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An LMS Feature Assessment: Basis for an Enhanced Online Learning Experience for Users

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Abstract **Original Research Article**

The adoption of learning management systems (LMS) has increased in the past few years, particularly due to the pandemic. Higher education institutions looked for alternative methods to deliver instruction. Among these methods is the implementation of LMS. It was in this context that the study was written. It aimed to assess whether the essential features of an LMS can provide instructional delivery comparable to traditional onsite or face-to-face education. A descriptive statistical approach was used to achieve this. A literature review was conducted to explore and compare the features of different off-the-shelf learning management systems. This review served as the basis for the features to be included in the assessment of this research. The data was collected through stratified random sampling using a survey questionnaire on all campuses of Centro Escolar University, Manila, Makati, and Malolos. The t-test was used to identify significant differences in student assessments in terms of gender of LMS features across the three campuses. At the same time, one-way ANOVA allowed for the comparison of multiple groups, specifically by campus. The findings showed that the essential features of the learning management system of Centro Escolar University, namely, user interface visual design and navigation, accessibility, interactive tools, communication, and collaborative tools, are user-friendly and easy to use. However, there are items that need improvement, such as ensuring the navigation links are working for seamless transfer from one content to another and improving the loading speed of pages and offline access. These improvements can contribute to the enhanced online learning experience of users.

Keywords: LMS, Learning Management System, LMS Features, Online Experience

INTRODUCTION

As technology plays a significant role in education, an effective learning management system (LMS) has become increasingly important. It has become an essential tool in the educational system after being utilized only as a supplemental tool for classroom instruction before the pandemic in 2020. They have become the primary platform for delivering instruction and have contributed to the student's engagement through various features of the LMS, such as communication and collaboration.

The unexpected increase in the number of users of the LMS was seen during the pandemic when educational institutions were forced to use online learning as the primary method of instruction to replace face-to-face instruction as a response to the global lockdown (Tatnall, 2020). Either commercially available LMS or open-source systems were used as an alternative.

However, with the sudden implementation, there was insufficient time to adapt to the unique pedagogical and administrative policies and procedures of each institution, leading to questions about the effectiveness of the LMS in delivering meaningful online learning experiences for its users (McNichol, 2022).

Institutions, particularly those in urban areas with established digital infrastructure, quickly integrated LMS to manage the demands of remote learning. This large number of utilizations of LMS platforms under emergency conditions, while a

necessary response to the crisis, brought several challenges related to usability, scalability, and the overall quality of learning experiences they could offer.

While LMS provided a temporary solution to an unprecedented global crisis, its long-term viability in supporting high-quality online education has been questioned. Studies have demonstrated the advantages of LMS, including increased flexibility, easier access to learning materials, and improved resource management (Karsen, 2016). However, the use of several LMS platforms during the pandemic, although useful for content delivery, often fails to meet the exact interactive and dynamic nature of face-to-face education. Both educators and students reported significant challenges related to system navigation, interactivity, and overall engagement (Biwer et al, 2021). These shortcomings have prompted educators and technologists to re-evaluate how LMS platforms can be optimized to not only manage content but also to enhance user experience and foster more effective online learning environments.

Despite the widespread utilization of LMS in higher education, research examining their performance, particularly from the perspective of students in a post-pandemic context, remains limited. The pandemic normalized the use of digital tools in education. Still, the focus often remains on the administrative management of these platforms—such as tracking student progress or managing content—rather than improving the overall student online learning experience. Recent studies indicate that a learner's engagement with the LMS, their attitude toward e-learning, and the perceived availability of institutional support significantly influence learning outcomes, including satisfaction, engagement, and academic performance (Ghapanchi et al., 2020). These findings highlight the need to balance LMS administration, keeping in mind that it is important to have an engaging and positive learning experience for students.

It was in this context that the study was conducted. It aimed to assess the key features of the LMS used in Centro Escolar University and determine if it improves users' online learning experience. Key elements such as user interface design, accessibility across various devices and browsers, multimedia integration, and communication tools are crucial factors that determine the overall effectiveness of these platforms in facilitating online learning.

The results of this analysis are expected to provide results that can be used for system enhancements, ensuring that the LMS meets the online learning experience needs of students.

Review of Related Literature

The widespread utilization of online learning platforms in educational institutions, particularly in higher education, prompted this research to assess its key features to provide insights as to whether it would give the same learning experience as on-site or face-to-face learning. Several researchers have investigated the usability of various learning management systems, focusing on how these platforms meet the users' needs in terms of online learning.

A comparative analysis was conducted by (Cudney et al, 2017) of two of the most popular LMS platforms, Blackboard and Canvas. Their study focused on the perceived usability and interface efficiency of each platform by the students. The findings showed that Canvas was rated highly over Blackboard. However, the study revealed that the advanced features were underutilized and recommended for improvement in terms of user interface to enhance the overall online experience of students.

(Dolendo, 2016) conducted a similar comparison study among the three platforms, namely, MOODLE, Edmodo, and Schoology. The findings emphasized the differences in terms of usability among the platforms. The results also showed that among the three platforms, Edmodo was perceived as the most user-friendly, with significant differences in usability observed between Edmodo and Schoology. The differences emphasized the varied effectiveness of LMS platforms in meeting diverse users' needs, indicating that user interface design and functionality must be aligned with the user preference to enhance the online experience.

Both studies align with the current study's objective of assessing the key features of the LMS used at Centro Escolar University to ensure usability and a beneficial user experience.

The study conducted by (Gachie et al, 2017) examined the impact of LMS platform features on user interaction, specifically in the context of collaborative and authentic learning activities. It demonstrated that LMS platforms effectively support such interactive activities, promoting enhanced student engagement. However, improving tools, specifically image editing, could create a more customizable and engaging experience.

Lastly, a comprehensive study was conducted about the usability of the Jusur Learning Management System across nine dimensions such as content, learning support, visual design, navigation, accessibility, interactivity, self-assessment, learnability, and motivation; it provided a detailed framework for evaluating the usability of an LMS (Althobaiti, 2015). The results revealed satisfaction with the usability across most of the factors assessed.

The framework used in this study is highly relevant to the current study, offering a structured design through which the key features of an LMS can be evaluated to enhance the user's online learning experience.

Theoretical/Conceptual Framework

Constructivism in education is a theory where students do not acquire knowledge from their teacher alone but construct it through collaboration and experiences, adding it to their previous knowledge. It was this theory that this study was based on.

It was emphasized that learning is not a one-way process where the teacher gives information but an active process where the students create their knowledge by collaborating with others, engaging with content and activities, and reflecting, which builds upon prior knowledge. Both (Piaget, 1970) and (Vygotsky, 1978) asserted that the construction of knowledge was through the interaction with the learning environment by the students alone.

The importance of active learning engagement and process was emphasized by two scholars, (Jonassen, 1994) and (Garrison, 1997), saying that significant learning happens when students interact with peers and content. Additionally, studies conducted by (Palloff et al, 1999) and (Garrison et al, 2003) highlight that students are more likely to achieve deeper cognitive processing and develop more meaningful learning experiences when they actively participate in interactive activities like discussion forums, reflection activities, and problem-solving activities.

The students' online learning experiences are significantly created by how they interact with the key features of the LMS. This framework was based on constructivist theories. The LMS was conceived to be a tool and resource for online learning where students can experiment, collaborate, explore, and construct knowledge. To facilitate students' active engagement, several tools, such as multimedia, collaborative, and interactive content, were integrated. All of these tools promote deeper understanding through self-paced exploration and peer interaction.

Figure 3 provides a simple illustration of the research framework showing the LMS features analyzed by the students and will be used as the basis for the enhanced user online learning experience.

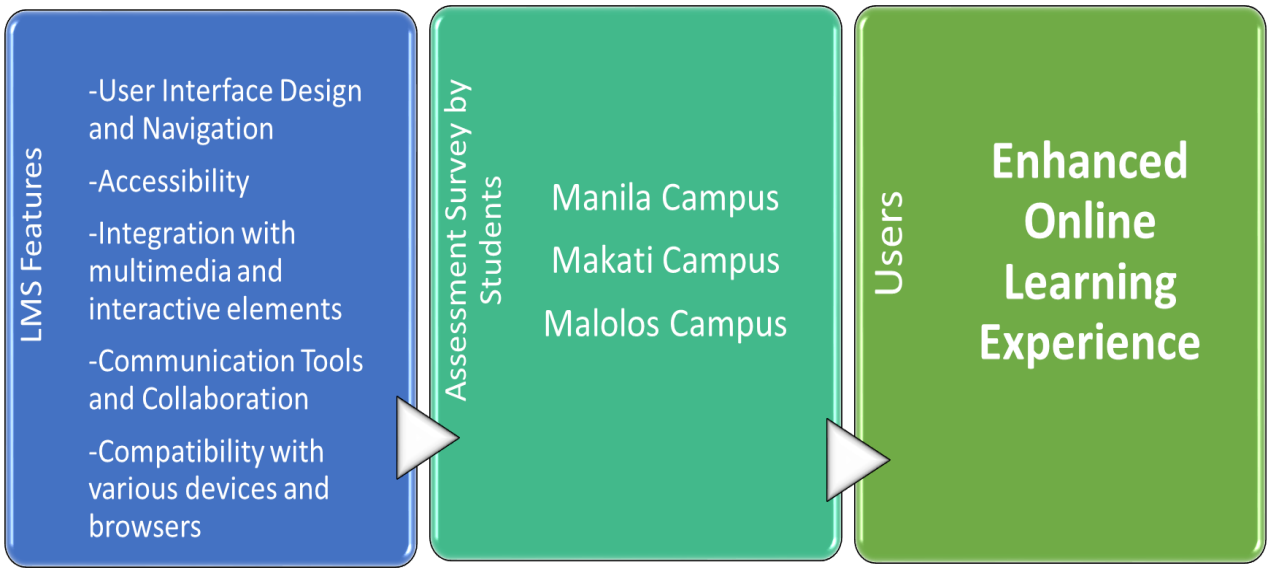

Figure 1
A Research Framework Showing the Student's Assessment of the LMS Features

Additionally, the constructivist framework is focused on the learner-centered method in online education. The quality of the online learning experience is determined by how effectively the key features of the LMS promote interaction, problem-solving, and critical thinking.

Lastly, the constructivist theory offers a clear understanding of how to assess the key features of LMS to enhance the online learning experience for users. It emphasizes the active participation of students in the educational process, guiding the assessment process of how LMS features can be improved to foster a more engaging, interactive, and meaningful online learning experience.

Importance of the Study

The delivery of education significantly changed during the pandemic, which resulted in an unexpected increase in the use of learning management systems to sustain academic continuity.

Given that LMS offers benefits, including more flexibility, easier resource access, and more efficient content management, they also sometimes fail to capture the dynamic, interactive nature of face-to-face instructions.

Studies have shown that teachers and students have reported difficulties navigating the LMS, suggesting that, even when widely used, it requires more optimization to support a high-quality learning experience. Considering educational technology tools are now essential to higher education in the post-pandemic period, these concerns have led to a re-assessment of the key features of the LMS.

This study addresses these concerns by assessing the LMS currently in use at Centro Escolar University (CEU), with a specific focus on how key functionalities—such as user interface design, accessibility, multimedia integration, communication and collaboration tools, and compatibility with various devices and browsers—affect students' online learning experiences. By gathering and analyzing student responses to the survey questionnaire, the study aims to identify strengths and areas for improvement, offering actionable insights for future LMS enhancements.

The findings from this research will contribute to ongoing discussions on how LMS can be optimized to meet the evolving demands of modern higher education. Ultimately, this study seeks to inform the development of more effective and engaging online learning environments, ensuring that LMS platforms not only support academic success but also foster meaningful and interactive educational experiences for students.

Specific Problems:

1. What is the profile of the respondents in terms of:
    a. Gender
    b. Campus Enrolled
2. How do the respondents assess the features of the learning management system in terms of the following areas?
    a. User interface design and navigation
    b. Accessibility features
    c. Integration with multimedia and interactive elements
    d. Communication tools and collaboration features
    e. Compatibility with various devices and browsers
3. How do the assessments compare in terms of gender and campus enrollment?
4. What areas for improvement did the respondents encounter when using the learning management system?

MATERIALS AND METHODS

For data analysis, descriptive statistics were employed to summarize the demographic characteristics of the respondents and their overall responses to the survey. Additionally, a t-test was utilized to examine whether there were statistically significant differences in student assessment of LMS features across the three campuses. Using one-way ANOVA allowed for the comparison of multiple groups, ensuring a robust statistical data treatment.

The study was conducted on students across all campuses of Centro Escolar University (CEU), Philippines, encompassing the Manila, Makati, and Malolos campuses. A survey questionnaire was developed to assess the five essential features of the Learning Management System (LMS) and problems encountered in using the learning platform at Centro Escolar University. Prior to distribution, the questionnaire was piloted to test its reliability using a set of students. This set of students was no longer included in the final assessment of the study. The resulting Cronbach's alpha coefficient was 0.98, indicating a high level of internal consistency, thus confirming the reliability of the instrument for use in the survey.

The stratified random sampling was used to gather data. The survey was administered to students from each of the three

campuses. The sample size for each campus was determined using Sloven's formula, and the questionnaire was given randomly to students enrolled during the second semester of the school year 2023-2024.

RESULTS AND DISCUSSION

The respondents of the study are students from the three campuses of Centro Escolar University—Manila, Makati, and Malolos—during the second semester of the school year 2023-2024. The data shows that a total of 1,105 students participated in the study, of which 574, or 51.95%, are from the Manila campus, followed by 328, or 29.68%, from the Makati campus, and the remaining 203, or 18.37%, are from the Malolos campus. Regarding gender, 836, or 75.66%, are female, and only 269, or 24.34%, are male. This shows that Centro Escolar University is perceived as an all-girl school until this time, with more girls enrolled.

Table 1
Profile of Students in Terms of Gender per Campus

	Female	%	Male	%	Total	%
Manila	448	40.54%	126	11.40%	574	51.95%
Makati	239	21.62%	89	8.05%	328	29.68%
Malolos	149	13.48%	54	4.89%	203	18.37%
Total	836	75.66%	269	24.34%	1,105	100.00%

The results in Table 2 show that the respondents have a highly positive assessment of the learning management system's user interface visual design and navigation, with an overall mean score of 4.29 out of 5.0. The platform's user-friendliness received the highest mean score of 4.37, closely followed by the content-focused layout with a mean score of 4.36, showing strong agreement on these aspects, and the respondents found it easy to use the system.

Table 2
Assessment of Features in Terms of User Interface Visual Design and Navigation

Statements	Mean	SD	Verbal Interpretation
1. The platform's design is visually appealing	4.26	0.77	Agree
2. The platform's layout focuses on content	4.36	0.73	Agree
3. It is easy to find the main features and functionalities of the platform	4.31	0.80	Agree
4. The platform's user interface is easy to navigate	4.33	0.79	Agree
5. The platform is user-friendly	4.37	0.75	Agree
6. The platform is responsive to my actions	4.32	0.79	Agree
7. Error messages are clear and helpful	4.19	0.86	Agree
8. All the navigational links are functional	4.19	0.88	Agree
Overall	**4.29**	**0.69**	**Agree**

Furthermore, respondents indicated that the system is easy to navigate, scoring an average of 4.33. However, both the "error messages are clear and helpful" and "all the navigational links are functional" resulted in the lowest mean score of 4.19, suggesting that some of the respondents may have experienced errors that were not clear to them or links that may have been put down.

Table 3 shows the results of the assessment of features in terms of accessibility. The overall mean score of 4.24 out of 5.00 indicates a highly positive assessment in terms of accessibility. This suggests the respondents' positive user experience in using the LMS.

Table 3
Assessment of Features in Terms of Accessibility

Statements	Mean	SD	Verbal Interpretation
1. Text sizes are adjustable, and alternative color schemes are available to enhance readability for users with visual impairments	4.30	0.79	Agree
2. The platform offers options to enlarge images or diagrams for better visibility	4.27	0.82	Agree
3. Audio elements, such as lectures and instructions, are accompanied by transcripts or captions to cater to users with hearing impairments.	4.22	0.85	Agree
4. Users can navigate through the platform using only a keyboard.	4.09	0.98	Agree
5. Instructional materials are presented in multiple formats to cater to different learning styles and cognitive abilities	4.29	0.79	Agree
6. Users can customize their experience based on accessibility needs.	4.27	0.83	Agree
Overall	**4.24**	**0.75**	**Agree**

The respondents agree with a mean score of 4.30 that the text sizes are adjustable and alternative color schemes are available to enhance readability for users with visual impairments. This suggests that the system's capability to adjust text and colors that are suited to the preferences of the users is a contributor to the positive learning experience. However, although the respondents agree with the statement that the users can navigate through the platform using only a keyboard, it resulted in the lowest mean score of 4.09. Students may find it difficult to navigate without a mouse, especially those who use handheld devices.

Table 4 shows that the overall mean score for the respondent's assessment of the interactive objects is 4.37 out of 5.0. It indicates that students agree that the learning management system effectively provides engaging tools and interactive elements, leading to a positive online user engagement experience.

Table 4
Assessment of Features in Terms of Interactive Objects

Statements	Mean	SD	Verbal Interpretation
1. The platform offers engaging tools like discussion forums, quizzes, and collaborative features.	4.41	0.71	Agree
2. The Interactive elements (quizzes, activities) promote participation and interaction with course materials, creating dynamic learning experiences	4.41	0.72	Agree
3. Feedback is provided for user actions.	4.29	0.79	Agree
Overall	**4.37**	**0.69**	**Agree**

For the statements on the platform's engaging tools and interactive elements, respondents also agree, giving a mean score of 4.41. This indicates that discussion forums, quizzes, and collaborative tools effectively promote engagement and active learning experiences. Feedback received the lowest mean score of 4.29, suggesting that while students generally agree that feedback is provided, there is slightly more variability in their experiences. This indicates potential room for improvement in making feedback more consistent and impactful.

Table 5 presents the assessment results of features in terms of communication and collaboration tools. The computed overall mean score of 4.35 out of 5.0 and a standard deviation of 0.66 indicate that respondents agree about the communication and

collaboration capabilities of the system.

Table 5
Assessment of Features in Terms of Communication and Collaboration Tools

Statements	Mean	SD	Verbal Interpretation
4. Email and chat are available and easy to use	4.40	0.74	Agree
5. Threads in discussion forums are easy to follow.	4.36	0.75	Agree
6. The platform supports real-time communication like direct messaging, chat, and video conferencing	4.37	0.75	Agree
7. Email is available and user-friendly.	4.39	0.74	Agree
8. Features that facilitate group projects and collaboration are easy to use	4.33	0.77	Agree
9. Users can easily share documents and work collaboratively.	4.35	0.74	Agree
10. The notification system is clear and customizable.	4.26	0.85	Agree
11. Users can easily manage and respond to notifications.	4.31	0.82	Agree
Overall	**4.35**	**0.68**	**Agree**

Users find the email and chat functions to be highly accessible and easy to use, as shown in the computed mean score of 4.40, which was validated by another statement that the email is available and user-friendly, with a mean score of 4.39, contributing to the efficiency of communication. Furthermore, the respondents agree with a mean score of 4.37 that the LMS effectively supports various real-time communication methods, enhancing interactions and engagements. Moreover, a mean score of 4.36 was computed for the following threads in discussion forums, which are straightforward and easy for the respondents. Each statement is interpreted as "agree," and all the statements received a mean score higher than 4.25, indicating a positive agreement among users regarding the platform's usability and effectiveness and a high level of satisfaction regarding the communication and collaboration features.

Table 6 shows the results of the assessment of features in terms of compatibility with various devices and browsers. The overall mean score is 4.19 out of 5, indicating a positive assessment for the respondents.

The platform's responsiveness on various devices yielded the highest mean score of 4.34 with a standard deviation of 0.74, indicating that the respondents find the platform to be highly responsive across different devices, indicating good design and adaptability. The platform's browser compatibility yielded a mean score of 4.30, showing that the LMS would run seamlessly regardless of the browser used. For the seamless operation across various devices and screen sizes, the mean score computed is 4.29, indicating robust performance and flexibility.

Table 6
Assessment of Features in Terms of Compatibility with Various Devices and Browsers

Statements	Mean	SD	Verbal Interpretation
1. The platform works consistently across different browsers (Safari, Edge, etc.).	4.30	0.80	Agree
2. The platform is designed to be responsive on various devices (desktops, laptops, tablets, smartphones).	4.34	0.76	Agree
3. The platform works seamlessly across different devices and screen sizes.	4.29	0.82	Agree
4. Users can access course materials offline.	3.92	1.20	Agree
5. The platform loads fast to different internet connection speeds.	4.09	1.00	Agree

Overall	**4.19**	**0.79**	**Agree**

The loading speed and offline access, with mean scores of 4.09 and 3.92, respectively, though indicate agreement from the respondents, demonstrate a mixed experience, as indicated by their standard deviations of 1.00 and 1.20, respectively. Respondents differ in their perception of the loading speed's performance, which may differ under different conditions.

Overall, the respondents agree that the platform effectively ensures a smooth user experience across different technological environments.

Table 7 presents a comparative analysis of student assessments across various LMS features based on gender. The results indicate significant gender-based disparities in several features, highlighting the importance of considering gender-specific perspectives when evaluating and improving LMS platforms.

Table 7
Comparison of Assessment Between Gender

Statements	Gender	Mean	SD	t-value	p-value	Remark
1. Overall, in terms of User Interface Visual Design and Navigation	Female	4.32	0.67	2.67	0.008<0.05	Sig.
	Male	4.19	0.74			
2. Overall, in terms of Accessibility	Female	4.26	0.73	1.65	0.10>0.05	Not Sig.
	Male	4.17	0.78			
3. Overall, in terms of Interactive Objects	Female	4.40	0.67	2.48	0.013<0.05	Sig.
	Male	4.28	0.75			
4. Overall, in terms of Communication Tools and Collaboration	Female	4.38	0.65	2.84	0.005<0.05	Sig.
	Male	4.24	0.75			
5. Overall, in terms of Compatibility with Various Devices and Browsers	Female	4.20	0.77	1.24	0.214>0.05	Not Sig.
	Male	4.13	0.83			

The results show that females assessed the user interface visual design and navigation significantly higher than males with a p-value of 0.008, which is less than the significance level of 0.05 and with a computed mean of 4.32. Female respondents appeared to prioritize the aesthetics and usability of the learning management system. The university's color scheme of pink and gray might have influenced female respondents' preferences more than male respondents. However, there is no significant difference between genders regarding accessibility, likely because learning management systems adhere to established accessibility standards, resulting in similar experiences for both genders.

Furthermore, in the interactive object features, there is a significant difference between females and males, with a p-value of 0.013, which is less than a 0.05 significance level, and females having a computed mean of 4.40 while male respondents have a mean of 4.28. This indicates that female students may find these features more engaging, effective, or supportive of their learning styles than male respondents. The design of interactive elements and the integration of multimedia content could potentially influence these preferences.

In terms of communication and collaboration tools, the female rated this item significantly higher than the male with a computed p-value of 0.005, which is less than the significance level of 0.05. The female respondents yielded a mean value of 4.38 compared to the male's mean value of 4.20. This suggests that female students may value these features more for facilitating group work, sharing ideas, and building connections with peers.

For the last item, in terms of compatibility with various devices and browsers, there's no significant difference between female and male respondents. Both genders use a variety of devices and browsers similarly, leading to a comparable experience and ensuring a consistent experience for all. Technologies are generally designed to be compatible across multiple devices and browsers, ensuring a consistent experience for all users.

Table 8 presents a comparative analysis of student assessments of the LMS features based on campus. The results indicate significant campus-based gaps in most features, highlighting the importance of considering campus-specific perspectives when improving LMS platforms.

These results show significant differences with a p-value of

0.007, less than 0.05 significance level in user interface visual design and navigation between Manila (x=4.26) and Makati (x=4.39) but not between Manila (x=4.26) and Malolos 4.23, suggesting that the LMS experience may vary based on location. While Manila campus students reported a generally positive experience, Makati campus students rated the user interface significantly higher. This discrepancy might be attributed to factors such as differences in campus infrastructure or student demographics.

Furthermore, in terms of accessibility, results show that there are significant differences in means as reflected by the p-value 0.033, which is less than 0.05 significant level, between Manila (x=4.29) and Makati (x=4.20), but not between Manila (x=4.29) vs Malolos (x=4.33) and Makati (x=4.20) vs Malolos (x=4.33). Makati campus students reported a slightly more positive experience, suggesting that the LMS may be more accessible or inclusive in that location.

Table 8
Comparison of Assessment Between Campus

Statements	Campus	Mean	SD	F-Value	p-value	Remark	Post Hoc
1. Overall, in terms of User Interface Visual Design and Navigation	Manila	4.26	0.68	5.04	0.007<0.05	Sig.	Manila vs. Makati Makati vs. Malolos
	Makati	4.39	0.66				
	Malolos	4.23	0.77				
2. Overall, in terms of Accessibility	Manila	4.29	0.69	3.42	0.033<0.05	Sig.	Manila vs. Makati
	Makati	4.20	0.75				
	Malolos	4.33	0.71				
3. Overall, in terms of Interactive Objects	Manila	4.20	0.80	4.81	0.008<0.05	Sig.	Manila vs Makati
	Makati	4.24	0.75				
	Malolos	4.33	0.67				
4. Overall, in terms of Communication Tools and Collaboration	Manila	4.47	0.65	3.61	0.027<0.05	Sig.	Manila vs Makati
	Makati	4.33	0.78				
	Malolos	4.37	0.69				
5. Overall, in terms of Compatibility with Various Devices and Browsers	Manila	4.32	0.67	2.72	0.066>0.05	Not Sig	
	Makati	4.43	0.65				
	Malolos	4.29	0.75				

Similarly, in terms of interactive objects, there are significant differences in means between Manila (x=4.20) and Makati (x=4.24), but not between Manila (x=4.20) vs Malolos (x=4.33) and Makati (x=4.24) vs Malolos) (x=4.33) as shown by the p-value 0.008, which is less than the 0.05 significant level. Makati campus students rated the interactive objects feature higher, suggesting they may be more effectively integrated or utilized on their campus. This could be attributed to factors like differences in teaching strategies or student engagement.

In terms of communication and collaborative tools, the results show that there are marginally significant differences in means as shown by the p-value of 0.027, which is less than 0.05 significant level between Manila (x=4.47) and Makati (x=4.33), but not between Manila (x=4.47) vs Malolos (x=4.37) and Makati (x=4.33) vs Malolos (x=4.37). While the differences were less pronounced, there was a marginal trend towards a more positive experience with communication tools and collaboration features at the Manila campus compared to Makati. This might be due to variations in campus culture, communication styles, or technical support for these features.

Lastly, in terms of compatibility with various devices and browsers. The results showed no significant differences between the campuses. This suggests that the LMS is generally well-optimized to function consistently across different technological environments, regardless of campus location.

Students were asked to select from the list of issues or concerns encountered using the learning management system. Table 9 shows that more than half, or 63.35%, of the students have experienced slow system loading.

Table 9
Distribution of Issues in the Learning Management System Encountered by Students

Areas for Improvement	Frequency	%	Rank

Slow loading time	700	63.35%	1
Frequent System Errors	332	30.05%	2
Compatibility issues with certain browsers or devices	318	28.78%	3
Delayed responses to user inquiries or feedback.	228	20.63%	4
Difficulty in accessing the platform from certain locations or devices.	225	20.36%	5
Lack of access to help resources or tutorials.	195	17.65%	6
Limited interactive tools	214	19.37%	7
Lack of clear instructions or guidance on how to use LMS features	165	14.93%	8
Confusing layout of the Learning Management System (LMS)	159	14.39%	9
Difficulty in navigating between different sections or modules of the LMS	157	14.21%	10
Inadequate customer support for technical issues or queries.	105	9.50%	11
Incompatibility with assistive technologies for users with disabilities.	88	7.96%	12
Ineffective communication channels for discussion or collaboration.	79	7.15%	13
Language barriers for non-native speakers.	54	4.89%	14

This was ranked as the most common problem experienced. This was attributed to slow network connection due to traffic because several students were using the Internet simultaneously. Network congestion is inevitable with the common schedule for online classes per week.

Findings:

This study gained the following findings based on the data gathered and after the analysis of data.

1. The results showed that the learning management system's user interface is very user-friendly, and the layout is focused on content. However, items like alert messages and the functionality of navigational links need improvement.
2. The LMS is generally accessible and has the capability of accommodating various accessing needs.
3. The LMS interactive features contribute to an improved user online learning engagement experience.
4. The LMS effectively enhances communication and collaboration, providing user-friendly features that improve interactions between students and instructors.
5. The LMS works well with different devices and browsers, providing a smooth user experience. However, the loading speed and the offline access can still be improved to address the consistency and performance.
6. There are some gender-based differences in assessing the essential features of the learning management system, but it remains generally accessible and compatible for all users.

CONCLUSIONS:

Based on the findings, the following conclusions were drawn:

1. The learning management system used in Centro Escolar University is highly user-friendly and accessible to all, with engaging interactive features, effective communication & collaborative tools, and compatibility with different devices.
2. Some elements need to be improved, such as keyboard navigation, loading speed, and offline access. There are also gender-based differences when evaluating some features.

RECOMMENDATION:

Based on the findings, the following recommendations are offered:

1. To improve the user experience, add more interactive activities and ensure they perform the same way across various devices and browsers.
2. To allow offline access of instructional contents and activities uploaded to the LMS that could improve the user learning experience.
3. To address the technical issues affecting the loading speed to improve the user's online learning experience.
4. For future research, conduct a study focused on the impact of LMS on learning outcomes and engagement.

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