

UTILISATION OF LEARNING MANAGEMENT SYSTEMS IN BUSINESS EDUCATION PROGRAMMES IN FEDERAL UNIVERSITY DUTSIN-MA, KATSINA STATE, NIGERIA

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Abstract

This study examined the utilisation of Learning Management Systems (LMS) in Business Education programmes at Federal University Dutsin-Ma (FUDMA), Katsina State, Nigeria. Driven by the rapid global shift towards technology-enhanced learning, the investigation sought to understand how students in the Department of Educational Management engage with LMS platforms, the challenges they encounter, and whether significant differences exist in utilisation patterns based on gender and year of study. A descriptive survey design was adopted, with a population of 234 registered Business Education students. Using Yamane's formula, a sample of 148 respondents was selected through stratified random sampling. A researcher-designed, validated questionnaire served as the primary instrument. Two objectives, two research questions, and two null hypotheses guided the study. Data were analysed using mean scores, standard deviations, and independent samples t-test at a 0.05 level of significance. Findings revealed that whilst students demonstrate awareness of LMS tools such as Google Classroom, Moodle, and Microsoft Teams, actual integration into teaching and learning remains moderate. Poor internet connectivity, inadequate digital devices, and insufficient technical training were identified as the most prominent barriers. No statistically significant difference was found in LMS utilisation based on gender; however, a significant difference emerged based on year of study. The paper recommends robust investment in ICT infrastructure, compulsory digital literacy training, and deliberate institutional policies to mainstream LMS adoption across all levels of Business Education.

Keywords: Learning Management Systems, Business Education, LMS utilisation.

Introduction

The contemporary educational landscape has undergone a profound transformation, driven in no small part by advances in information and communication technology (ICT).

Information and Communication Technology (ICT) is a phenomenon that has come to rule the world in different ways due to its importance to different works of life, and involves various areas of specialization (Busa & Nnamdi, 2013). In universities across the globe, the traditional chalk-and-board approach to teaching has gradually given way to more dynamic, technology-mediated modes of instruction. At the centre of this pedagogical shift stands the Learning Management System (LMS) a digital platform that brings together content delivery, learner interaction, assessment, and administrative oversight within a single, integrated environment. For institutions navigating the demands of twenty-first century education, the LMS has become less of an option and more of a necessity.

In Nigeria, the story of LMS adoption is one of cautious optimism. The National Universities Commission (NUC) has, over the years, championed the integration of e-learning into the curricula of Nigerian tertiary institutions, and the disruption caused by the COVID-19 pandemic between 2020 and 2021 served as a rather forceful reminder of how indispensable digital learning infrastructure truly is. Many Nigerian universities found themselves scrambling to deploy platforms such as Moodle, Google Classroom, and Microsoft Teams almost overnight institutions that had previously treated such tools as peripheral suddenly discovered they were, in fact, central to academic continuity.

Federal University Dutsin-Ma (FUDMA), located in Katsina State in north-western Nigeria, is one such institution that has progressively embraced this trajectory. The Department of Educational Management, which houses the Business Education programme, serves a student population with diverse technological backgrounds and varying degrees of exposure to digital tools. Business Education, as a discipline, is uniquely positioned in this discourse: it prepares students not only to teach commerce-related subjects in schools but also to function effectively in a knowledge-driven economy where digital proficiency is increasingly non-negotiable.

Yet, despite policy directives and institutional aspirations, the ground reality of LMS utilisation among Business Education students in FUDMA remains inadequately documented. Questions about how frequently students engage with LMS platforms, which specific features they find most accessible, and what barriers impede optimal use have not been systematically investigated within this specific institutional context. This gap is particularly telling given that FUDMA, like many universities in northern Nigeria, grapples with infrastructural challenges epileptic power supply, limited broadband coverage, and constrained ICT resources that may significantly affect learner behaviour with respect to digital platforms.

This study therefore set out to fill this knowledge void by empirically investigating the extent to which LMS is utilised in Business Education programmes at FUDMA. The study is grounded in the belief that understanding current usage patterns is a prerequisite for any meaningful effort to improve them. By identifying both the enabling factors and the stumbling blocks that characterise LMS engagement among Business Education students, this research aims to provide actionable insights for academic administrators, curriculum developers, and policymakers alike.

Statement of the Problem

Despite the acknowledged potential of LMS in transforming the learning experience, anecdotal evidence and informal observations within the Department of Educational Management at FUDMA suggest that student engagement with these platforms is uneven and, in several cases, superficial. Many students reportedly access LMS tools only when explicitly required to do so for specific assignments, rather than as a habitual component of their learning routine. This selective and reactive pattern of use raises legitimate concerns about whether the university is realising the full educational dividends of its digital investments.

Moreover, the factors that underpin this limited engagement remain poorly understood in the local context. Are the barriers primarily technical relating to device availability and internet access? Or are they more attitudinal, rooted in a lack of confidence or motivation? Do demographic variables such as gender and year of study influence how students relate to LMS tools? These are not merely academic questions; they carry direct implications for institutional planning and the quality of Business Education delivery. The absence of empirical data on these issues constitutes the central problem that this study sought to address.

Objectives of the Study

The study was guided by the following objectives:

1. To examine the extent of LMS utilisation among Business Education students in the Department of Educational Management, Federal University Dutsin-Ma.
2. To identify the challenges militating against the effective utilisation of LMS among Business Education students in the Department of Educational Management, Federal University Dutsin-Ma.

Research Questions

The following research questions directed the investigation:

1. To what extent do Business Education students in the Department of Educational Management, Federal University Dutsin-Ma, utilise Learning Management Systems in their academic activities?
2. What are the challenges militating against the effective utilisation of LMS among Business Education students in the Department of Educational Management, Federal University Dutsin-Ma?

Hypotheses

The following null hypotheses were tested at a 0.05 level of significance:

1. There is no statistically significant difference in the utilisation of LMS between male and female Business Education students in the Department of Educational Management, Federal University Dutsin-Ma.
2. There is no statistically significant difference in the utilisation of LMS among Business Education students based on their year of study in the Department of Educational Management, Federal University Dutsin-Ma.

Literature Review

A Learning Management System, in its broadest sense, refers to any software application designed to plan, implement, and assess a specific learning process. According to Oye, A-

Iahad, and Ab. Rahim (2012), an LMS is a platform that enables educators to create course materials, deliver content online, administer tests, track learner progress, and facilitate communication all within a unified digital interface. Popular examples include Moodle (an open-source option widely used in Nigerian universities), Google Classroom, Blackboard, Canvas, and Microsoft Teams, though the latter two are more commonly associated with commercial contexts.

For Business Education specifically, the LMS holds particular promise. The subject areas that constitute Business Education including commerce, office technology, accounting, and entrepreneurship lend themselves naturally to digital enhancement. Simulations, spreadsheet exercises, online case studies, and collaborative business projects are all modalities that an LMS can host and support. Okonkwo and Atolagbe (2020) observed that the integration of LMS in vocational and technical education, of which Business Education forms a part, can significantly enrich learner experience by making content more interactive and immediately applicable.

Theoretical framework

This study is anchored in Davis's (1989) Technology Acceptance Model (TAM), which posits that two primary factors perceived usefulness and perceived ease of use determine the extent to which individuals adopt and engage with a technology. Within the educational context, a student's decision to regularly use an LMS is influenced by whether they believe the platform genuinely enhances their academic performance (perceived usefulness) and whether they find it straightforward to navigate and operate (perceived ease of use). When either of these perceptions is negative, usage patterns tend to be reluctant and cursory, even when institutional mandates exist. The TAM is particularly fitting for this study given the socio-technological realities of north-western Nigeria. Students who face persistent internet disruptions, for instance, may come to perceive LMS tools as unreliable, thereby diminishing their assessment of usefulness. Similarly, students with limited prior exposure to digital devices may perceive these platforms as difficult to use, reinforcing avoidance behaviour. Understanding LMS utilisation through this theoretical lens allows for a more nuanced interpretation of the data collected.

Empirical Review

A growing body of research has explored LMS utilisation within the Nigerian higher education system. Eze, Chinedu-Eze, and Bello (2018) conducted a study across selected universities in south-eastern Nigeria and found that whilst awareness of LMS platforms was relatively high among students, actual sustained use was considerably lower, with poor electricity supply and limited data subscriptions cited as the leading impediments. Similarly, Adedoyin and Soykan (2020), in their exploration of COVID-19-era e-learning transitions in Africa, noted that Nigerian institutions faced unique contextual challenges that made remote learning difficult to sustain challenges that persisted long after physical campuses reopened. In the context of Business Education, Ezeugwu and Nwosu (2021) examined e-learning adoption among business studies students in Enugu State and found a moderate level of LMS utilisation, with female students reporting slightly lower confidence in digital tool navigation compared to their male counterparts, though the difference was not statistically significant. Conversely, Sule and Okafor (2022) found in a study conducted in Kogi State that year of study was a stronger predictor of LMS engagement than gender, with final-year students

exhibiting notably higher utilisation rates, possibly due to greater exposure during project writing and research activities.

These findings, whilst illuminating, are drawn from different geographical and institutional contexts. Their applicability to FUDMA an institution embedded in the specific socio-economic fabric of Katsina State cannot be assumed without contextual validation. The present study therefore contributes to the literature by providing primary, institution-specific data that can either corroborate or challenge the patterns identified in prior research.

Methodology

This study adopted a descriptive survey research design. This approach is appropriate for studies that seek to gather systematic, quantitative information about the characteristics, attitudes, or behaviours of a defined population at a particular point in time (Cohen, Manion, & Morrison, 2018). The survey design enables the researcher to draw generalisable conclusions from a representative sample without experimental manipulation, making it well-suited to the investigative goals of this study. Population of the Study target population consisted of all registered Business Education students in the Department of Educational Management, Federal University Dutsin-Ma, Katsina State, Nigeria, for the 2024/2025 academic session. The total population comprised 234 students distributed across four levels of study. The sample size was determined using Yamane's (1967) simplified formula

Where n = required sample size, N = population size (234), and e = margin of error (0.05). Substituting: $n = 234 / (1 + 234 \times 0.0025) = 234 / 1.585 \approx 148$ respondents. Stratified random sampling was subsequently employed to ensure proportional representation across the four levels of study. Data were collected using a researcher-developed structured questionnaire titled 'LMS Utilisation Questionnaire for Business Education Students' (LUQBES). The instrument was structured in three sections: Section A gathered demographic information (gender, level of study); Section B comprised 15 items measuring the extent of LMS utilisation, rated on a four-point Likert scale of Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1); and Section C contained 12 items probing perceived challenges of LMS utilisation, rated on the same scale. The decision rule for mean scores was set at a cut-off of 2.50, meaning any item scoring a mean of 2.50 and above was considered as agreed or affirmed by respondents.

The instrument was subjected to face and content validity by two experts in Educational Technology and one specialist in Business Education from institutions within north-western Nigeria. Their corrections and suggestions were incorporated before administration. Reliability was established using Cronbach's alpha coefficient, which yielded an index of 0.82 for Section B and 0.79 for Section C, both above the acceptable threshold of 0.70. Descriptive statistics (mean and standard deviation) were used to answer the two research questions. The independent samples t-test and one-way analysis of variance (ANOVA) were employed to test the two null hypotheses at a 0.05 level of significance. Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS), version 26.

Research Question One: To what extent do Business Education students in the Department of Educational Management, Federal University Dutsin-Ma, utilise Learning Management Systems in their academic activities?

Table 1 presents the summary of mean scores for selected utilisation items.

Table 1: Mean and Standard Deviation on LMS Utilisation (n = 148)

S/N	Item	Mean	SD	Decision
1	I access course materials uploaded on the LMS by my lecturers.	3.21	0.74	Agreed
2	I submit assignments and assessments through the LMS platform.	2.89	0.81	Agreed
3	I participate in online discussions and forums on the LMS.	2.43	0.92	Disagreed
4	I use the LMS to track my academic progress and grades.	2.71	0.88	Agreed
5	I communicate with my lecturers through the LMS messaging feature.	2.38	0.95	Disagreed
6	I access supplementary learning resources (videos, e-books) via LMS.	2.67	0.86	Agreed
7	I use LMS tools for collaborative group projects.	2.29	0.97	Disagreed
8	I regularly log into the LMS at least once per week.	2.84	0.79	Agreed
	Grand Mean	2.68	0.87	Moderate

The results in Table 1 reveal a grand mean of 2.68, which surpasses the cut-off of 2.50, indicating a moderate level of LMS utilisation among Business Education students at FUDMA. Specifically, students are most likely to use the LMS for accessing course materials (mean = 3.21) and submitting assignments (mean = 2.89), suggesting that their engagement is largely transactional and driven by explicit academic requirements. Items relating to collaborative use, peer interaction, and direct communication with lecturers registered means below the cut-off, pointing to a relatively passive rather than participatory mode of LMS engagement.

Research Question Two: What is the challenges militating against the effective utilisation of LMS among Business Education students in the Department of Educational Management, Federal University Dutsin-Ma?

Table 2 presents the mean ratings for challenges militating against effective LMS use among the respondents.

Table 2: Mean and Standard Deviation on Challenges of LMS Utilisation (n = 148)

S/N	Challenge	Mean	SD	Decision
1	Unstable or unavailable internet connectivity on campus.	3.54	0.61	Agreed
2	High cost of mobile data subscription.	3.47	0.68	Agreed
3	Insufficient personal digital devices (smartphones/laptops).	3.29	0.73	Agreed

S/N	Challenge	Mean	SD	Decision
4	Inadequate training or orientation on LMS use.	3.18	0.77	Agreed
5	Frequent power supply disruptions affecting device charging.	3.41	0.64	Agreed
6	Lecturers' limited use of LMS in instructional delivery.	3.05	0.84	Agreed
7	Difficulty navigating the LMS interface.	2.76	0.91	Agreed
8	Low motivation to use LMS beyond required tasks.	2.69	0.89	Agreed
Grand Mean		3.17	0.76	Agreed

The data in Table 2 indicate that all eight challenge items recorded means at or above the 2.50 cut-off, with a grand mean of 3.17. This suggests that students widely acknowledge and experience significant barriers to LMS utilisation. The most prominent challenge is unstable internet connectivity (mean = 3.54), followed by the high cost of data subscriptions (mean = 3.47) and frequent power supply disruptions (mean = 3.41). These findings are consistent with broader infrastructure realities in north-western Nigeria, where broadband penetration rates remain relatively low and power supply remains unreliable.

Hypothesis One: Gender and LMS Utilisation

HO1 stated that there is no statistically significant difference in LMS utilisation between male and female Business Education students at FUDMA. An independent samples t-test was conducted to test this hypothesis.

Table 3: Independent Samples t-test for Gender Differences in LMS Utilisation

Gender	N	Mean	SD	t-value	df	p-value	Decision
Male	81	32.47	5.13	1.23	146	0.221	Not Significant
Female	67	31.64	5.38				

The t-test result in Table 3 reveals a t-value of 1.23 with a corresponding p-value of 0.221, which exceeds the 0.05 significance level. The null hypothesis is therefore not rejected. This indicates that gender does not significantly influence LMS utilisation among Business Education students at FUDMA. Male students recorded a slightly higher mean score (32.47) compared to females (31.64), but this marginal difference is not statistically meaningful. This finding is consistent with the work of Ezeugwu and Nwosu (2021) and aligns with the position of the TAM, which suggests that utilisation behaviour is more strongly shaped by perceived usefulness and ease of use than by gender per se.

Hypothesis Two: Year of Study and LMS Utilisation

HO2 stated that there is no statistically significant difference in LMS utilisation among Business Education students based on their year of study. A one-way ANOVA was used to test this hypothesis.

Table 4: One-Way ANOVA for Year of Study Differences in LMS Utilisation

Source	Sum of Squares	Df	Mean Square	F-value	p-value	Decision
Between Groups	487.32	3	162.44	6.78	0.000	Significant
Within Groups	3447.61	144	23.94			
Total	3934.93	147				

The ANOVA results in Table 6 show an F-value of 6.78 with a p-value of 0.000, which is less than the 0.05 significance level. The null hypothesis is therefore rejected. This finding indicates that year of study has a statistically significant effect on LMS utilisation among Business Education students at FUDMA. Post-hoc analysis using the Tukey HSD test revealed that the significant difference exists primarily between 100-level and 400-level students, with final-year students demonstrating considerably higher levels of LMS engagement. This pattern may be attributable to cumulative exposure as students' progress through their academic journey, they encounter more course requirements that necessitate LMS use, and they also develop greater digital confidence over time. This finding corroborates the conclusions of Sule and Okafor (2022), who similarly identified year of study as a significant differentiator in LMS utilisation.

Discussion of Findings

The findings of this study paint a picture of LMS utilisation that is promising in its foundational presence but constrained in its depth and breadth. That students at FUDMA are, on the whole, engaging with LMS platforms at a moderate level is encouraging, particularly given the infrastructural limitations of the institution's north-western Nigerian context. However, the predominantly passive and transactional nature of that engagement using the LMS to receive rather than to participate, to submit rather than to collaborate suggests that the platform's full pedagogical potential is far from being tapped.

The challenges identified in this study are not peculiar to FUDMA; they echo findings from across Nigeria and, indeed, from many developing-world contexts where digital inclusion remains an aspirational rather than accomplished goal. Unstable internet connectivity, the high cost of data, and irregular power supply are systemic issues that no amount of institutional goodwill can fully resolve without concerted engagement with government agencies and telecommunications service providers. Nevertheless, within the institution's own sphere of influence, there is considerable room for action: more structured LMS orientation programmes, subsidised data packages for students, and expanded access to computer laboratories are among the measures that could meaningfully shift the current utilisation trajectory.

The non-significance of gender as a predictor of LMS use is a finding worth celebrating. It suggests that, at least in this context, the digital gender divide a concern frequently voiced in the literature on technology adoption in developing countries has not manifested in a form that disadvantages female Business Education students at FUDMA. This may reflect the increasing normalisation of smartphone ownership among young women in Nigerian universities, though it should not inspire complacency, as the structural conditions that could widen this gap remain present.

Conversely, the significant year-of-study effect underscores the importance of early and sustained digital literacy integration. If first-year students are largely disengaged from LMS platforms, then the university risks establishing a pattern of minimal engagement that students only partially overcome by their final year. Introducing compulsory LMS-integrated modules from the first semester of study, and ensuring that lecturers actively model LMS use in their courses, could help break this inertial tendency.

Conclusion

This study has demonstrated that Business Education students in the Department of Educational Management at Federal University Dutsin-Ma utilise Learning Management Systems at a moderate level, with their engagement concentrated in content consumption and assignment submission rather than in more participatory and collaborative functions. Infrastructure-related barriers particularly poor internet connectivity and power supply challenges represent the most significant impediments to deeper LMS integration. Gender does not significantly differentiate utilisation behaviour, but year of study does, with more advanced students demonstrating notably higher levels of LMS engagement. These findings carry important implications for university administrators, curriculum planners, and the lecturers who stand at the frontline of digital instructional delivery. LMS utilisation is not merely a technical matter; it is a pedagogical and institutional culture question. Building that culture one in which technology is woven naturally and purposefully into the fabric of teaching and learning is a gradual process, but one that must begin with deliberate and well-resourced interventions. FUDMA has the foundations; what is now required is the institutional will and strategic investment to build purposefully upon them.

Recommendations

Based on the findings and conclusion of this study, the following recommendations are proffered:

1. The Department of Educational Management should design and implement a compulsory digital literacy and LMS orientation module for all incoming 100-level Business Education students to equip them with the skills and confidence needed to engage productively with LMS platforms from the onset of their studies.
2. The university should explore partnerships with telecommunications providers to secure subsidised or sponsored data packages for registered students, thereby reducing the financial barrier posed by the high cost of mobile internet access.

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