their cameras during online group discussions and only do so when specifically asked.

3.6 Coping Strategies

To manage such obstacles, the participants introduced graded tasks, group presentations, interactive tasks such as Canva and Google Docs, implemented flexible instructional methods and asynchronous learning approach to develop student engagement and collaboration.

4. Conclusions

This study explored the challenges encountered by language lecturers in utilizing LMS tools to enhance collaborative learning in ODL environments. The findings highlight that LMS platforms are predominantly used for content delivery, assessments and students' grading. Additionally, considerable issues in both technical and pedagogical aspects persist, such as technical issues, lack of knowledge of LMS features and collaborative learning tools, and low student participation and interaction that hinder effective implementation for engaging learning. Despite these obstacles, the lecturers managed to identify strategies to cope with the challenges such as assigning grading tasks, group presentations, and flexible instructional methods to enhance student engagement and participation. These findings underscore the need for training sessions for lecturers and support from the institutions to use LMS tools effectively to enhance collaborative learning and student engagement.

Acknowledgement

We would like to express our appreciation to Universiti Teknologi Malaysia for granting us the UTM Encouragement Grant (Q.J130000.3853.31J21) that enabled this research.

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