

# **International Journal of Research Publication and Reviews**

Journal homepage: www.ijrpr.com ISSN 2582-7421

# APPLICATION OF LEARNING MANAGEMENT SYSTEM FOR LECTURE DELIVERY BY ACADEMIC STAFF OF MODIBBO ADAMA UNIVERSITY, YOLA.

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## ABSTRACT :

This study investigates the application of Learning Management Systems (LMS) for lecture delivery by senior academic staff at Modibbo Adama University, Yola. The increasing reliance on digital platforms in education necessitates an understanding of LMS efficacy in enhancing teaching and learning outcomes. The objectives of this research include assessing the level of awareness of available LMS among academic staff, identifying preferred features, and recognizing challenges encountered in LMS application in lecture delivery by academic senior academic staff of Modibbo Adama University, Yola among others. A quantitative research approach was adopted, employing a survey research design. The study's population consisted of 442 academic staff, with a sample size of 205, selected through simple random sampling. Data were collected using a self-designed questionnaire, which was validated for content through a pilot survey at the Federal College of Education, yola. The r-value obtained was 0.97. Descriptive statistics, including percentages, frequencies, and mean values, were utilized to analyze the data, with appropriate benchmarks set for decision-making. The benchmarks used for deciding on research Question 2, 4 and 5 is 2.5. In addition, a benchmark of 50% is used for deciding research Questions 1,3 and 6. The findings revealed that the academic staff demonstrate a high level of awareness and proficiency in various LMS, notably Google Classroom and Canvas, which are favored for their features. Staff affirm the importance of LMS in facilitating flexible access to course materials and promoting collaboration among students. Furthermore, the majority possess adequate digital skills for effective LMS utilization, though challenges persist, particularly concerning reliable internet connectivity and technical support among others. Overall, this study underscores the significance of LMS in enhancing lecture delivery at Modibbo Adama University and highlights the need for further training and infrastructure improvement to

Keywords: Learning Management Systems, digital skills, lecture delivery, academic staff, challenges, LMS application.

# INTRODUCTION.

The concept of a Learning Management System (LMS) has been extensively discussed in academic literature. Papas (2021) defines LMS as "a software application designed to administer, document, track, report, and deliver educational courses, training programs, or learning and development programs." This definition underscores the comprehensive administrative capabilities of LMS, which streamline the management of content, tracking of student progress, and reporting of academic outcomes. Furthermore, LMS platforms such as Moodle, Blackboard, Canvas, Google Classroom, and Microsoft Teams are designed to centralize the delivery of educational content, making it easily accessible to students regardless of their location (Papas, 2021). By providing a unified repository for course materials, these systems enhance the efficiency of content delivery and ensure that academic staff can update resources effortlessly.

A research conducted by Sweeney and Kinnane (2022) describe LMS as "a digital platform that integrates various tools and technologies to deliver, manage, and track learning experiences." Their definition highlights the technological integration within LMS platforms that streamlines both the instructional and administrative processes. The automation of administrative tasks such as course enrollment, scheduling, and grading is one of the key features of LMS, as it significantly reduces the workload of academic staff. This allows educators to focus more on instructional activities and student support, leading to more efficient and organized educational experiences for both staff and students. Additionally, Sweeney and Kinnane (2022) emphasize the importance of communication tools embedded within LMS platforms. Integrated messaging systems, announcement boards, and feedback mechanisms facilitate timely communication between academic staff and students, ensuring that students receive immediate updates on assignments, assessments, and important academic information.

Effective communication and feedback are further emphasized by Nguyen (2024), who notes that LMS platforms promote a collaborative learning environment through built-in communication tools. These systems help streamline interactions between students and lecturers, fostering timely feedback on student performance. Similarly, Nguyen (2024) highlights the use of assessment tools within LMS that allow for the automated grading of quizzes, exams, and assignments, which ensures a more efficient assessment process and enables lecturers to monitor student progress closely.

LMS platforms also play a critical role in supporting diverse teaching methodologies. According to Cavus (2023), LMS offers flexibility by allowing academic staff to integrate online components with traditional face-to-face instruction or to fully deliver courses online. This adaptability is essential for accommodating various instructional approaches, especially in the wake of the COVID-19 pandemic, which forced many institutions to shift to blended or fully online learning models. Cavus (2023) points out that this flexibility is crucial in meeting the diverse needs of students, enhancing accessibility, and improving the overall learning experience.

Academic staff refers to individuals employed by educational institutions, such as universities or colleges, whose primary responsibilities include teaching, conducting research, and contributing to academic governance. This group typically includes professors, lecturers, researchers, and other teaching staff involved in the delivery of educational content and scholarly activities, Altbach, Philip G. (2021).

The adoption of LMS in Nigerian universities offers numerous benefits. According to Afolabi and Bello (2020), these platforms provide flexible access to learning materials, allowing students to engage with course content at their own convenience. Furthermore, continuous assessment tools embedded within LMS platforms enable academic staff to conduct assessments efficiently, providing students with timely feedback on their academic progress. However, Okoro and Adamu (2023) point out that the implementation of LMS in Nigeria is often hindered by challenges such as inadequate digital infrastructure and limited access to training for academic staff. To maximize the benefits of LMS, universities must invest in both technology and capacity-building programs to ensure academic staff can effectively use these platforms to enhance teaching and learning.

This study seeks to explore the current state of LMS adoption for lecture delivery in Modibbo Adama university examining both the opportunities it presents and the challenges hindering its effective use. Understanding these dynamics is crucial for fostering sustainable academic practices that meet the evolving needs of lecturers and students in the digital age. Modibbo Adama University is a conventional university with a diverse range of academic programs and faculties, serving students from various parts of Nigeria and beyond. The institution plays a significant role in providing higher education in the northeastern region of the country. The university has been striving to improve its infrastructure and adopt modern educational technologies, though it has yet to fully implement a Learning Management System (LMS) for lecture delivery.

## STATEMENT OF THE PROBLEM.

The integration of Learning Management Systems (LMS) in universities has become increasingly crucial, particularly with the growing shift towards online and blended learning models. Platforms such as Blackboard, Moodle, and Google Classroom provide essential tools for delivering lectures, managing course materials, and fostering communication between students and instructors in a flexible and accessible manner. These LMS platforms serve diverse needs, offering features that streamline the educational process by centralizing content distribution and supporting collaborative learning environments Aung &Khaing, (2021). In the context of Nigerian universities, Yusuf (2021) emphasizes the significance of adopting LMS to improve lecture delivery, noting that these platforms enable students to access course materials more flexibly, promote active engagement, and reduce the administrative workload of lecturers by automating tasks such as grading, attendance tracking, and content management. The integration of LMS has the potential to bridge the gap between traditional teaching methods and modern digital education systems, creating a more efficient and interactive learning experience for both students and lecturers.

Despite the potential advantages of Learning Management Systems (LMS) in enhancing educational experiences, the implementation in Nigerian universities faces significant challenges. A major issue is the insufficient training and technical support for academic staff, which leads to underutilization of LMS features (Yusuf, 2021). Additionally, resistance to adopting new technologies, coupled with inadequate digital infrastructure, hampers full LMS integration. These barriers diminish the flexibility and accessibility that LMS can offer, ultimately impacting student engagement and learning outcomes. Therefore, this study seeks to investigate the barriers to effective LMS adoption and explore strategies that could enhance its application in Nigerian universities, ensuring improved teaching practices and better learning outcomes.

# **OBJECTIVES.**

#### The objectives of the study are as follows:

- 1. To find out the level of awareness of learning management systems available for application in lecture delivery among Academic Staff at Modibbo Adama University, Yola.
- 2. To determine the types of learning Management Systems applied for lecture delivery by Academic Staff at Modibbo Adama University, Yola.
- 3. To find out the reasons for the application of learning Management Systems in lecture delivery by academic staff in Modibbo Adama University, Yola.
- 4. To identify the preferred Features of learning Management System applied in Lecture delivery by Academic Staff in Modibbo Adama University,, Yola.
- To find out the Skills possessed in application of learning Management Systems in lecture delivery by academic Staff of Modibbo Adama University, Yola.
- 6. 6. To identify the Challenges encountered in the application of learning management systems in lecture delivery by academic Staff in Modibbo Adama University, Yola.

## **RESEARCH QUESTIONS.**

#### The research questions of this study are as follows:

1. What is the level of awareness of Learning Management Systems (LMS) available for application in lecture delivery among academic staff at Modibbo Adama University, Yola?

2. what are the types of Learning Management Systems applied for lecture delivery by academic staff at Modibbo Adama University, Yola?

3. What are the reasons for the application of learning management systems in lecture delivery by academic staff of Modibbo Adama University, Yola.

4. What are the preferred features of Learning Management Systems applied in lecture delivery by academic staff at Modibbo Adama University, Yola?

5. What are the digital skills possessed by academic staff for the application of LMS in lecture delivery at Modibbo Adama University, Yola?

6. What are the challenges encountered by academic staff in the application of Learning Management Systems in lecture delivery at Modibbo Adama University, Yola?

### SCOPE OF THE STUDY.

The study focused on Modibbo Adama University (MAU), located in Yola, Adamawa State, Nigeria. The study has specifically covered senior lecturers, Associate Professors, and Professors, as these individuals represent the higher academic ranks who have attained degrees and have been promoted based on their academic qualifications and professional achievements. These academic Staff members are assumed to have significant teaching experience and familiarity with the use of digital tools, including LMS platforms, in their instructional practices.

# LITERATURE REVIEW.

A recent survey conducted by Smith and Caruso (2022) demonstrates an increasing awareness and adoption of advanced LMS features among academic staff, driven by professional development initiatives and institutional support. The survey revealed that faculties who receive targeted training and support are more likely to leverage LMS tools for interactive and engaging course design, such as incorporating multimedia content and utilizing analytics for student performance tracking. This growing awareness and sophistication in LMS usage are crucial for enhancing the effectiveness of lecture delivery and improving overall student learning outcomes. The findings suggest that ongoing investment in training and resources is essential for maximizing the potential of LMS in higher education.

Adebayo and Akintoye (2021) conducted a survey at the University of Lagos to examine the application of Learning Management Systems (LMS) for lecture delivery. Their study found that while LMS platforms were recognized for enhancing lecture organization and facilitating resource sharing, the adoption rate among academic staff varied significantly. The survey highlighted that many faculty members appreciated the LMS for its ability to centralize course materials and streamline communication with students. However, the study also noted challenges, including insufficient technical support and resistance to adopting new technologies. These barriers impacted the overall effectiveness of LMS implementation at the university.

A comprehensive survey by Alabi and Dada (2023) at the University of Ibadan explored the integration of LMS in lecture delivery. The findings indicated that LMS adoption had positively impacted teaching practices by allowing for better course management and facilitating asynchronous learning. The study also noted improvements in student engagement through interactive features of LMS. However, the survey identified that a lack of sufficient infrastructure and support posed challenges to the effective implementation of LMS. The study suggested that addressing these infrastructural issues could enhance the overall effectiveness of LMS in supporting academic activities.

Furthermore, Alabi and Dada (2022) focused on the utilization of LMS for teaching and learning purposes at universities. The study revealed that academic staff primarily employed LMS for distributing lecture notes and managing assignments. The survey highlighted that LMS tools improved the efficiency of lecture delivery and provided a structured platform for student interaction. However, the research also identified challenges such as inadequate training for academic staff and limited access to reliable interact, which posed significant obstacles to the effective use of LMS.

The effective use of Learning Management Systems (LMS) in lecture delivery by academic staff requires a blend of technical, instructional, and content creation skills. Technical proficiency is essential for navigating platforms such as Moodle, Blackboard, and Canvas, which includes uploading materials, organizing coursework, and integrating tools like video conferencing for live sessions. Academic staff also need the ability to create and curate multimedia content, including video lectures, quizzes, and interactive simulations, which help promote active learning and engagement among students Jaramillo-Morillo et al. (2023). These technical and content-related skills are crucial for creating a seamless and effective digital learning environment.

In a survey conducted by Musa and Ibrahim (2022) at Ahmadu Bello University, the application of LMS for lecture delivery was assessed. The study found that LMS platforms were useful in organizing course content, managing student assessments, and providing feedback, with academic staff reporting increased efficiency in handling administrative tasks related to teaching. However, disparities in LMS adoption were noted, influenced by varying levels of digital literacy and access to technical resources. The primary barrier to LMS adoption in some Nigerian universities was identified as inadequate technological infrastructure, including unreliable electricity and limited high-speed internet. Additionally, the study pointed out that many lecturers lack the digital literacy skills necessary to efficiently operate LMS platforms, which further impedes the integration of LMS into lecture delivery.

# **RESEARCH METHODOLOGY.**

This study adopted a quantitative research approach, and survey research design was used for the research, this is in line with Ghanad (2020), who postulate that survey research is an effective method for collecting data from a large group of respondents, providing a comprehensive understanding of the subject under study. The population of the study is 442, and the sample size of 205 was used based on Krejcie and Morgan Table (1970). The technique used for selecting the sample was simple random sampling. Questionnaire was adopted for data collection, Ghanad (2020), emphasized the use of structured instruments in quantitative research to collect data that could be analyzed statistically, ensuring reliability and validity in the measurement of variables. The questionnaire was self-designed and subjected to face validity by experts in the department. The research instrument was subjected to the same group of respondents in FCE Yola. This method is test re-test method. The first and second scores were analysed to obtain a Cronbach's alpha reliability coefficient. The r-value obtained was 0.97. Based on this r-value, the research instrument was considered reliable and suitable to be used for the actual research because the reliability coefficient obtained was high. Moreover, descriptive statistics was used to analyze the data collected, employing percentages, frequencies, and mean values. A benchmark of 50% was used for decision-making on research questions 2, 4, and 5, while a mean value of 2.5 served as the benchmark for research questions 1, 3, and 6. The analysis was conducted using Microsoft Excel and Statistical Package for Social Sciences (SPSS Inc., Chicago, IL) version 2.3.

# DATA ANALYSIS.

**Research Question 1:** What is the level of awareness of learning management systems (LMS) available for lecture delivery among academic staff at Modibbo Adama University, Yola?

In order to determine the level of awareness of Learning Management Systems (LMS) among the respondents, several statements were provided for them to indicate their level of agreement. A four-point Likert scale was used to measure their responses. The findings are presented in Table 1 below. Table 1: Level of Awareness of Learning Management Systems (LMS)

S/N	STATEMENT	Res	ponse				Me	SD	Decision			
		SA		Α		DA		SD		all		
		F	%	F	%	F	%	F	%			
1	I am aware of Moodle as a platform for lecture delivery.	20	15.5	60	46.5	40	31.0	9	7.0	3.0	1.23	Agreed
2	I am aware of Google Classroom as a platform for lecture delivery.	45	34.9	70	54.3	10	7.8	4	3.1	3.7	0.45	Agreed
3	I am aware of Blackboard as a platform for lecture delivery.	30	23.3	75	58.1	15	11.6	9	7.0	3.6	0.49	Agreed
4	I am aware of Canvas as a platform for lecture delivery.	25	19.4	60	46.5	35	27.1	9	7.0	3.3	0.52	Agreed
5	I am aware of Microsoft Teams as a platform for lecture delivery.	50	38.8	70	54.3	7	5.4	2	1.6	3.7	0.76	Agreed
6	I am aware of Zoom as a tool for live lectures in combination with LMS.	40	31.0	75	58.1	10	7.8	4	3.1	3.6	0.48	Agreed
7	I am familiar with the integration of third- party tools (Google Drive, Office 365).	35	27.1	68	52.7	22	17.1	4	3.1	3.5	0.64	Agreed

8	I am aware of the analytics features within LMS for tracking student performance.	30	23.3	60	46.5	25	19.4	14	10.9	3.3	0.63	Agreed
9	I am familiar with the customization options for course content in LMS.	25	19.4	65	50.4	30	23.3	9	7.0	3.3	0.83	Agreed
10	I am aware of LMS security features for protecting student data.	20	15.5	80	62.0	18	14.0	11	8.5	3.4	0.84	Agreed
	Grand Mean									3.47		Agreed

Keyword: SA: Strongly Agree. A :Agreed. DA: Disagree. SD: Strongly disagree

The results in Table 1 highlight the level of awareness of Learning Management Systems (LMS) among academic staff, with a grand mean score of 3.47, which exceeds the acceptable benchmark of 2.5. The highest level of awareness is associated with Google Classroom, which received a mean score of 3.7, indicating that a significant number of respondents are familiar with its application for lecture delivery. Similarly, Microsoft Teams also demonstrated strong awareness, scoring 3.7. The remaining statements related to other LMS platforms and features are also acceptable, as they all surpass the benchmark of 2.5.

**Research Question 2:** What are the types of Learning Management Systems (LMS) applied for lecture delivery by academic staff at Modibbo Adama University, Yola?

To determine the types of Learning Management Systems (LMS) currently utilized for lecture delivery by academic staff at Modibbo Adama University, Yola, various statements were presented to respondents to gauge their familiarity and application of these systems. The findings are Presented in Table 2 below.

Table 2: Types	of LMS A	nnlied for	Lecture D	)eliverv h	ov Academic	Staff.
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S/N	STATEMENT		RESP	PONSES		DECISION
			YES		NO	
		F	%	F	%	
1	Moodle	100	77.5	29	22.5%	Applied
2	Google Classroom	110	85.3	19	14.7	Applied
3	Blackboard	95	73.7	34	26.3	Applied
4	Canvas	120	93.0	9	7.0	Applied
5	Microsoft Teams	80	62.0	49	38.0	Applied
6	Zoom (for live lectures)	105	81.5	24	18.5	Applied
	Total	610	81.0%	164	19.0%	APPLIED

Source: Field work, 2024.

The assessment of digital skills possessed by academic staff for the application of Learning Management Systems (LMS) reveals strong competencies, particularly in the ability to customize course content for different learning needs, which received the highest score of 85.3%. This indicates that academic staff are well-equipped to tailor their educational materials to meet diverse student requirements, significantly enhancing the learning experience. Additionally, 69.8% of respondents demonstrated knowledge of troubleshooting basic technical issues on LMS, while 65.1% showed proficiency in using discussion forums and collaborative tools. These skills are accepted as they also exceed the benchmark of 50%, underscoring the overall preparedness of academic staff to effectively integrate technology into their teaching practices and improve educational outcomes.

Research Question 3: What are the reasons for the application of Learning Management Systems (LMS) in lecture delivery by academic staff of Modibbo Adama University, Yola.

In order to determine the reasons for the application of Learning Management Systems (LMS) in lecture delivery, several statements were provided for respondents to indicate their level of agreement. A four-point Likert scale was used to measure their responses. The findings are presented in Table 3 below.

Table 3: The Reasons for the application of Learning Management Systems in Lecture Delivery.

S/N	STATEMENT	Response							Mean	SD	Decision	
		SA			A		DA					
		F	%	F	%	F	%	F	%			

1	To enhance student engagement and interaction	45	34.9	70	54.3	10	7.8	4	3.1	3.50	0.63	Agreed
2	To provide flexible access to course materials	60	46.5	65	50.4	3	2.3	1	0.8	3.70	0.58	Agreed
3	To facilitate real-time communication between staff and students	55	42.6	71	55.0	3	2.3	0	0.0	3.70	0.60	Agreed
4	To streamline assessment and grading processes	25	19.4	60	46.5	25	19.4	19	14.7	3.00	1.11	Agreed
5	To support diverse learning styles through multimedia resources	50	38.8	75	58.1	4	3.1	0	0.0	3.60	0.66	Agreed
6	To enable tracking of student progress and performance	52	40.3	73	56.6	4	3.1	0	0.0	3.60	0.69	Agreed
7	To integrate with other educational tools and platforms	48	37.2	72	55.8	7	5.4	2	1.6	3.50	0.73	Agreed
8	To promote collaborative learning opportunities among students	54	41.9	69	53.5	4	3.1	2	1.6	3.70	0.61	Agreed
9	To improve the overall efficiency of course management	49	38.0	70	54.3	8	6.2	2	1.6	3.50	0.79	Agreed
10	To enhance data security and privacy for student information	42	32.6	68	52.7	16	12.4	3	2.3	3.30	0.86	Agreed
	Grand Mean									3.5		Agreed

Keyword: SA: Strongly Agree A : Agreed. DA: Disagree. SD: Strongly disagree

The results presented in the table indicate the perceived reasons for the application of Learning Management Systems (LMS) in lecture delivery, with a grand mean score of 3.50, surpassing the acceptable benchmark of 2.5. The highest mean scores were recorded for the statement regarding the provision of flexible access to course materials and the facilitation of real-time communication between staff and students, both scoring 3.70. This suggests that academic staff highly value these functionalities of LMS as they contribute significantly to enhancing the learning experience. The remaining statements also received agreement from the respondents, indicating that they are acceptable as they exceed the benchmark of 2.5.

Research Question 4: What are the preferred features of Learning Management System for lecture delivery by academic

staff at Modibbo Adama University, Yola?

To identify the preferred features of Learning Management Systems (LMS) for lecture delivery by academic staff at Modibbo Adama University, Yola, various statements were presented to respondents. These statements aimed to capture the key features that lecturers prioritize when utilizing LMS for effective teaching and interaction with students. The results are presented in Table 4 below.

Table 4:	Features	of Learning	Management	System	preferred	for 1	Lecture	Delivery
		0	0	•				

S/N	STATEMENT		RESP	ONSES		DECISION
			YES		NO	
		F	%	F	%	

1	User-friendly interface	108	83.7	21	16.3	Preferred
2	Availability of real-time interaction (live chat, video conferencing)	105	81.4	24	18.6	Preferred
3	Offline access to materials	116	89.9	13	10.1	Preferred
4	Integration with other tools (e.g., Google Drive, Microsoft Office)	105	81.4	24	18.	Preferred
5	Automated grading and assessment features	122	94.6	7	5.4	Preferred
6	Customizable course content and modules	108	83.7	21	16.3	Preferred
7	Analytics for tracking student progress	105	81.4	24	18.6	Preferred
8	Mobile device compatibility	108	83.7	21	16.3	Preferred
9	Secure login and data protection features	124	96.1	5	3.9	Preferred
10	Discussion forums and collaboration tools for students	112	86.8	17	13.2	Preferred
11	Ability to support multimedia (videos, presentations, interactive content)	119	92.2	10	7.8	Preferred
12	Accessibility features for students with disabilities	112	86.8	17	13.2	Preferred
13	Efficient notifications and updates for both staff and students	115	89.1	14	10.9	Preferred
						Preferred
	Total	1459	87.1%	242	12.9%	

The top three preferred features of the learning management systems by academic staff at Modibbo Adama University, Yola. are secure login and data protection (95.0%), automated grading and assessment (91.0%), and support for multimedia content (88.8%). These features were most frequently selected, highlighting their importance in facilitating lecture delivery. Additionally, all other features passed the benchmark of 50%, indicating overall satisfaction with the LMS functionalities.

# Research Question 5: What are the digital skills possessed by academic staff for the application of Learning Management Systems (LMS) for lecture delivery at Modibbo Adama University, Yola?

To assess the digital skills possessed by academic staff for the application of Learning Management Systems (LMS) for lecture delivery at Modibbo Adama University, Yola, various statements were presented to respondents. These statements aimed to determine the proficiency of lecturers in utilizing LMS features for effective teaching. A 50% benchmark was used to gauge whether the academic staff possess the necessary digital skills for LMS application. The findings are presented in Table 5 below.

S/N	STATEMENT		RESP		DECISION	
			YES		NO	
		F	%	F	%	

### Table 5: Skills in Application of LMS for Lecture Delivery

1	Ability to navigate and use LMS platforms efficiently	85	66.0	44	34.0	Posessed
2	Proficiency in uploading and organizing lecture materials	70	54.3	59	45.7	Posessed
3	Skills in conducting live lectures via LMS	60	46.5	69	53.5	Posessed
4	Competence in creating and managing online quizzes and assessments	78	60.5	51	39.5	Posessed
5	Ability to track student progress using built-in analytics	65	50.4	64	49.6	Posessed
6	Familiarity with integrating third-party tools into LMS	72	55.8	57	44.2	Posessed
7	Skills in using discussion forums and collaborative tools	84	65.1	45	34.9	Posessed
8	Knowledge of troubleshooting basic technical issues on LMS	90	69.8	39	30.2	Posessed
9	Ability to customize course content for different learning needs	110	85.3	19	14.7	Posessed
10	Proficiency in ensuring data security and privacy	76	58.9	53	41.1	Posessed
11	Competence in providing timely feedback to students	80	62.0	49	38.0	Posessed
Total		129	60.1	86	39.9	Posessed

The highest scores in the assessment of digital skills possessed by academic staff for the application of Learning Management Systems (LMS) indicate a strong capacity for effective technology integration in teaching practices. The top score is in the ability to customize course content for different learning needs, with 85.3% of respondents demonstrating proficiency in this area. Following closely, 69.8% of staff possess knowledge of troubleshooting basic technical issues on LMS, while 65.1% have skills in using discussion forums and collaborative tools. The remaining skills assessed also surpass the benchmark of 50%, reinforcing the overall readiness of academic staff to leverage LMS effectively in their educational endeavors.

# Research Question 6: What are the challenges encountered by academic staff in the application of Learning Management Systems (LMS) for lecture delivery at Modibbo Adama University, Yola?

In order to identify the challenges encountered by academic staff in the application of learning management system (LMS) for lecture delivery among respondent, several statements were provided for them to indicate their level of agreement. A four-point Likert scale was used to measure their responses. The findings are presented in Table 6 below.

S/N	STATEMENT	Res	Response								SD	Decision
		SA		Α		DA		SD				
		F	%	F	%	F	%	F	%			
1	Lack of reliable internet connectivity	40	31.0	70	54.3	12	9.3	7	5.4	3.70	0.84	Agreed
2	Insufficient training and technical support for staff	30	23.3	50	38.8	32	24.8	17	13.2	2.80	1.30	Agreed
3	Resistance to change from traditional teaching methods	35	27.1	60	46.5	20	15.5	14	10.9	3.00	1.21	Agreed
4	Limited access to technological devices among staff and students	38	29.4	64	49.6	20	15.5	7	5.4	3.40	0.99	Agreed
5	Difficulty in integrating LMS with existing curriculum	36	27.9	65	50.4	22	17.1	6	4.7	3.40	0.89	Agreed
6	Technical issues and system glitches during lecture delivery	42	32.6	66	51.2	14	10.9	7	5.4	3.70	0.88	Agreed
7	Challenges in ensuring student engagement and participation	34	26.4	58	44.9	27	20.9	10	7.8	3.30	0.81	Agreed
8	Concerns regarding data privacy and security	37	28.7	61	47.3	24	18.6	7	5.4	3.50	0.79	Agreed
9	High workload due to additional responsibilities in managing LMS	35	27.1	61	47.3	26	20.2	7	5.4	3.40	1.05	Agreed
10	Limited institutional support for LMS implementation	30	23.3	55	42.6	30	23.3	14	10.9	3.30	1.08	Agreed
	Grand mean										3.34	Agreed

Table 6: Challenges encountered in the application of learning management system.

keywords: SA: Strongly Agree A : Agreed. DA: Disagree. SD: Strongly disagree

The assessment of challenges encountered by academic staff in the application of Learning Management Systems (LMS) reveals that all identified challenges are significant, each scoring above the benchmark of 2.5. The top three challenges reported are as follows: First, *lack of reliable internet connectivity*, which received a mean score of 3.70, highlighting it as a major obstacle for staff in effectively utilizing LMS for lecture delivery. Second, *technical issues and system glitches during lecture delivery*, also scoring 3.70, indicate that technical difficulties significantly hinder the teaching process. Third, *limited access to technological devices among staff and students*, with a mean score of 3.40, suggests that inadequate access to necessary devices is a prevalent issue affecting the effective use of LMS. The remaining challenges have also been accepted, as they have surpassed the benchmark of 2.5.

# Summary of findings.

- The findings from The study shows a high level of awareness of Learning Management Systems (LMS) among academic staff at Modibbo Adama University, Yola, with Google Classroom and Microsoft Teams scoring the highest (3.7), followed by Zoom (3.6). The overall grand mean of 3.4 indicates strong familiarity with various LMS tools and features.
- The findings reveal a strong application of various types of LMS for lecture delivery at Modibbo Adama University, Yola. Google Classroom (85.3%) and Canvas (93%) were the most widely used, while Zoom (81.5%) was popular for live lectures. All types of LMS surpassed the 50% benchmark, indicating broad adoption.

- 3. The findings show strong agreement on the benefits of LMS in lecture delivery at Modibbo Adama University, Yola. The highest scores were for flexible access to materials and real-time communication (mean = 3.7). With a grand mean of 3.5, LMS is seen as crucial for enhancing teaching and student engagement.
- 4. Academic staff at Modibbo Adama University, Yola, prioritize secure login and data protection (95.0%), automated grading and assessment (91.0%), and support for multimedia content (88.8%) as key features of their Learning Management System. These preferences underscore the critical role these functionalities play in enhancing lecture delivery. Overall, all other features also exceeded the 50% satisfaction benchmark, reflecting a positive reception of the LMS.
- 5. The assessment of digital skills among academic staff at Modibbo Adama University shows strong proficiency in LMS application, with 85.3% demonstrating the ability to customize course content and 69.8% skilled in troubleshooting LMS issues. All skills evaluated surpassed the 50% benchmark, confirming the readiness of staff to effectively integrate LMS into teaching.
- 6. The findings reveal that academic staff at Modibbo Adama University face several challenges in applying LMS for lecture delivery, with the most significant issues being unreliable internet connectivity and technical glitches, both with a mean score of 3.7. Additionally, concerns regarding data privacy and workload management were highlighted. Overall, all challenges assessed surpassed the 2.5 benchmark, indicating widespread agreement on these obstacles.

### **Discussion of Findings**

The findings from the study reveal a generally high level of awareness of Learning Management Systems (LMS) among academic staff at Modibbo Adama University, with a grand mean score of 3.47. Google Classroom and Microsoft Teams emerged as the most familiar platforms, both receiving mean scores of 3.7, underscoring their widespread use in higher education. These results align with broader trends in the adoption of digital tools for education, where platforms like Google Classroom have gained prominence due to their user-friendly interfaces and effective integration with other educational tools (Liu et al., 2023). Overall, the results suggest that faculty members at the university are well-equipped with the necessary knowledge of various LMS platforms, supporting the effective integration of technology into teaching.

The findings indicate a robust application of various Learning Management Systems (LMS) among academic staff at Modibbo Adama University, with Google Classroom and Canvas being the most utilized platforms, as reflected in their high affirmative responses of 85.3% and 93.0%, respectively. The data suggests that faculty members possess significant digital skills, particularly in customizing course content (85.3%) and troubleshooting technical issues (69.8%). Such competencies are crucial for enhancing educational outcomes, as they enable lecturers to effectively address diverse student needs and foster collaborative learning environments (Alhassan et al., 2023). Overall, the results emphasize the readiness of academic staff to leverage LMS technologies to improve teaching effectiveness.

The findings highlight the significant reasons for the application of Learning Management Systems (LMS) in lecture delivery at Modibbo Adama University, with a grand mean score of 3.50, indicating strong agreement among academic staff. Notably, the functionalities of flexible access to course materials and real-time communication between staff and students received the highest mean scores of 3.70, underscoring their importance in enhancing the learning experience. These results align with research suggesting that effective LMS use promotes student engagement and improves educational outcomes (Akinwumi&Eze, 2023).

The findings reveal that academic staff at Modibbo Adama University, Yola, prioritize secure login and data protection (95.0%), automated grading and assessment (91.0%), and support for multimedia content (88.8%) as key features of their Learning Management System (LMS). This reflects the importance of these functionalities in enhancing lecture delivery and aligns with literature emphasizing the necessity of robust security and efficient assessment tools in online education (Aliyu, 2021). Overall, the positive evaluation of the LMS, with all features surpassing the 50% satisfaction threshold, indicates a strong acceptance of the platform among faculty.

The assessment of digital skills among academic staff for the application of Learning Management Systems (LMS) at Modibbo Adama University, Yola, reveals a strong proficiency in utilizing various LMS features. Notably, 85.3% of respondents demonstrated the ability to customize course content to meet diverse learning needs, indicating significant competency in tailoring educational materials. Additionally, 69.8% possess knowledge of troubleshooting basic technical issues, and 65.1% are skilled in using discussion forums and collaborative tools. All evaluated skills exceeded the 50% benchmark, highlighting the faculty's readiness to effectively integrate technology into their teaching practices (Ibrahim et al., 2024).

The evaluation of challenges faced by academic staff in utilizing Learning Management Systems (LMS) at Modibbo Adama University, Yola, highlights several significant obstacles impacting lecture delivery. The most pressing issue identified is the lack of reliable internet connectivity, with a mean score of 3.70, which greatly restricts the effectiveness of LMS use. Similarly, technical issues and system glitches during lectures, also scoring 3.70, pose considerable difficulties for instructors. Additionally, limited access to technological devices among both staff and students, with a mean score of 3.40, further complicates the effective implementation of LMS. All challenges presented exceeded the acceptable benchmark of 2.5, indicating a clear need for institutional support to enhance the integration of technology in teaching (Ali et al., 2024).

# Conclusion

The investigation into the application of Learning Management Systems (LMS) for lecture delivery among academic staff at Modibbo Adama University, Yola, reveals a robust engagement with digital education tools. The academic staff demonstrated a high level of awareness of various LMS platforms, particularly Google Classroom, Blackboard, and Microsoft Teams. This awareness signifies a positive shift towards embracing technology in teaching and learning processes.

The study also identified that academic staff actively utilize several LMS for lecture delivery, with Moodle and Canvas being the most commonly applied. The reasons for employing LMS largely focus on enhancing student engagement, providing flexible access to course materials, and facilitating real-time

communication, all of which contribute to a more effective educational experience. Additionally, the findings highlighted a preference for specific LMS features, such as user-friendly interfaces and robust security measures, indicating a demand for systems that support both teaching effectiveness and data protection.

Despite the positive findings, the research uncovered several challenges that academic staff face in using LMS, including unreliable internet connectivity, insufficient training, and technical issues. These challenges highlight the need for continuous support and infrastructure development to fully leverage the potential of LMS in enhancing educational delivery.

## Recommendations

- 1. Modibbo Adama University should arrange for continuous professional development and LMS integration training to enhance academic staff's skills and effectively incorporate these technologies into their curriculum.
- 2. Modibbo Adama University should implement comprehensive training and support programs for Microsoft Teams to ensure academic staff can effectively utilize the platform for enhanced collaboration and lecture delivery.
- 3. Modibbo Adama University should enhance training on utilizing LMS features to improve teaching effectiveness among academic staff.
- 4. Modibbo Adama University should foster inter-platform collaboration and best practices sharing among academic staff to enhance the effective use of Learning Management Systems.
- Modibbo Adama University should implement targeted professional development programs to equip academic staff with the necessary skills for effective use of Learning Management Systems.
- Modibbo Adama University should provide internet support and technical support for academic staff to ensure effective utilization of Learning Management Systems.

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