

Navigating the digital shift: EFL lecturers' perceptions and pedagogical barriers in LMS-based blended learning at a Vietnamese university

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Abstract: As digital transformation reshapes higher education, this study investigates English as a Foreign Language (EFL) lecturers' perceptions of Learning Management System (LMS) integration within blended learning frameworks. Employing an explanatory sequential mixed-methods design, the research gathered survey data from 18 lecturers at a Vietnamese university, complemented by follow-up semi-structured interviews with six participants. Findings reveal a predominantly positive stance toward LMS integration ($M = 3.94$); however, a notable disparity exists in lecturers' confidence concerning blended course design and implementation ($M = 3.12$). While participants recognized advantages such as pedagogical flexibility and increased learner autonomy, they identified substantial challenges, including inadequate pedagogical guidance, difficulties in tracking student engagement, and the heavy workload inherent in digital content development. Consequently, the study concludes that institutional support must shift from basic technical instruction toward developing comprehensive digital pedagogical competencies. The findings imply that establishing professional learning communities is essential for sustainable digital integration. Although focused on a specific institutional context, this research offers valuable implications for EFL environments undergoing similar pedagogical shifts.

Keywords: *Benefits, Blended learning, Difficulties, Learning management system (LMS), Pedagogical, Positive attitude, Teacher perception, Workload.*

1. Introduction

In the 21st century, the Fourth Industrial Revolution (Industry 4.0) has emerged as a major paradigm shift in many aspects of societal structures, particularly the landscape of education and training. Higher Education Institutions (HEIs) are no longer operating within static educational frameworks; instead, they are required to continuously innovate, adapt, and anticipate evolving demands shaped by hyper-connectivity, artificial intelligence, big data, and pervasive digitalization [1].

Advances in Information and Communication Technology (ICT) have significantly expanded the possibilities for designing flexible, interactive, and personalized learning environments. These developments support a significant change from one-size-fits-all instruction toward learner-centered approaches that better accommodate diverse learning needs and styles [2]. The COVID-19 pandemic further accelerated this transition by forcing higher education systems worldwide to rapidly adopt online and blended learning modalities (BL), thereby reinforcing the importance of digital readiness and instructional flexibility in contemporary education.

Garrison and Kanuka [3] define BL as the intentional integration of face-to-face classroom activities with carefully designed online learning experiences. Rather than being a simple addition of online components to traditional teaching, BL represents a fundamental redesign of the learning process that strategically leverages the strengths of both physical and virtual environments to enhance teaching quality and learning outcomes. Face-to-face learning remains essential for fostering interaction, collaboration, and immediate feedback, while online learning enables asynchronous access, flexible

spacing, and multimedia-supported instruction [4, 5]. Recent studies further emphasize that flexibility, personalization, and learner autonomy have become defining characteristics of effective BL environments in the post-pandemic context [6].

Within this ecosystem, LMS serves as the central technological infrastructure supporting BL implementation. Platforms such as Moodle, Canvas, Blackboard, and Microsoft Teams enable institutions to manage learning materials, track student engagement, facilitate assessments, and support communication between lecturers and students. In doing so, LMS platforms extend the boundaries of the physical classroom into a structured digital learning environment, enabling seamless integration between online and offline instructional activities [7].

In Vietnam, aligned with the national strategy for digital transformation in higher education announced in the Politburo of Vietnam [8] dated December 22, 2024, by the Political Ministry on breakthroughs in science, technology, innovation, and national digital transformation, Thuongmai University officially implemented a BL model beginning in the 2023–2024 academic year. As part of this initiative, a comprehensive LMS platform was introduced and integrated across multiple academic programs. In particular, English as an EFL course was redesigned into a blended format, incorporating digital lectures, online learning materials, and interactive learning activities.

However, despite the well-established pedagogical potential of BL, its effectiveness depends not only on technological infrastructure but also on human factors in implementation. Lecturers play a central role in determining the success of this model, as their perceptions, attitudes, digital competencies, and pedagogical adaptability directly influence instructional quality. Understanding how lecturers experience this transition, particularly in terms of perceived benefits, practical challenges, and institutional needs for improvement, is therefore essential for evaluating and enhancing the sustainability of BL implementation.

Against this background, this study aims to explore the perceptions and experiences of EFL lecturers at Thuongmai University regarding the use of LMS in BL courses. Specifically, it investigates how lecturers perceive the pedagogical benefits of LMS integration, what challenges they encounter in practice, and what context-specific improvements they suggest for enhancing implementation effectiveness. By addressing these questions, the study seeks to provide evidence-based insights to inform the continuous development of BL practices within the institution.

2. Theoretical Review

BL is increasingly conceptualized not only as a pedagogical model but also as a form of human–technology interaction, where digital systems mediate cognitive, social, and instructional processes. Early definitions [9] focused primarily on the structural integration of face-to-face and online instruction. However, contemporary perspectives emphasize the role of technology in shaping users' psychological experiences, including perceptions, motivation, and behavioral engagement.

A widely adopted theoretical foundation for BL is the Community of Inquiry (CoI) framework developed by Garrison et al. [10]. The CoI model posits that meaningful learning in online and blended environments emerges through the interaction of three interdependent elements: social presence, cognitive presence, and teaching presence.

- i) *Social presence* refers to learners' ability to project themselves as real participants within a learning community, encompassing affective expression, open communication, and group cohesion. In BL environments, LMS facilitates social presence through discussion forums, collaborative tools, and synchronous communication channels, fostering a sense of belonging even in physically distributed contexts [11].
- ii) *Cognitive presence* reflects the extent to which learners construct meaning through sustained reflection and discourse. It is supported by LMS functionalities that enable access to learning resources, structured inquiry, collaborative knowledge construction, and critical academic discussion, following the phases of triggering events, exploration, integration, and resolution [10].

iii) *Teaching presence* involves instructional design, facilitation, and direction of learning processes to achieve meaningful educational outcomes. In BL contexts, it is expressed through course design, facilitation of online discourse, feedback provision, and orchestration of learning activities across online and face-to-face environments, often mediated through LMS platforms [12].

Within this framework, the LMS functions not merely as a content repository but as an essential mediating environment that supports all three presences of the CoI model. It enables structured interaction, collaborative learning, and sustained academic engagement, even in the absence of physical co-location.

In addition to the CoI framework, constructivist learning theory [13] and connectivism [14] further underpin BL design. Constructivism emphasizes active knowledge construction through interaction and experience, while connectivism highlights learning in digitally networked environments. The LMS supports both perspectives by enabling learners to access, navigate, and integrate diverse information sources while engaging in collaborative and self-directed learning processes.

Recent developments in CoI research [15] further reinforce its relevance in contemporary digital learning environments, especially in higher education, where LMS-based BL has become increasingly prevalent.

3. Research Methodology

3.1. Research Aims and Questions

Building upon the aforementioned contextualization, this empirical study aims to meticulously explore and analyze the perceptions and prevailing attitudes of English as a Foreign Language (EFL) lecturers at Thuongmai University concerning their experiences with the application of the Learning Management System (LMS) within their newly implemented blended courses. The ultimate objective is to comprehensively map the landscape of their experiences, thereby identifying both the positive aspects and perceived benefits that warrant further promotion and institutional reinforcement, as well as the significant barriers and challenges that necessitate strategic intervention and overcoming. This critical assessment will subsequently inform the development and proposal of viable, evidence-based recommendations aimed at enhancing the overall effectiveness and sustainability of the blended learning model as practiced at Thuongmai University.

To systematically achieve this overarching aim, the study endeavors to address the following specific research questions:

1. *How do EFL lecturers at Thuongmai University perceive the benefits derived from utilizing the Learning Management System (LMS) within a blended learning instructional model?*
2. *What are the primary challenges, difficulties, and impediments that these EFL lecturers encounter during the practical implementation of blended learning via the LMS platform?*
3. *Based on the systematically identified benefits and challenges, what actionable and context-specific recommendations can be proposed to further enhance the effective and efficient application of the blended learning model within the broader institutional context of Thuongmai University?*

3.2. Research Design

This study employed a mixed-methods approach using an explanatory sequential design [16]. This design involves two consecutive phases (Figure 1): an initial quantitative phase followed by a qualitative phase, in which qualitative findings are used to explain and expand upon the quantitative results.

In the first phase, quantitative data were collected through a structured questionnaire to obtain a general overview of EFL lecturers' perceptions of the benefits and challenges associated with the use of LMS in BL at Thuongmai University. The results of this phase provided a descriptive and statistical foundation for the study.

In the second phase, qualitative data were collected through semi-structured interviews with a subset of participants selected from the survey respondents. This phase aimed to explore lecturers' experiences in greater depth and to provide contextual explanations for the quantitative findings.

The integration of both data types enabled methodological triangulation and enhanced the validity and interpretability of results by combining statistical trends with in-depth qualitative insights [17, 18].

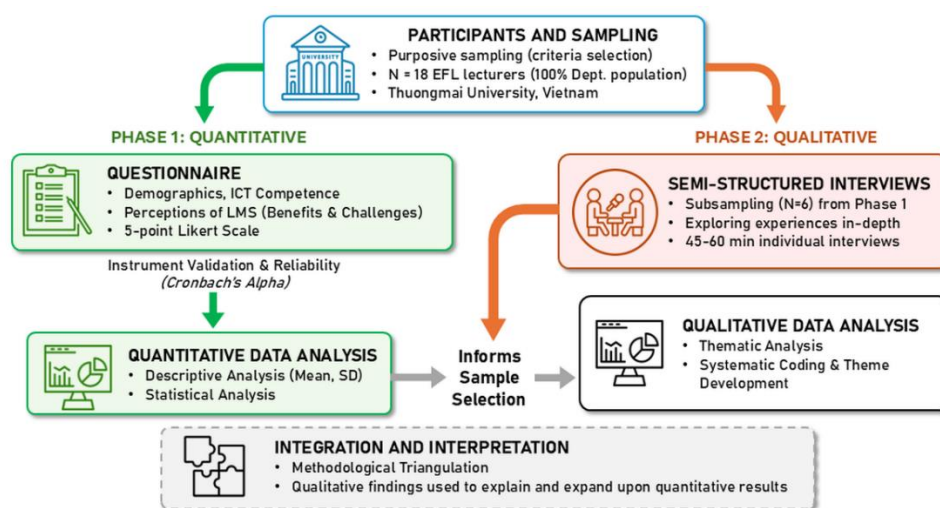


Figure 1.
Participant and data analysis flow of the mixed method used.

3.3. Participants and Sampling

The study was conducted at the English Practice Department, Faculty of English, Thuongmai University, Vietnam. This department was selected because of its direct involvement in implementing BL courses supported by the institutional LMS during the 2023–2024 academic year.

A purposive sampling strategy was used based on criterion selection [19]. The inclusion criterion required participants to have direct experience using LMS-supported BL in EFL teaching.

A total of 18 lecturers participated in the study, representing the entire population of the department (100% response rate). Among them, 2 were male, and 16 were female, aged between 28 and 51 years. Teaching experience ranged from 7 to over 20 years, and all participants had direct experience with LMS-based instruction. All teachers were allocated 4 to 6 classes to teach on the LMS platform during 2 semesters. Before carrying out teaching work, they were given short internal training courses (2–4 classes) to learn how to design lecture video clips and control students' activities via the LMS platform, such as monitoring students watching online lessons and fulfilling assignments. They were not introduced to how to exploit online tools to assist teaching procedures.

Although the sample size is limited, it represents all sources of teachers teaching language in a university and reflects a full-population case study, which enhances contextual validity and allows in-depth institutional analysis. All participants provided informed consent, and confidentiality was ensured throughout the study.

3.4. Data Collection Instruments

Two instruments were used to collect data: a structured questionnaire and semi-structured interviews.

3.4.1. Questionnaire

The questionnaire consisted of two sections:

- i) *Section 1: Demographic and professional information*, including teaching experience, prior exposure to online/BL, and ICT competence.

ii) *Section 2: Perceptions of LMS use*, including perceived benefits and challenges of LMS-supported BL measured using a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Items were developed based on relevant literature on BL and LMS implementation in higher education. Content validity was ensured through expert review by an educational technology specialist. A pilot test with two EFL lecturers was conducted to ensure clarity and appropriateness of the instrument.

Reliability was assessed using Cronbach's Alpha, confirming acceptable internal consistency, as summarized in Table 1.

Table 1.
Reliability Statistics - Cronbach's Alpha Simulation.

Components	Number of items	Cronbach's Alpha	Reliability Category
Perceived Benefits	3	0.845	High
Perceived Challenges	3	0.782	High

3.4.2. Semi-Structured Interviews

Semi-structured interviews were conducted following preliminary quantitative analysis. An interview guide was developed based on survey findings to explore lecturers' experiences in greater depth, particularly regarding perceived benefits, challenges, and contextual factors influencing LMS use. Six lecturers were purposively selected from survey participants based on teaching experience and variation in questionnaire responses to ensure diverse perspectives.

Each interview lasted approximately 45–60 minutes and was conducted individually in a private setting. With participants' consent, all interviews were audio-recorded and transcribed verbatim for analysis.

3.5. Data Analysis

Quantitative data were analyzed using SPSS version 26.0. Descriptive statistics, including mean values and standard deviations, were used to summarize lecturers' perceptions of LMS use in BL.

Qualitative data were analyzed using thematic analysis following Braun and Clarke [20]. The analysis involved systematic coding of transcripts, identification of recurring patterns, and development of themes related to perceived benefits and challenges.

Finally, the integration of findings enabled a comprehensive understanding of how psychological factors and technological systems interact, linking perception patterns with experiential insights.

4. Findings and Discussion

4.1. General Attitudes Toward LMS-Integrated Blended Learning

The quantitative results from 18 EFL lecturers at Thuongmai University are presented in Table 2, showing descriptive statistics for two attitude-related variables: overall attitude toward LMS adoption and self-reported confidence in LMS-based course design and implementation.

The mean score for overall attitude toward LMS adoption was 3.94 (SD = 0.639), with responses ranging from 3 to 5 on the 5-point Likert scale.

The mean score for self-reported confidence in designing and implementing blended courses was 3.12 (SD = 0.758), with observed values ranging from 2 to 4. A difference of 0.82 points was observed between the two mean values.

Table 2.
Descriptive Statistics of EFL lecturers' attitude and self-confidence in adopting LMS.

Items	N	Min	Max	Mean (M)	SD*
Overall positive attitude toward LMS adoption	18	3	5	3.94	0.639
Confidence in course design and implementation	18	2	4	3.12	0.758

Note: * SD = standard deviation; Likert scale: 1 = Strongly disagree, 5 = Strongly agree.

4.2. Perceived Benefits of LMS in Blended Learning

The analysis of questionnaire data and interview responses revealed three main categories of perceived benefits of LMS integration in BL: (1) enhancement of learning material management, (2) support for pedagogical innovation, and (3) facilitation of learner autonomy (Table 3).

Table 3.
Perceptions of the Benefits of LMS Integration in Blended Learning.

Benefit Items	Strongly Disagree / Disagree (%)	Neutral (%)	Strongly agree / Agree (%)	Mean (M)	SD
LMS supports flexible and efficient management of learning materials	0.0	5.6	94.4	4.56	0.616
LMS facilitates active and autonomous learning	0.0	11.1	88.9	4.28	0.669
LMS enables the application of new teaching methods	5.6	11.1	83.3	4.11	0.832

4.2.1. Learning Material Management and Instructional Organization

The item “LMS supports flexible and efficient management of learning materials” recorded the highest mean score ($M = 4.56$, $SD = 0.616$) (Table 3). Among 18 respondents, 94.4% selected “Agree” or “Strongly agree,” while 5.6% selected “Neutral.” No negative responses were recorded for this item.

Interview responses consistently reported the LMS as a centralized platform for storing, distributing, and updating teaching materials. Lecturers highlighted functions such as uploading lecture slides, reading materials, assignments, and supplementary documents. LMS was also reported as supporting the storage and retrieval of student submissions, as well as recording grades and assessment outputs in a structured format.

4.2.2. Facilitation of Learner Autonomy

The item “LMS facilitates active and autonomous learning” recorded a mean score of 4.28 ($SD = 0.669$). A total of 88.9% of respondents agreed or strongly agreed with this statement, while 11.1% selected neutral responses. (Table 3).

Interview responses indicated that LMS-supported learning activities included access to recorded lectures, completion of online quizzes, and participation in discussion forums. These functions enable students to access learning materials repeatedly, complete tasks at their own pace, and engage in asynchronous academic discussions.

4.2.3. Support for Pedagogical Innovation

The item “LMS enables application of new teaching methods” obtained a mean score of 4.11 ($SD = 0.832$), with 83.3% agreement, 11.1% neutral responses, and 5.6% disagreement (Table 3).

Interview responses indicated that LMS functions such as video uploading, online quizzes, and discussion forums were used in relation to redesigned teaching activities. Lecturers reported that these functions supported the implementation of flipped classroom structures, particularly for pre-class preparation tasks and in-class activity reallocation between online and face-to-face sessions.

4.2.4. Overall Quantitative Pattern of Perceived Benefits

Across all three items, mean scores ranged from 4.11 to 4.56, indicating consistently positive evaluations across benefit dimensions. The highest-rated item was learning material management ($M = 4.56$), followed by learner autonomy ($M = 4.28$) and pedagogical innovation ($M = 4.11$). Standard deviations ranged from 0.616 to 0.832, indicating relatively low to moderate dispersion in responses across items. (Table 3).

4.3. Perceived Challenges of LMS Implementation

The analysis identified three major, interrelated categories of challenges faced by EFL lecturers during LMS-supported BL implementation: (1) difficulties monitoring students' self-study, (2) insufficient pedagogical training to effectively utilize LMS functionalities, and (3) increased workload related to course preparation and delivery (Table 4).

Table 4.
Difficulties and Challenges of LMS Integration in Blended Learning.

Challenge Items	Strongly Disagree / Disagree (%)	Neutral (%)	Strongly agree / Agree (%)	Mean (M)	SD
Difficulties in monitoring students' self-study	5.6	11.1	83.3	4.22	0.878
Insufficient training to utilize the LMS effectively	11.1	11.1	77.8	4.06	0.938
Increased workload in preparation and teaching	16.7	11.1	72.2	3.89	1.078

Among these challenges, difficulties in monitoring students' self-study emerged as the most prominent issue ($M = 4.22$, $SD = 0.878$), with 83.3% of lecturers agreeing or strongly agreeing that it is difficult to track students' actual engagement in LMS-based learning activities. This indicates a widespread concern regarding the visibility and authenticity of students' independent learning processes in online environments.

Insufficient pedagogical training was identified as the second most significant barrier ($M = 4.06$, $SD = 0.938$), with 77.8% agreement. This indicates that while lecturers are generally familiar with basic LMS functionalities, many lack the pedagogical skills needed to design and implement effective BL courses.

Increased workload was also reported by a substantial proportion of participants (72.2%), with a mean score of 3.89 ($SD = 1.078$), indicating that the development of digital materials, design of online activities, and continuous monitoring of student engagement impose considerable additional demands on lecturers.

Overall, the three challenges follow a clear hierarchy: monitoring difficulties ($M = 4.22$), insufficient training ($M = 4.06$), and workload increase ($M = 3.89$), suggesting that while LMS integration is positively perceived, its implementation is constrained by both pedagogical and operational limitations that may affect the sustainability and effectiveness of BL practices.

4.4. Discussion

To provide an integrated interpretation of the findings, Figure 2 presents a conceptual framework illustrating how lecturers' perceptions, cognitive evaluations, and experiential constraints interact with LMS use in BL environments. Rather than viewing LMS adoption as a purely technological or pedagogical issue, the findings are interpreted through the lens of mind–technology interaction, where human cognition, beliefs, and experiences mediate the effectiveness of digital tools.

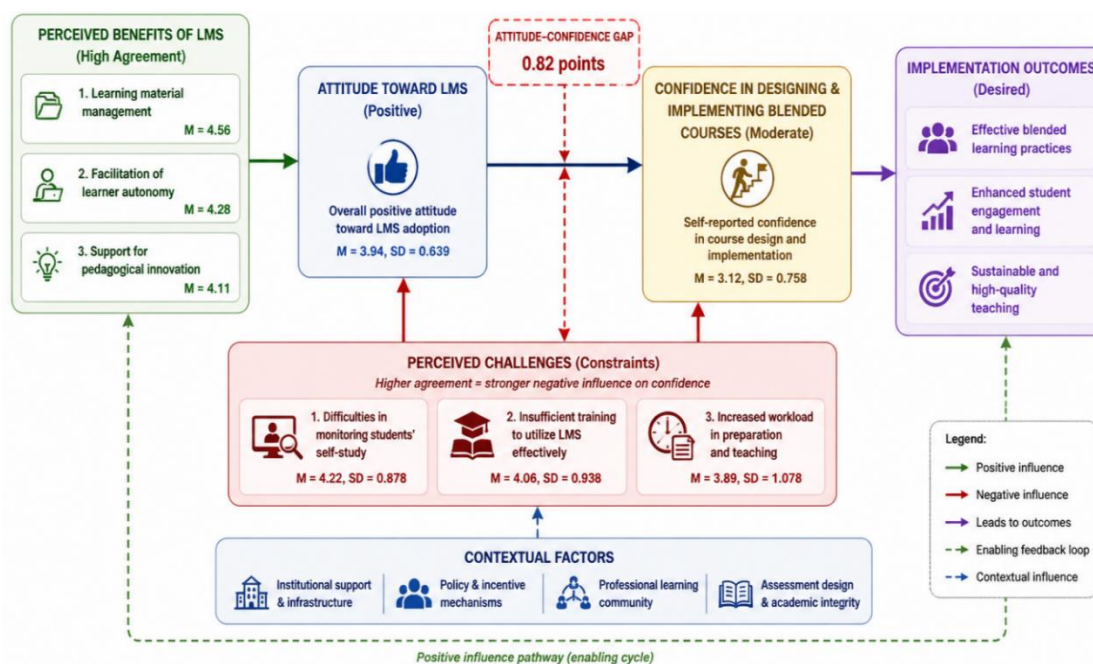


Figure 2. Conceptual framework showing factors influencing EFL lecturers' confidence in implementing LMS-integrated BL.

To enhance the reliability of quantitative survey results, follow-up semi-structured interviews were conducted. An interview guide was developed based on survey findings to explore lecturers' experiences in greater depth, particularly regarding perceived benefits, challenges, and contextual factors influencing LMS use.

Six lecturers were selected purposively from survey participants based on teaching experience and variation in questionnaire responses to ensure diverse perspectives. Each interview lasted approximately 45–60 minutes and was conducted individually in a private setting. With participants' consent, all interviews were audio-recorded and transcribed verbatim for analysis. The discussion will be a combination of results extracted from these two data sources.

4.4.1. Positive Attitudes as Cognitive Acceptance of Technology

As illustrated in Figure 2, lecturers' positive perceptions of LMS benefits contribute to their generally favorable attitudes, representing an initial stage in the implementation process. The results indicate that EFL lecturers at Thuongmai University generally hold a positive attitude toward LMS-supported BL, as reflected in the relatively high mean score for overall attitude ($M = 3.94$, $SD = 0.639$; Table 2). This suggests a favorable cognitive and affective acceptance of digital transformation in teaching practices, consistent with previous research emphasizing the importance of faculty receptiveness in successful LMS implementation [21, 22].

However, this positive perception is not fully reflected in pedagogical confidence. The lower mean score for self-reported confidence in course design and implementation ($M = 3.12$, $SD = 0.758$) (Table 2) reveals a clear gap of 0.82 points between attitude and capability. This finding indicates that while lecturers recognize the value of LMS, many still lack sufficient pedagogical competence to effectively design and implement blended courses. Similar discrepancies have been reported in previous research, where limited training and insufficient instructional design support were identified as key barriers to effective LMS integration [23–26].

This “positive-but-cautious” profile indicates that LMS adoption at Thuongmai University remains in a transitional stage, where acceptance has been achieved attitudinally but not yet consolidated operationally.

4.4.2. Attitude–Confidence Gap and Implementation Readiness

According to the results (Table 4), three interrelated categories of challenges were identified: insufficient pedagogical training ($M = 4.06$, $SD = 0.938$), difficulties in monitoring student self-study ($M = 4.22$, $SD = 0.878$), and increased workload ($M = 3.89$, $SD = 1.078$). Additionally, as highlighted in Figure 2, this attitude–confidence gap is closely associated with several key implementation challenges. These factors provide a concrete explanation for the observed gap between lecturers’ relatively positive attitudes ($M = 3.94$) and their lower confidence in implementing blended courses ($M = 3.12$).

While lecturers recognized the pedagogical value of LMS-supported BL, the high level of agreement regarding insufficient training suggests limited readiness to translate this perception into effective instructional practice. From a mind–technology interaction perspective, this reflects a lack of pedagogical–cognitive alignment, in which lecturers’ beliefs about technology are not supported by sufficiently developed mental models for instructional design and implementation. This aligns with prior research identifying limited pedagogical training and insufficient instructional design support as key barriers to effective LMS integration [23, 24].

This gap is strongly reflected in the qualitative data. As one lecturer explained:

“The university rolled this out very quickly, which was commendable in terms of keeping up with trends. However, the support was largely superficial... It felt very much like trial and error, which consumed a lot of time and sometimes led to frustration.”

This evidence indicates that institutional support was predominantly technical rather than pedagogical, leading to variability in implementation and reduced instructional confidence. From a mind–technology interaction perspective, this imbalance suggests that lecturers are supported at the level of tool use but not at the level of cognitive–pedagogical integration, where technology needs to be meaningfully aligned with instructional goals.

From an implementation perspective, these findings suggest that technological readiness alone is insufficient. Instead, pedagogical readiness, particularly in instructional design, alignment of learning modalities, and assessment strategies, emerges as a critical determinant of effective LMS integration [25, 27]. In cognitive terms, this reflects the need for lecturers to develop structured mental models that connect technological affordances with pedagogical decision-making.

4.4.3. LMS as a Tool for Instructional Reconfiguration

The results (Table 3) indicate that LMS adoption has contributed to a reconfiguration of instructional organization, particularly in content delivery and classroom utilization. High levels of agreement were observed for items related to learning material management ($M = 4.56$, $SD = 0.616$; 94.4%) and pedagogical innovation ($M = 4.11$, $SD = 0.832$; 83.3%), suggesting that lecturers actively used LMS to shift content delivery to online environments and repurpose face-to-face sessions for interactive learning activities. This pattern reflects how LMS functions not only as a delivery platform but also as a cognitive support tool that shapes how lecturers organize and sequence instructional activities.

This transformation was particularly evident in the adoption of flipped classroom practices, as one lecturer described this process as follows:

“Before the LMS, truly flipping the classroom was difficult. It required students to read extensive materials beforehand, and there was no way to easily ensure they did. Now, I require students to watch my pre-recorded video lectures and complete a short comprehension quiz directly on the LMS before they come to class. This pre-class engagement is easily trackable. Consequently, our precious face-to-face class time is completely freed up and dedicated entirely to active learning, intensive practice, collaborative group discussions, peer tutoring, and directly addressing complex issues or misconceptions that emerged from their self-study. The classroom atmosphere is much

more dynamic and student-centered. The LMS is truly an indispensable tool for me to effectively implement this model and achieve a deeper level of student engagement.”

This excerpt illustrates how LMS facilitates a restructuring of teaching activities rather than merely digitizing existing materials. By enabling the redistribution of learning phases between online and in-person environments, LMS supports more student-centered and active learning approaches, consistent with prior research on blended and flipped learning models [4, 6].

4.4.4. Learner Autonomy: Enabling Conditions and Limitations

Consistent with the “perceived benefits” dimension in Figure 2, LMS adoption is associated with changes in how instructional activities are organized and delivered. The results (Table 3 and Figure 2) show that lecturers perceived LMS as supporting learner autonomy, with a high level of agreement for this dimension ($M = 4.28$, $SD = 0.669$; 88.9%). Functions such as recorded lectures, online quizzes, and discussion forums provide students with flexible access to learning materials and opportunities for self-paced and asynchronous learning, aligning with principles of self-directed learning.

However, qualitative findings also indicate concerns regarding the actual depth of student engagement. One lecturer noted:

“That’s the theory, and the potential is certainly there for students to become more independent. But how do we truly know if they are genuinely engaged in deep self-study, reflecting on the material, or just logging in briefly to fulfill an attendance requirement or superficially ‘clicking through’ content without meaningful engagement? The platform can track logins and completion rates, but genuine learning goes beyond that.”

This concern highlights a limitation of LMS-based environments: reliance on behavioral indicators (e.g., logins, completion rates) as proxies for engagement. Such metrics provide only partial insight into students’ cognitive processes and may overestimate actual learning outcomes, as noted in previous studies on online assessment and engagement [28].

The findings suggest that learner autonomy in BL is not solely a function of technological affordances but is strongly mediated by pedagogical design. Specifically, the quality of learning tasks, the level of cognitive challenge, and the integration between online and face-to-face components play a decisive role in shaping meaningful engagement. Without carefully designed activities that require reflection, interaction, and application, LMS-supported autonomy may remain superficial.

From a pedagogical perspective, this implies that fostering genuine learner autonomy requires a shift from content delivery to engagement-oriented design. Approaches such as problem-based learning, reflective tasks, and structured interactive discussions can enhance the depth of student participation and better align observable behaviors with actual learning processes. This interpretation is consistent with prior research emphasizing the importance of instructional design in promoting meaningful engagement and self-directed learning in blended environments [4, 6]. Therefore, the effectiveness of LMS in supporting learner autonomy ultimately depends more on how lecturers design and scaffold learning experiences than on the technological platform itself.

4.4.5. Workload Intensification in Blended Learning Implementation

The results (Table 4) indicate that increased workload is a substantial challenge in LMS-supported BL, with 72.2% of lecturers reporting higher workload ($M = 3.89$, $SD = 1.078$). This suggests that, despite positive perceptions of LMS benefits, the implementation process imposes significant additional demands on lecturers.

This intensification reflects not only an increase in workload volume but also a qualitative transformation of instructional labor. In BL environments, lecturers are required to take on multiple roles, including content creator, instructional designer, and online facilitator, extending beyond traditional teaching responsibilities. Similar patterns have been reported in prior studies, where the development and maintenance of blended courses require considerable time investment and new skill sets [29, 30].

One interview participant described this process in detail:

“To create even a single 15-minute video lecture that is pedagogically sound and engaging, I first have to prepare a detailed script, then spend considerable time recording it, and finally, even more time editing the video to ensure clarity, correct pacing, and often adding supplementary visuals or captions. This entire process can easily take an entire day, if not more, for just a short segment of content. Beyond video creation, I then have to design and integrate interactive online exercises, monitor student activities on the forum, and respond to their numerous queries that emerge from the online component. This is all in addition to my regular face-to-face teaching and other academic duties. The workload has definitely increased, at least in this initial phase of developing and adapting courses to the blended format.”

The account highlights the often underestimated “hidden labor” involved in blended course development, consistent with the quantitative finding that 72.2% of lecturers reported increased workload ($M = 3.89$; Table 4). While LMS platforms are frequently associated with efficiency gains, these benefits tend to materialize only after substantial upfront investment in course design and resource development. During the initial implementation phase, lecturers experience a significant workload surge, driven by the need to redesign instructional materials, develop digital content, and manage both online and face-to-face learning components. Similar patterns have been reported in prior studies on BL adoption [29, 30].

From an institutional perspective, this finding raises critical concerns regarding the sustainability of BL initiatives. If increased workload is not formally recognized and adequately supported, it may lead to faculty fatigue, reduced motivation, and resistance to pedagogical innovation. Moreover, without appropriate workload adjustments or incentives, lecturers may resort to surface-level use of LMS functionalities, thereby limiting the pedagogical effectiveness of BL.

These findings suggest that successful and sustainable implementation of LMS-based BL requires not only technological infrastructure but also systemic support mechanisms, including workload recognition, instructional design support, shared digital resources, and collaborative teaching models. Addressing workload intensification is therefore essential to ensure that BL evolves from an experimental practice into a stable and high-quality component of higher education delivery.

4.4.6. Assessment of Integrity and Monitoring Challenges

As highlighted in Figure 2, difficulties in monitoring students’ self-study represent a key constraint in LMS implementation, with important implications for assessment integrity. The findings indicate strong concern among lecturers regarding both the monitoring of student learning processes ($M = 4.22$, $SD = 0.878$; 83.3% agreement) (Table 4) and the reliability of online assessment in LMS-supported blended environments. In particular, lecturers reported persistent challenges in ensuring that students complete online tasks independently, especially in asynchronous and proctored settings.

These challenges highlight a fundamental limitation in transferring traditional assessment practices into digital contexts. While LMS platforms enable automated testing and activity tracking, they primarily capture behavioral traces rather than direct evidence of learning. Indicators such as quiz completion, login frequency, or time-on-task provide only partial insight into students’ engagement and do not reliably reflect the depth or authenticity of their learning processes. Similar concerns have been reported in prior research on online assessment and engagement [28].

From a mind–technology interaction perspective, this issue reflects a misalignment between what the system can measure and what educators aim to assess. LMS analytics are effective in recording observable actions but remain limited in capturing higher-order learning processes such as critical thinking, reflection, or knowledge construction. As a result, lecturers face increasing uncertainty when interpreting digital traces as proxies for genuine learning.

This creates tension between efficiency and validity in assessment design. While LMS-based assessments offer scalability and administrative convenience, reduced control over testing conditions increases the risk of academic dishonesty and may compromise the reliability of evaluation outcomes.

The findings suggest that assessment challenges in BL are not merely technological but fundamentally pedagogical. Addressing these issues requires a shift away from reliance on conventional

summative testing toward more authentic, process-oriented assessment approaches, such as project-based tasks, portfolios, and reflective or interactive activities. These forms of assessment generate richer evidence of learning and are less dependent on controlled testing conditions, as highlighted in prior research [4, 6].

However, such approaches also introduce new demands, including increased grading complexity and the need for enhanced assessment literacy. Ensuring assessment integrity in LMS-based environments requires a comprehensive institutional response that integrates pedagogical training, assessment design support, and appropriate policy frameworks.

5. Conclusions and Implications

5.1. Conclusions

This study investigated EFL lecturers' perceptions of LMS-supported BL at Thuongmai University using a mixed-methods approach. The findings indicate that lecturers generally hold positive attitudes toward LMS adoption and recognize its value in improving instructional organization, enabling pedagogical innovation, and supporting learner autonomy.

However, a consistent gap emerges between positive perceptions and practical implementation capacity. Lecturers reported lower confidence in designing and managing blended courses, alongside key challenges including limited pedagogical training, difficulties in monitoring student learning and ensuring assessment integrity, and increased workload associated with digital course development.

Overall, these findings suggest that the effectiveness of LMS integration is shaped not only by technological provision but also by the dynamic interaction between human and technological factors. In particular, lecturers' pedagogical readiness, their ability to interpret and act on digital learning data, and the extent of institutional support play a central role in determining the quality and sustainability of BL practices.

5.2. Implications

Building on these findings, several implications can be drawn for the future development of LMS-supported BL in higher education.

First, effective LMS integration requires closer alignment between technological systems and pedagogical practices. Future initiatives should therefore move beyond system deployment to focus on strengthening lecturers' capacity to design meaningful learning experiences in digitally mediated environments.

Second, the observed gap between positive attitudes and implementation confidence highlights the need for sustained professional development. Rather than isolated technical training sessions, continuous, practice-oriented development programs focusing on digital pedagogy, assessment design, and BL strategies are essential to support long-term transformation.

Third, the challenges related to workload and assessment integrity underscore the importance of institutional support structures. Sustainable implementation depends on coordinated technical-pedagogical support, including instructional design assistance, shared digital resources, and recognition of the additional demands associated with blended teaching.

Fourth, fostering collaborative academic environments is critical. Professional learning communities (PLCs), both formal and informal, can support knowledge exchange, peer learning, and the gradual consolidation of effective blended teaching practices across institutional contexts.

Finally, while LMS platforms provide extensive capabilities for tracking learning activities, future pedagogical development should focus on improving the quality and interpretability of assessment. Emphasis on more authentic, process-oriented, and performance-based assessment approaches may better capture student learning and engagement, while also addressing limitations associated with reliance on behavioral data in digital environments.

5.3. Limitations and Future Research Directions

While this study provides valuable insights into the nascent phase of LMS-integrated blended learning at Thuongmai University, it is important to acknowledge certain inherent limitations that suggest avenues for future scholarly inquiry. Firstly, the scope of the sample was relatively confined. The study focused exclusively on EFL lecturers from one university. This specific demographic and institutional context, while providing rich, in-depth data for a case study, inherently limits the direct generalizability of the findings to a broader population of lecturers across different disciplines, faculties, or other higher education institutions, particularly in varied national contexts. Secondly, the study was conducted during the initial implementation phase (academic year 2023–2024) of the blended learning model at Thuongmai University. Lecturers' perceptions, attitudes, and levels of proficiency are dynamic and likely to evolve substantially as they gain more practical experience, participate in further professional development, and as the institutional support structures mature.

Therefore, future studies could be designed to involve a substantially larger sample size, encompassing lecturers from multiple faculties and departments within Thuongmai University, as well as extending to other universities within Vietnam or in comparable regional contexts. This would enable more robust statistical analyses and enhance the generalizability of findings across varied academic disciplines and institutional cultures. Additionally, a longitudinal research design would be invaluable for tracking the evolution of lecturers' perceptions, attitudes, technological competencies, and pedagogical practices over an extended period (e.g., over several academic semesters or years). Such a study could provide crucial insights into the long-term impacts of continuous professional development, policy changes, and accumulated experience on the effectiveness and sustainability of blended learning. Future research should also incorporate the student perspective: To achieve a truly holistic and comprehensive understanding of the effectiveness and impact of the blended learning model, future research should explicitly include the student perspective. Data could be collected from students regarding their experiences with the LMS, their perceptions of blended learning benefits and challenges, their engagement levels, and their academic outcomes. This comparative view, contrasting lecturer and student perceptions, would provide a powerful triangulation of data and offer crucial insights into the overall efficacy of the blended learning implementation from the end-users' standpoint.

By addressing these limitations and exploring future research avenues, the academic community can further refine its understanding of blended learning implementation in diverse higher education contexts, thereby contributing to the development of more effective and sustainable digital pedagogical practices.

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