

Development of a Learning Management System (CLMS) for English Language Courses in Saudi Technical Colleges: Transitioning from Traditional to Digital Instruction

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Abstract

This study investigated the development and evaluation of an electronic Learning Management System (LMS) designed to support the teaching and learning of the Body System Course, with particular emphasis on the Digestive System. The research adopted the Design and Development Research (DDR) methodology and was guided by the ADDIE model Analysis, Design, Development, Implementation, and Evaluation focusing specifically on the design–development and evaluation phases. During the design and development phase, traditional textbook-based content on the Digestive System was transformed into interactive and engaging digital materials within an electronic LMS platform. Multimedia instructional resources, interactive learning activities, and online assessment tools were developed to enhance content delivery and learner engagement. Attention was given to usability, accessibility, and system compatibility to ensure the platform aligned with existing technological infrastructure and effectively met the needs of both teachers and learners. The development process involved programming, database integration, and content production to operationalize the instructional design. Formative evaluation was conducted throughout this phase, incorporating feedback from teachers and learners to identify technical issues, usability concerns, and areas for improvement. The evaluation phase employed both quantitative and qualitative approaches to assess the effectiveness of the developed LMS. Data was collected through surveys, interviews, classroom observations, and analysis of student performance indicators. Formative findings informed refinements prior to full implementation. Following a designated period of use, summative evaluation results indicated improvements in teaching effectiveness, student learning outcomes, engagement levels, and overall user satisfaction with the platform. By applying the DDR methodology and concentrating on the design–development and evaluation components of the ADDIE framework, the study provided empirical evidence regarding the effectiveness of an electronic LMS for subject-specific instruction. The findings offer practical recommendations for future

enhancements and contribute to the ongoing development of educational technology practices.

Keywords: Learning Management Systems, English Language Courses, Saudi Technical Colleges

Introduction

The rapid advancement of digital technologies has significantly transformed educational practices across all levels of learning. In recent years, educational institutions have increasingly adopted technology-based platforms to enhance instructional delivery, promote student engagement, and improve learning outcomes. Among these innovations, Learning Management Systems (LMSs) have emerged as essential tools for organizing course content, facilitating communication, and supporting assessment in both traditional and blended learning environments. In the context of English as a Foreign Language (EFL), LMS platforms play a particularly critical role in providing flexible, interactive, and student-centered learning opportunities.

Recent empirical studies highlight the growing importance of digital learning technologies in Saudi Arabia, particularly under the national transformation agenda of Vision 2030, which emphasizes the integration of technology in education. For instance, a study by Al Fraidan and Alaliwi (2024) found that digital platforms significantly enhance collaboration, assessment practices, and learner engagement in Saudi higher education contexts. Similarly, Jamshed et al. (2024) reported that Saudi EFL learners demonstrate positive attitudes toward technology-enhanced language learning, although challenges related to implementation and digital readiness persist. These findings suggest that while LMS adoption is increasing, its effectiveness depends on pedagogically sound design and contextual relevance.

An LMS provides a centralized digital environment where instructional materials, activities, and assessments can be systematically managed and accessed. Modern LMS platforms go beyond content delivery by incorporating interactive features such as multimedia resources, discussion forums, quizzes, and real-time feedback. These affordances support learner autonomy, engagement, and collaboration, which are essential in language learning contexts. Empirical evidence from Saudi Arabia indicates that LMS-based instruction can significantly improve language skills. For example, Alahmadi (2024) found that LMS integration enhanced EFL learners' listening skills through structured digital activities and interactive tasks. Likewise, Alsalami and Mohammed (2025) demonstrated that technology-supported platforms improved reading fluency and student engagement among Saudi undergraduate EFL learners.

Despite these benefits, the successful implementation of LMS platforms in EFL contexts requires more than simply digitizing instructional materials. Research indicates that poorly designed LMS environments may limit interaction and fail to achieve desired learning outcomes. Effective e-learning environments must incorporate clear instructional objectives, aligned assessments, and interactive learning strategies. Moreover, recent studies emphasize the importance of integrating emerging technologies such as artificial intelligence to further enhance engagement and motivation in EFL classrooms (Allehyani et al., 2025). However, other research shows that although awareness of such technologies is

high among Saudi learners, actual usage remains limited, indicating a gap between availability and effective implementation (Mubarak, 2025).

To address these challenges, systematic instructional design models are essential. The ADDIE model—Analysis, Design, Development, Implementation, and Evaluation—provides a structured framework for developing effective LMS-based learning environments. It ensures that instructional content is aligned with learners' needs, pedagogical goals, and assessment strategies. Additionally, the Design and Development Research (DDR) methodology supports iterative refinement and validation of educational technologies, ensuring both theoretical rigor and practical applicability.

The primary objective of this study is to analyze the needs of EFL teachers and learners at Colleges of Technology in Saudi Arabia and to design, develop, and evaluate LMS-based content for English language courses. Specifically, the study aims to: (1) identify the instructional and technological needs of EFL stakeholders, (2) develop pedagogically sound and interactive LMS content based on the ADDIE model, and (3) evaluate the effectiveness of the developed LMS in terms of learner engagement, satisfaction, and language learning outcomes.

The scope of this study is limited to the analysis, design, development, and evaluation phases of LMS implementation within the Saudi EFL higher education context. It focuses on English language courses delivered through LMS platforms and examines both teacher and learner perspectives to provide a comprehensive understanding of LMS effectiveness in this setting. By examining LMS implementation in Saudi EFL contexts, this study contributes to the growing body of research on technology-enhanced language learning. It extends recent empirical findings by integrating systematic instructional design principles with localized educational needs and provides practical recommendations for improving LMS-based English language instruction in Saudi Arabia.

Statement of the Problem

(Alzahrani et al., 2023) conducted a study investigating the reasons behind the poor English language skills of the trainees in the technical colleges in Saudi Arabia and shed light on the underlying reasons for the decline. The study involved 220 teachers randomly selected from 8 technical colleges and collected both quantitative and qualitative data through questionnaires and open-ended questions. The findings of the study indicated that the average English language skills level of the, from the perspective of the training staff, was low, with a mean score of 1.92. The study revealed that the quality of the current English textbooks is not high and considered to be an underline reason beyond that decline. In more details, the study proved that the series of English language textbooks adopted in technical colleges are not suitable for developing the English language skills of the trainees and are not equipped with various interactive digital resources and online support programs. More importantly, the textbooks do not contribute to the development of language skills and their application in various professional specializations within the colleges. The study has strongly indicated that a significant solution that contributes to the development of current English language training curricula is replacing the current textbooks with modern and digital textbooks, with a high percentage of 72% of the responses. Finally, the study asserts the

significance of involving the trainers in the curriculum design and development and training them on designing digital content.

The research problem addressed in this study is the deficiency of captivating and interactive content within the existing English as a Foreign Language (EFL) textbook utilized at the Colleges of Technology. This deficiency arises from the inherent limitations of traditional teaching methods and textbooks. The issue has been underscored by extensive feedback gathered from both students and instructors, officially highlighting the need for more engaging and effective instructional materials.

The research aims to bridge the gap between conventional teaching approaches and modern learning preferences by designing and implementing innovative EFL materials. These materials are intended to enhance student engagement, promote active participation, and optimize the overall language learning experience. The research seeks to leverage insights gained from the collected feedback to create a more dynamic and stimulating learning environment, ultimately improving students' language proficiency and communication skills. Through a comprehensive analysis of the existing EFL textbooks, pedagogical practices, and the preferences of both learners and educators, the study endeavors to develop a range of content and strategies tailored to the specific needs and aspirations of the Colleges of Technology community. By doing so, the research seeks to contribute to the advancement of language education methodologies, fostering a more effective and enjoyable learning process for all stakeholders involved.

Research Questions

The research questions guiding this study are as follows utilizing the basic ADDIE (Analysis, Design, Development, Implementation and Evaluation) phases as the guideline (Yusop and a Correia. 2008).

Analysis Phase

In the analysis phase, need analysis was conducted to determine the need for instruction. If a need existed, the design team should clearly identify the need, conduct a goal, learner and context analyses, which would result in production of a statement of instructional needs and goals. A variety of data collection methods (e.g., interviews, questionnaires and observations) should be used to gather information representative of all different dimensions of analysis. The instructional design process ends if no instructional need(s) was identified.

Design and Development Phase

The design and development of instructional strategies were always consistent with the defined instructional analysis. Instructional designers worked closely with the SMEs in deciding which instructional strategies to be applied and in producing the blueprint of the instructional strategies, which served as the main input for the prototype creation. The finalized prototype would then be pilot tested with a group of subjects who have characteristics quite similar to the actual target audience (i.e. learners). Participants in the test would be asked to complete a functional analysis checklist of the prototype as a way to determine the effectiveness of the prototype.

The final output of this phase was the finalized instructional materials designed and developed based on the results of the instructional analysis process.

Implementation and Evaluation phase

Implementation of the instructional would be carried out with the actual target audiences (i.e. learners). This process may involve production of training manuals for the instructor (i.e. trainer or teacher) if needed containing detailed explanation on how instruction should be carried out.

Ideally, at the end of instruction, learners were expected to complete a summative evaluation (or post-project evaluation) on the topic addressed (remind the reader which topic it was). The summative evaluation tools might include a short survey and interview with in- and pre-service teachers and any other methods, like class observations. Learners' feedback would be the input in the generation of the final report, which included recommendations for further development

Accordingly, the research questions might be:

What are the needs of EFL teachers and learners towards the development of the electronic LMS platform in the English language teaching and learning process?

What are the key elements, activities and practices to ensure successful implantation of the designed English language LMS?

What are the key factors influencing the use of learning using LMS platforms on the academic achievement, language proficiency, and motivation of EFL learners at the Colleges of Technology?

Research Objectives

To identify the specific needs and requirements of EFL teachers in relation to the development of an electronic Learning Management System (LMS) platform for English language teaching and learning.

To explore the key elements, activities and practices to ensure successful implantation of the designed English language LMS?

To examine the key factors influencing the use of learning using LMS platforms on the academic achievement, language proficiency, and motivation of EFL learners at the Colleges of Technology?

By addressing these research objectives, the study aims to shed light on the effects of blended learning using LMS platforms on the performance of EFL teachers and learners at the Colleges of Technology in Saudi Arabia, and to provide insights and recommendations for the improvement of EFL education in the institution and beyond.

Research Significance

Theoretical Significance

Advancing Educational Practices: This study holds significant value as it contributes to the advancement of educational practices in the context of EFL teaching and learning. By investigating the effects of blended learning using LMS platforms, it provides valuable insights into innovative approaches that can enhance instructional delivery and improve learning outcomes.

Enhancing Teacher Performance: The research holds significance in understanding how blended learning through LMS platforms can impact the performance of EFL teachers. By identifying the benefits, challenges, and strategies for effective implementation, the study can help in enhancing teacher effectiveness, pedagogical approaches, and instructional design techniques.

Improving Student Learning Outcomes: The study's findings on the effects of blended learning using LMS platforms on EFL learners can have a significant impact on their academic performance and achievement. It can provide insights into effective learning strategies, engagement techniques, and motivation enhancement, ultimately leading to improved learning outcomes.

Informing Policy and Decision-Making: The research can inform educational policies and decision-making processes at various levels. The findings can guide educational institutions, administrators, and policymakers in making informed choices about integrating blended learning and LMS platforms into the curriculum and instructional practices.

Addressing Technological Integration Challenges: The study's focus on LMS platforms and blended learning helps address the challenges associated with technology integration in educational settings. By investigating the specific challenges faced by EFL teachers and learners and exploring strategies for customization and scalability, the research can provide practical insights for overcoming these challenges.

Contributing to the Body of Knowledge: This research contributes to the existing body of knowledge in the field of EFL education, specifically in the context of Saudi Arabia. It adds to the limited literature on the effects of blended learning using LMS platforms on EFL teachers and learners, providing valuable empirical evidence and insights that can be built upon by future researchers.

Practical Significance

Enhancing Educational Technology Adoption: By examining the perceptions and experiences of EFL teachers regarding the usability and effectiveness of LMS platforms, the research can contribute to the successful adoption of educational technologies. It can identify factors that facilitate or hinder technology integration, ultimately fostering a positive environment for the adoption of LMS platforms and other educational technologies.

Supporting Professional Development: The study's findings can inform the design and implementation of professional development programs for EFL teachers. By understanding the impact of training and professional development on teachers' readiness and competence in utilizing LMS platforms effectively, the research can guide the development of targeted and effective professional development initiatives.

Cultivating Best Practices: The research can help identify best practices for integrating blended learning using LMS platforms in the EFL context. By providing recommendations and insights based on empirical evidence, the study contributes to the cultivation of effective instructional design strategies, pedagogical approaches, and technological integration methods.

Fostering Global Collaboration: The significance of the research extends beyond the local context, as the findings can contribute to global discussions on blended learning and the use of LMS platforms in EFL education. It can foster collaboration and knowledge exchange among educators, researchers, and policymakers worldwide, ultimately benefiting the broader educational community.

Methodology

Instructional design theory (IDT)

This study will employ a Design and Development Research (DDR) methodology “systematic study of design, development and evaluation processes with the aim of establishing an empirical basis for the creation of instructional and non-instructional products and tools and new or enhanced models that govern their development” (Richey & Klein, 2008, p. 748) utilizing the basic ADDIE (Analysis, Design, Development, Implementation and Evaluation) cycle as the guideline (Yusop and a Correia. 2008).

The researcher will adopt the DDR methodology cycle as follows:

Analysis: The researcher will conduct a comprehensive needs analysis to identify the specific requirements, challenges, and goals of EFL teachers and learners at the Colleges of Technology in Saudi Arabia.

Design and Development: This phase focuses on designing Learning Content Management Systems (LCMS) that addresses the identified problem. The design process involves conducting needs analysis to determine the requirements of EFL teachers and learners, such as content management, interactive features, and assessment tools. The design should consider user-friendly interfaces, accessibility, and compatibility with existing technological infrastructure. The researcher will develop content on the electronic platform (LCMS), including the design of engaging learning materials, interactive activities, and assessments aligned with the ENG-101 course. It involves programming, database development, and content creation.

Implementation: Once the content is created on the electronic LMS, the researcher will implement it at Abha College of Technology through 14 EFL trainers and 660 trainees, divided into 22 sections. The implementation process includes training sessions for EFL teachers and learners to familiarize them with the features and functionalities of the LMS. Support systems should be established to address any technical difficulties and provide assistance during the implementation phase.

Evaluation: The researcher will employ both theoretical and practical frameworks to collect quantitative and qualitative data through surveys, interviews, classroom observations, and analysis of student performance indicators to assess the impact of the electronic LMS platform on the performance of EFL teachers and learners. Formative evaluation involves collecting feedback from EFL teachers and learners during the development process. This feedback helps identify potential issues, usability concerns, and areas for improvement. Iterative cycles of development and evaluation ensure that the electronic LMS meets the requirements and expectations of the users

Research Findings

Needs of EFL teachers and learners towards the development of the electronic LMS platform in the English language teaching and learning process

User-friendly interface and accessibility are essential for an LMS in Saudi Arabia because the country combines high mobile penetration with urban–rural bandwidth gaps and culturally specific classroom arrangements (including gender-separated settings in some areas). An effective platform should be mobile-first, responsive, and offer offline or low-bandwidth

modes, an Arabic/English UI toggle, clear role-based dashboards (teacher, student, parent, admin), simple onboarding with Arabic help documentation, and accessibility features for learners with disabilities. Privacy and group-configuration options that allow gender-specific or institution-specific spaces will help the system fit local norms, while government-backed hosting or CDN support can improve nationwide performance.

Pedagogical flexibility and content adaptability must reflect Saudi curricular modernization and the diversity of teacher preparation and learner goals, which range from basic communicative competence to exam preparation for university and scholarships. The LMS should include modular course templates supporting communicative, task-based, and exam-prep tracks, adaptive learning paths with placement diagnostics in Arabic and English, teacher-editable scaffolds, and content libraries aligned with national standards and university entry requirements. Built-in authoring tools will enable local teachers to create culturally relevant tasks (such as workplace scenarios tied to Saudi industries), and integrated professional-development modules can train educators in digital pedagogy and adaptive content design.

Communication, collaboration, and interaction tools need to accommodate both traditional teacher-led preferences and the growing use of student-centered methods in Saudi classrooms. The platform should offer secure synchronous tools (video conferencing with privacy controls and breakout rooms) alongside asynchronous options (forums, voice threads, recorded oral assignments), peer-review workflows, and moderation features. Given cultural norms, the LMS should allow the creation of gender-specific or mixed discussion groups per institutional policy, provide parental view options for younger learners, and include spoken-language practice tools with recording, playback, and teacher or AI-assisted feedback to strengthen oral skills within culturally appropriate boundaries.

Assessment, feedback, and progress tracking are critical because standardized testing remains influential in Saudi education even as competency-based evaluation gains traction. The LMS should provide a range of assessment types—auto-graded quizzes, rubrics for speaking and writing, e-portfolios, and placement/diagnostic tests in Arabic and English—plus analytics dashboards tailored to school and university KPIs. Longitudinal progress reports and exportable records will support scholarship and admission processes, while bilingual feedback templates and automated reminders can help lower-level learners. To preserve quality, integrate LMS assessment data with national student information systems only with appropriate training for assessors and human oversight of AI-assisted scoring.

Language-specific resources and learning supports must bridge Arabic–English transfer issues and align with Saudi learners’ vocational and academic needs. Include built-in bilingual glossaries, contextual pop-up translations, Arabic-aware grammar and pronunciation tools, spaced-repetition vocabulary tailored to exams and workplace domains (oil & gas, healthcare, hospitality, IT), and curated corpora of authentic Saudi academic and industry texts. LTI integrations with local publishers, government content portals, and university repositories will expand relevance and encourage collaborative content development; the Ministry of Education and universities can support open educational resources and quality guidelines for localized language tools.

For practical implementation in Saudi Arabia, prioritize Arabic/English localization and culturally relevant content, ensure full mobile and low-bandwidth functionality, and provide robust teacher professional development delivered through the LMS. Design with privacy, data-compliance, and configurable group settings to respect local norms, then pilot the platform across diverse contexts (urban, rural, female-only institutions) and iterate based on analytics and teacher/student feedback.

Learning Management System (LMS)

The history and definition of Learning Management Systems (LMS) can be traced back to terms such as computer-based instruction (CBI), computer-assisted instruction (CAI), and computer-assisted learning (CAL). These terms refer to the use of computers in education and instructional design. An LMS is a framework that supports various online operations and serves as a platform for distributing and managing pedagogical material. It also includes features such as monitoring, approval, and dissemination of materials. LMS functions include organizing and delivering learning content, managing student progress and assessments, facilitating communication and collaboration, and providing a platform for online learning. LMS also work in conjunction with Learning Objects (LOs), which are small units of instructional material that support student learning. Additionally, LMS can be connected to Course Management Systems (CMSs), which act as an academic structure for hosting pedagogical knowledge and facilitating connections between students and professors. (Watson & Watson, 2012).

The purpose of an LMS in creating an engaging learning environment is to provide teachers and students with a platform that supports the learning process. It offers various resources and features that promote collaboration, professional training, discussions, and communication

among users. An LMS allows students to access learning materials, participate in group chats, monitor their grades and progress, engage in online discussions, and take assessments. It also allows instructors to maintain their presence in the online environment, cultivate an educational atmosphere, and provide consistent information regarding student performance. By utilizing an LMS, students can become independent learners and engage in constructive approaches to learning. (Bradley, 2021).



Benefits of Learning Management Systems (LMS)

Reinforcing learning processes: LMS support an inclusive learning environment for academic progress with structures that promote online collaborative-groupings, professional training, discussions, and communication among users.

Providing consistent information: LMS usage provides online learners with consistent information regarding their performance, allowing them to track their progress and make informed decisions about their learning. (Jung & Huh, 2019; Watson & Watson, 2012)

Promoting learner independence: LMS usage allows online learners to become independent by participating in group-chats, monitoring their grades and progress, participating in online discussions, and taking assessments.

Cultivating an educational environment: LMS allows online professors to create an educational environment for learning and continuous improvement, providing valuable resources for efficient information access that is adaptable to specific student needs.

Enhancing learner outcomes: Studies have shown that LMS usage improves learner outcomes, online application, and engagement with instructional leaders, instructors, and parents. LMS features such as assignment submission, grade viewing, and social networking facilitate learner participation and support.

Organizational assistance: LMS provides users with organizational assistance, helping them stay organized and manage their learning materials effectively. (Al-Fraihat, Joy, Masa'deh, & Sinclair, 2020, Jung & Huh, 2019, Watson & Watson, 2012)

Course Management Systems

Jung & Huh (2019) define a Course Management System (CMS) as a technology platform that provides users with tools and features to structure online interactions and manage information related to a course. It serves as a central location where users can access course materials, track progress, monitor grades, and engage in communication with instructors and other students. The purpose of a CMS is to facilitate online and blended learning by organizing and delivering course content, fostering collaboration and communication, and providing tools for assessment and tracking of student progress.

Learning Content Management Systems

Learning Content Management Systems (LCMS) are modern versions of Learning Management Systems (LMS) that provide instructional designers with tools to create e-learning content more methodically. LCMS allows for the creation, storage, assembly, and delivery of personalized e-learning content in the form of learning objects. It supports the arrangement and presentation of learning objects within an LMS, serving as a base for providing guidelines for use and housing the LCMS content. LCMS and LMS have different complementary applications, but the term "content" is what separates them, with LCMS focusing on content creation and management (Watson & Watson, 2012).



Factors influencing satisfaction towards using LMS

Factors such as system quality, information quality, service quality, perceived ease of use, and perceived usefulness are important factors that determine the success of creating an LMS. Alkhateeb and Abdalla (2021) conducted research on the factors influencing student satisfaction towards using a learning management system is to gain a better understanding of the aspects that contribute to students' satisfaction with the system. They found that the factors that influence student satisfaction towards using a learning management system include perceived ease of use, perceived usefulness, information quality, system quality, service quality, and computer self-efficacy. These factors were identified in a study conducted at Palestine Technical University. The use of a learning management system (LMS) in higher education institutions has improved learning systems and increased access to resources.

Discussion

Rui (2022) claims that synthesized empirical evidence of blended language learning effects on language performance is still lacking. To bridge the gap, his study aimed to meta-analyze the effects of blended language learning on EFL learners' language performance. The research utilized the framework of Activity Theory (AT) and analyzed 43 valid effect sizes from 39 experimental and quasi-experimental studies published between 2000 and 2021. The findings pointed that the overall effect size analysis revealed that blended language learning had a significantly moderate effect on language performance, indicating its superiority over traditional methods. Moderating effects of AT-related factors such as educational levels, intervention durations, geographic regions, and software types influence the effectiveness of blended language learning and should be considered when designing and implementing language programs.

Ataizi and Komür (2021) conducted a study examining the impact of blended learning on the writing skills of English as a Foreign Language (EFL) students, as well as their perception of the blended learning environment. The study involved 92 participants and collected both quantitative and qualitative data through questionnaires, pre-test and post-test writing scores, and semi-structured interviews. The data was analyzed using SPSS t-tests and content analyses. The findings of the study revealed that blended learning significantly

improved participants' writing skills, and the participants expressed a positive attitude towards using blended learning in EFL classes.

In Alipour's study (2020), 90 Iranian intermediate EFL learners (aged 17 to 19) were divided into three equal groups to investigate the impact of online vs. blended learning on vocabulary development. The control group received vocabulary instruction through conventional methods of lecture and face-to-face teaching. The online learning group received vocabulary instruction through the LMS instructional model, while the blended learning group received instruction through a blended learning instructional model. The findings indicate that both online and blended learning approaches were effective compared to conventional methods of lecture and face-to-face teaching. This suggests that incorporating technology into language learning can be beneficial.

Dousti and Amirian (2023) conducted a study that sounds interesting. They investigated the effectiveness of different instructional approaches, namely web-mediated learning (WML), enriched virtual blended learning (EVBL), and purely online learning (POL), on EFL learners' writing achievement. The researchers randomly assigned 49 participants to these three groups and administered pre-tests, WebQuest tasks, and post-tests.

The results indicated that all three groups demonstrated significant improvement in their writing skills and sub-skills. However, the WML and EVBL groups seemed to outperform the POL group in terms of overall writing achievement. These findings highlight the positive impact of technology and interaction in enhancing learning outcomes for EFL learners.

This study's outcomes could be valuable for stakeholders, such as teachers, curriculum designers, and policymakers, as they provide insights into the benefits of incorporating technology-enhanced instructions in EFL contexts. Consequently, these findings might encourage the integration of more interactive and technology-driven methods to promote effective language learning.

Wang (2021) examined the use of blended learning to enhance English conversation skills among Taiwanese learners in a non-English-speaking environment. They implemented an 18-week English conversation course that combined face-to-face teaching with online learning. The study involved 136 participants divided into three groups, and data was collected through pre-test and post-test scores, a questionnaire survey, and semi-structured interviews.

The findings of the study highlighted a positive overall effect of blended learning on the students' English conversation performance. Both the learners and instructors expressed a positive attitude towards the blended course arrangement. Learners believed that blended learning supported their English conversation learning, while instructors acknowledged its contribution to the students' improvement. The study suggests that blended learning, incorporating both traditional lectures and ICT, can help non-native English speakers overcome the limitations of an EFL learning environment.

Huang (2021) evaluated how using smartphone-based collaborative video projects impacted the speaking performance and learning engagement of English as a Foreign Language (EFL) learners in China. Over an 8-week period, 65 college students participated in collaborative

video tasks using their smartphones. The researchers collected data through pretest and post- test speaking scores, a questionnaire on group collaboration, final reflections, and focus group interviews.

The findings of the study revealed that the students' speaking abilities significantly improved after engaging in the video projects. They also enjoyed working together in groups and valued the opportunity to develop digital media production skills. Additionally, the study shed light on both the advantages and challenges of integrating video projects into EFL classrooms. The study conducted by Terzioğlu and Kurt (2022) seems to provide valuable insights into the impact of a Learning Management System (LMS) on students' listening and speaking skills in language education. The use of a quasi-experimental design allowed for a comparison between an experimental group taught with LMS and a control group taught with traditional methods.

The results indicating that the experimental group taught with LMS achieved higher scores in the listening and speaking posttests is promising. It suggests that incorporating LMS and online activities into language instruction can effectively enhance language learning and teaching in terms of these skills. Furthermore, the positive perceptions reported by students towards the use of LMS and online activities, finding them interesting and motivating, further support the effectiveness of blended learning approaches. This finding is consistent with previous research highlighting the positive impact of blended learning and Web 2.0 tools in language instruction.

The methodology utilized in the study, including pre and posttests, a questionnaire, and interviews, provides a comprehensive analysis of students' perceptions and skill development. By including multiple data collection methods, the researchers were able to gather a variety of perspectives and insights. Rahimzadeh and Gilakjani (2022) investigate the effectiveness of blended learning on the reading proficiency of Iranian intermediate English as a foreign language (EFL) learners. The study involved 60 participants who were divided into an experimental group (received reading materials through blended learning techniques) and a control group (received traditional training). The teacher designed activities to enhance reading skills, such as scanning, skimming, and accurate comprehension. After the treatment, both groups took a reading post- test. The results showed that the experimental group outperformed the control group in reading comprehension, indicating the positive impact of blended learning on

Conclusion and Recommendations

Indeed, Learning Content Management Systems (LCMS) could potentially offer a viable solution to address the identified research problem. An LCMS is a software application or platform designed to facilitate the creation, management, organization, and delivery of learning content. It allows educators to design and deliver engaging and interactive materials that can be accessed by learners online. Here's how an LCMS could be applied to the context of the research problem at the Colleges of Technology:

Customized Content Creation: LCMS platforms enable instructors to create and customize learning materials based on the specific needs and preferences of the learners. This flexibility can address the lack of engaging content in traditional textbooks by incorporating

multimedia elements such as videos, audio clips, interactive quizzes, and simulations.

Engagement and Interactivity: LCMS platforms offer tools to embed interactive elements, discussion forums, and collaborative activities within the learning materials. These features can enhance student engagement and encourage active participation, which is often lacking in traditional EFL textbooks.

Accessibility and Flexibility: Learners can access the learning content anytime, anywhere, using various devices. This can accommodate different learning styles and schedules, providing a more learner-centric approach compared to traditional classroom-based instruction.

Feedback and Assessment: LCMS platforms often include assessment tools that allow instructors to create and administer quizzes, assignments, and assessments. Instant feedback and grading can provide learners with a clearer understanding of their progress and areas for improvement.

Data-Driven Insights: LCMS platforms often provide analytics and reporting features that allow instructors to track learner progress, identify areas of difficulty, and make data-driven adjustments to the content and teaching strategies.

Continuous Improvement: An LCMS facilitates iterative content development and improvement. Based on ongoing feedback from both learners and teachers, the learning materials can be regularly updated and refined to ensure they remain relevant, engaging, and effective.

Teacher Professional Development: LCMS platforms can also support teacher training and professional development by providing resources and tools to help educators effectively use the system and create engaging content.

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