

Exploring Secondary School Teachers' Attitude Towards the Use of Learning Management Systems (LMS) for Instructional Delivery in Oyo State, Nigeria

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Abstract

Learning Management System (LMS) is an application software used to plan, implement and assess learning process in educational institutions. After Covid19 pandemic which changed every aspect of human life and education, LMS became the focus of teachers and students when physical classrooms were not visible. This study therefore examined teachers' attitude towards using LMS in secondary schools in Oyo State. The study adopted descriptive design of survey type. Multi-stage sampling procedure (purposive, proportional, and simple random sampling techniques) were used to select four educational zones, ten secondary schools and 1,117 teachers out of 15,705 teachers in the zones. Four (4) research questions and three (3) research hypotheses were raised for the study. The instrument for data collection were validated by three (3) Test and Measurement experts and tested for reliability using Cronbach's alpha which yielded 0.85. The data collected were analyzed using mean, standard deviation, ANOVA, t-test, and Pearson Product Moment Correlation, (PPMC). The study concluded that teachers' attitude had positive impact on LMS use for teaching. It is therefore recommended that secondary school teachers in Oyo State be encouraged to undergo courses on making use of LMS to enhance efficient teaching and effective learning.

Keywords: Learning Management System, Secondary Schools, Attitude, Teacher

1. Introduction

Education is a tool that avails people with knowledge, skills, techniques and information which empowers them for national socio-economic growth and development. Education has been greatly affected by the rapid change in technology which is used in teaching and learning. Information and Communication Technology (ICT) equip teachers and students with skills essential for work and life in the 21st century (Hawwal & Adam, 2022). Information technologies help teachers to assess students' academic needs. As technology becomes prevalent and accessible to students of all ages, teachers are encouraged to find innovative and creative ways to incorporate technology into their instructional tasks.

The utilisation of ICTs in educational processes has emerged as a highly notable advancement. This phenomenon has arisen due to positive anticipations regarding the significance of ICT in advancing higher education and facilitating a more efficient and adaptable learning encounter (Coates, James, & Baldwin, 2015). There is a prevalent argument suggesting that ICT possesses the capacity to revolutionise the possibilities of higher education instruction, hence fostering a student-centered learning experience (Bingimlas, 2019; Drent & Meelissen, 2018). Nevertheless, it has been contended by Chang (2018) that technology has been sluggish in effecting substantial or basic alterations to educational frameworks. Educational institutions are progressively embracing Learning Management Systems (LMS) as a prevalent technological tool to facilitate the educational process and enhance students' learning experiences (Lonn & Teasley, 2019; McGill & Klobas, 2019).

Although the utilisation of LMS is prevalent, it remains uncertain whether this technology has met

anticipated outcomes, particularly within secondary school institutions. An LMS is an electronic learning platform that provides a range of tools for delivering course materials and information. It facilitates interaction and communication between teachers and students, as well as among students themselves, without any restrictions on time or location (Chang, 2018).

LMSs are employed in numerous courses across high schools and universities, and it is anticipated that this quantity will rise in the future (Chang, 2018). While the original purpose of these technologies was to facilitate remote learning, they have now become an essential component of the educational journey for students across many backgrounds. Incorporating virtual elements into campus-based courses and complementing conventional in-person instruction, these tools are extensively employed (Lonn & Teasley, 2019). The increasing fascination with the implementation and utilisation of LMS has been propelled by the expected advantages of this system for both educators and learners. There is a prevalent argument suggesting that LMSs have the capacity to enhance student learning, optimise instructional efficiency, and foster innovation in the realm of education (Chang, 2018; Lonn & Teasley, 2019). Additional assertions have been put out suggesting that LMSs will significantly alter educational methodologies and introduce novel efficiencies to the teaching process. Broad et al. (2014) argue that the implementation of LMS has the potential to redirect the learning experience from the instructor to the student, with the teacher assuming the role of a facilitator in the student learning process.

Sharifov, Safikhanova and Mustafa (2021), opined that education has been revolutionised by enhancing a range of social and constructive teaching methods due to

the implementation of LMS. This is achieved by enabling students to conveniently access and engage with diverse educational materials (Sharifov et al., 2021). Additionally, it offers the potential to incorporate numerous of these methodologies, and certain aspects within it to promote student-centered methodologies for education.

Although LMSs are commonly used in educational institutions worldwide, not all lecturers or teachers utilise them (Costen, 2019). This statement underscores the perspective that the mere provision of technology, namely LMS in this context, does not ensure the effective utilisation of technology by instructors. The adoption and implementation of technology in the classroom are contingent upon the teachers themselves, rather than solely relying on the availability of tools (Singh, 2021). The attitude of Teachers has a crucial role in determining the implementation of technology, such as LMS, in their classrooms. Attitude can be defined as an individual's perception or evaluation of a particular behaviour (Pardana et al., 2019). Ochonogor (2013) defined attitude as a manifestation of an individual's values, which arise from the impact of the surrounding environment, as well as previous and present experiences, on an individual's personality.

Nja et al. (2022) explained attitude as a component of the affective domain, which is one of the three commonly categorised educational objectives. The study highlighted that attitude may be quantified at various levels by utilising appropriate items and indicators. Measurement of attitude can be achieved by deliberate acceptance or rejection of opinions. It refers to how one perceives, thinks, or acts towards something, an event, or a circumstance. Attitude can be articulated through verbal or behavioural means, serving as a manifestation of an individual's favourable or unfavourable response towards a certain entity or circumstance shaped by their past or present experiences, and it can encompass both good and negative assessments of others, things, events, activities, and ideas within their surroundings (Obiegbu, 2016).

1.1 Statement of the Problem

Internationally, it is evident that the Covid 19 pandemic changed every aspect of our life and education is not an exception. As the series of the pandemic-induced lockdown resulted in movement from traditional pedagogy to e-learning platforms such as Learning Management System for teaching and learning processes, Nigeria is one of the countries which need to learn from numerous lessons during and after the COVID-19 disruption particularly with respect to education.

LMS such as Google classroom, Canvas, Moodle, and blackboard are some of the electronic learning platforms that provide a range of tools for delivering course materials and information. LMS has the potential to redirect the learning experience from the instructor to the students, with the teacher assuming the role of facilitator in the teaching learning process. It also has the potential to revolutionize education by enhancing a range of social and constructive teaching methods. LMS makes it possible to upload and download materials in various forms, allowing for continual updates and access. It also possesses the potential to serve as a valuable instrument in augmenting students' learning outcomes and enhancing pedagogical approaches. LMS has the capacity to

enhance student learning, optimise instructional efficiently, and foster innovation in the realm of education.

Utilisation of LMS in the realm of education can pose a serious setback in teaching and learning processes if the needed facilities are not in place. While LMS may lead to extra administrative costs for schools, they can become a technological barrier for untrained teachers and a social barrier for students who are reliant on face to face interaction to fully benefit from learning process. However, the use of LMS in school is perceived to be challenging because of technical issues such as unstable internet connection and electricity, lack of needed devices, limited technical experience and skills, and lack of e-learning pedagogy. There are numerous challenges of using LMS in school such as intuitive teacher experience integrating with other systems, keeping content relevant and updated, scalability concerns, technical glitches and downtime, tracking and reporting limitations, and mobile accessibility.

As nobody pray for pandemic again, but as a country, Nigerian secondary education needs to move from traditional pedagogy to blended and e-learning platforms such as LMS. This cannot be achieved if secondary school teachers are not ready or do not have good attitude towards using LMS for teaching and learning purposes. Therefore, this study aimed at investigating teachers' attitude towards using LMS for instructional delivery in Oyo State secondary schools.

1.2 Research Questions

The following research questions were answered in the study:

1. What influence does secondary school teachers' attitude have towards the use of LMS for teaching in Oyo State?
2. What is the difference in the Attitude to use LMS by secondary school teachers in Oyo State based on work experience?
3. What is the difference between male and female teachers' attitude to the use of LMS in Oyo State?
4. What is the relationship between institutional support and secondary school teachers' attitude to the use of LMS in Oyo State?

1.3 Research Hypotheses

The following hypotheses were tested in this study at 0.05 level of significance:

H₀₁: There is no significant difference in the attitudes of secondary school teachers in Oyo State towards the use of LMS based on their work experience.

H₀₂: There is no significant difference between male and female teachers' attitude of the use of LMS in Oyo State.

H₀₃: There is no relationship between institutional support and secondary school teachers' attitude on the use of LMS in Oyo State.

1.4 Theoretical Framework

Learning theories are ideal for the way students learn and retain information. Understanding and application of these theories is important for effective teaching. These principles provide different frameworks that teachers can use to adapt to students' diverse learning styles and academic needs. In this study, researchers will investigate

diffusion of innovation and social cognitive theories. The theory seeks to explain how, why, and at what rate new ideas and technology spread. The diffusion of innovation theory, as proposed by Rogers (2004), has been widely embraced by several educational research studies as a framework for comprehending the utilisation and adoption of information and communication technology (ICT) at both individual and institutional levels. This theory has been extensively examined by many researchers. Social Cognitive Theory is an interpersonal level theory developed by Albert Bandura that emphasizes the dynamic interaction between people, their behaviour, and their environment. It also suggests that an individual's behaviour choices are selected based on internal and external factors, such as environment, media outlets, and past experiences because of the desire to achieve a certain outcome. (Bandura, 1986).

2. Methodology

The population for this study consisted of all secondary school teachers in Oyo state, while the target population was all teachers in Ibadan, Oyo, Ogbomosho and Ibarapa Zones. The study adopted descriptive design of survey type. Multi-stage sampling procedures (purposive, proportional, and simple random sampling techniques) were used to select four educational zones, ten secondary schools and 1303 teachers out of 15,705. At the first stage, purposive sampling technique was used to select Ibadan, Oyo, Ogbomosho and Ibarapa Zones based on accessibility to ICT facilities. At the second stage, purposive sampling was utilized to select 10 secondary schools from each of the zones based on availability of internet facilities. At the third stage, simple random sampling technique was used to select the teachers from each of the secondary schools selected. Adapted questionnaire used to collect data was validated and tested for reliability using Cronbach's alpha which yielded 0.85. A total of 1400 copies of questionnaire was proportionally distributed to each of the zones selected for the study based on the sample size of each of the zones determined and using researcher's advisory model 2006 as presented in Table 1 below. 1,216 respondents were returned while only 1,117 were valid and used for the study. Mean, standard deviation, ANOVA, t-test, Pearson Product Moment Correlation, (PPMC) were used to answer research questions and test hypotheses at 0.05 level of significance respectively.

Table 1: Distribution of teachers by Zones in Oyo State and respective sample size

No	LGA	Number of Teachers	Sample size by advisors model
1	Ibadan Zone	8402	370
2	Oyo Zone	1963	322
3	Ogbomosho Zone	2011	333
4	Ibarapa Zone	951	278
	TOTAL	15,705	1,303

Source: Oyo state teaching service (2024).

The population size of secondary school teachers is 15,705 and by using the research advisor's model (2006) in (Appendix II), at 95% confidence, the sample size is 1,303.

3. Results

Research Question 1: What influence does secondary school teachers' attitude have towards the use of LMS for teaching in Oyo State?

Table 2: Influence of Teachers' Attitudes Towards the Use of LMS in Secondary Schools

Items	SA	A	D	SD	Mean	SD
The use of LMS provides the instructor with many different tools to assess learning.	162	852	70	33	3.02	.57
The use of LMS enables the teaching materials to be organized in a structure planned by the instructor.	196	814	105	2	3.08	.52
The use of LMS makes communication more convenient.	275	686	147	9	3.09	.63
The use of LMS provides a space where learning can take place independently.	156	835	102	24	3.01	.56
The use of LMS makes learning easier.	270	702	127	18	3.09	.64
The use of LMS increases interaction among students and instructor.	197	816	86	18	3.07	.56
The use of LMS increases motivation for learning.	292	638	176	11	3.08	.67
The use of LMS produces new models of teaching and learning.	215	785	95	22	3.07	.59
Students are not active in using LMS.	97	415	396	209	2.36	.88
LMS interfaces confuses me.	24	379	507	207	2.20	.76
Average Mean	2.91					

Table 2 summarizes the influence of teachers' attitudes towards LMS usage in secondary schools across Oyo State. The data show an overall positive attitude, with a weighted average mean of 2.91, indicating general agreement with the positively worded items. Teachers affirmed that LMS enhances communication, supports learning independence, improves instructional organization, and increases motivation and interaction. Meanwhile, they disagreed with negatively framed items, such as confusion about LMS interfaces and lack of student activity, reinforcing their favorable outlook. Hence, it can be concluded that secondary school teachers in Oyo State hold a positive attitude towards using LMS for teaching.

Research Question 2: What is the difference in the Attitude to use LMS by secondary school teachers in Oyo State based on work experience?

Table 3: Difference in the Teachers' Attitude toward the Use of LMS in Secondary Schools in Oyo State based on Work Experience

Work Experience	N	Mean	Std. Dev.
0-10years	587	29.03	3.69
11-20years	323	29.29	3.59
21-30years	180	28.83	3.59
31years and above	27	29.15	5.82

Table 3 explores whether differences exist in secondary school teachers' attitudes toward the use of LMS based on their work experience. The mean scores are as follows: 0-10years (M = 29.03, SD = 3.69), 11-20years (M = 29.29, SD = 3.59), 21-30 years (M = 28.83, SD = 3.59), and 31years and above (M = 29.15, SD = 5.82). The data shows minimal differences in attitudes toward LMS use across the different levels of work experience. To determine whether these differences are statistically significant ANOVA will be used to test the hypothesis for this particular research question.

Research Question 3: What is the difference between male and female secondary school teachers' Attitude to the use of LMS in Oyo State?

Table 4: Difference in the Secondary School Teachers' Attitude to the use of LMS based on Gender

Gender	N	Mean	Std. Deviation
Male	493	58.81	6.70
Female	624	59.09	6.55

Table 4 explores the differences in the attitude to the use of LMS among male and female secondary school teachers in Oyo State. The mean scores are as follows: male teachers (M = 58.81, SD = 6.70) and female teachers (M = 59.09, SD = 6.55). The data suggests that there is no difference in the attitude of LMS use between male and female secondary school teachers. To test further in this difference, a t-test for independent samples will be conducted with hypothesis three.

Research Question 4: What is the relationship between institutional support and secondary school teachers' attitude to the use of LMS in Oyo State?

Table 5: Relationship between Institutional Support and Secondary School Teachers' Attitudes toward the Use of LMS

Variables	Mean	Std. Dev.	N	R
Institutional Support	24.33	2.59	1117	.335
Teachers' Attitudes	29.33	3.71		

Table 5 evaluates the relationship between institutional support and the attitudes of secondary school teachers toward the use of LMS in Oyo State. The correlation coefficient ($r = 0.335$) indicates a positive relationship; therefore, this suggests that institutional support is positively associated with secondary school teachers' attitudes toward LMS usage. To test further if the relationship is significance, a PPMC will be conducted with this hypothesis.

3.1 Hypotheses Testing

Hypothesis 1:

H₀₁: There is no significant difference in the attitudes of secondary school teachers in Oyo State towards the use of LMS based on their work experience.

Table 6: Summary of ANOVA Showing Difference in the Attitude of Secondary School Teachers in Oyo State toward the Use of LMS based on Work Experience

Analysis of Variance						
Model	Sum of Squares	df	Mean Square	F	Sig.	Remark
Between Groups	27.600	3	9.200	.666	.573	Not Rejected
Within Groups	15366.083	1113	13.806			
Total	15393.683	1116				

Table 6 shows the difference in the attitudes of secondary school teachers in Oyo State toward the use of LMS based on their work experience. The ANOVA results shows that there is no significant difference in the attitudes of secondary school teachers in Oyo State toward the use of LMS based on their work experience ($p = .573 > 0.05$). Hence, hypothesis 2 is not rejected.

Hypothesis 2:

H₀₂: There is no significant difference between male and female teachers' attitude toward the use of LMS in Oyo State.

Table 7: Summary of T-test Showing Difference in Male and Female Teachers' Attitude toward the Use of LMS in Oyo State

Grouping Variable (Gender)	N	Mean	Std. D	Df	T	Sig.	Remark
Male	493	28.76	3.91	1115	-2.555	.073	Not Rejected
Female	624	29.33	3.53				

Table 7 shows the difference between male and female teachers' attitude toward the use of LMS in Oyo State. The table shows that the mean score for male teachers is 28.76 while that of female teachers is 29.33. The values of the mean scores do not reveal an appreciable difference. Therefore, there is no significant difference between male and female teachers' attitude toward the use of LMS in Oyo

State ($df = 1115$; $t = -2.555$; $p = 0.73 > 0.05$). Hence, hypothesis 3 is not rejected.

Hypothesis 3:

H₀₃: There is no significant relationship between institutional support and attitudes of secondary school teachers toward the use of LMS in Oyo State.

Table 8: Summary of Pearson Product Moment Correlation Showing Influence of Institutional Support on the Teachers' Attitudes toward the Use of LMS

Variable	Mean	Std Dev	N	R	Sig.	Remark
Institutional Support	24.33	2.59	1117	.335	.001	Rejected
Teachers' Attitude	29.08	3.71				

Table 8 shows the influence of institutional support on the attitudes of secondary school teachers toward the use of LMS in Oyo State. The analysis demonstrates that institutional support has a significant and moderate positive influence on teachers' attitudes toward the use of LMS in secondary schools in Oyo State ($N = 1117$; $r = .335$; $p = .001 < 0.05$). Hence, hypothesis 4 is rejected. Increasing institutional support could enhance teachers' attitudes to use LMS in instructional practices in secondary schools in Oyo State.

4. Discussion of Findings

Based on the data collected and the results of the analysis done, based on the mean and standard deviation value of result in table 2, teachers' attitude towards the use of LMS in secondary schools result shows that the value of the weighted average 2.91 out of 4.00 maximum value obtainable which fall within the decision value for the positive which implies that attitude of secondary school teachers towards the use of LMS for teaching is positive. Even though teachers disagree that students are not active in using LMS that interfaces of LMS confuse them. This finding is contrary to Igwe, Olatunde, & Yusuff, (2023), who submitted that teachers are new to some teaching technologies and unable to use them to improve teaching and learning and that instructional resources are not available for teaching and learning in most school in Nigeria. This finding is in tandem with the findings of Jegede et al., (2007), who found a significant correlation between attitudes towards ICT and computer competence. By implication, secondary school teachers have positive attitude toward using LMS for teaching

The result shows, in table 3 and research hypothesis 1 in table 6, some variation in attitudes of teachers based on work experiences. The ANOVA result shows there is no significant difference in the attitudes of secondary school teachers towards the use of LMS based on their work experience. Therefore, the stated hypothesis is accepted. By implication, the work experience of teachers does not have any significant effect on their attitude toward using LMS for teaching. There may be other factors. This finding contradicts with Nelson, et al, (2019), Bariham, (2019), and

Saltan & Arshan, (2017), submitted that teachers with long years of experience may not be as technologically minded as their less experienced younger ones because they are comfortable using their teaching skills.

The result in table 4 shows that there is a difference in attitudes toward LMS use between male and female teachers with female showing slightly more favourable attitudes but the result of hypothesis 2 on table 7 shows there is no significant difference between male and female teachers' attitude towards the use of LMS which means the null hypothesis was accepted. This suggests that gender may not be a major determinant of teachers' attitude towards use of LMS for teaching. This study corroborates with research that often finds gender to be less inferential factors in the utilization of online instructional tools (Olorunmonu, 2024). Also, Al- Azawei, (2019), revealed that gender difference does not affect the strength of the relationship on perceived usefulness or perceived ease of use of LMS. The findings of this study contradict the previous study of MumPorehze Prier (2017), whose study showed that females have limited access to ICT than their male counterparts. Tam et al., (2020), indicated that male students have more positive view of ICT and utilize it to improve their learning. Many studies contradict each other on the matter of gender difference in ICT use, while some studies have shown differing results in that some claim benefits for females while some for males.

The result of research question 4 shows that there is a positive relationship between institutional support and secondary school teachers' attitude to the use of LMS in Oyo State. This suggests that institutional support is positively associated with secondary school teachers' attitudes towards LMS usage. Also, with hypothesis 3, the analysis demonstrates that institutional support has a significant and moderate positive influence on teachers' attitudes towards the use of LMS in secondary schools in Oyo state. By implication, increasing the school support by all the stakeholders involved with relevant technology materials and equipment could enhance teachers' attitudes to use LMS for instructional purposes. This is in support of Olawale (2024), who submitted that the level of institutional support plays significant role in teachers' TPACK self-efficacy level.

5. Conclusion

Based on the data collected and the results of the analysis done, this study concludes that secondary school teachers have positive attitude towards the use of LMS for teaching. It was observed that work experience and institutional support play more significant role in LMS adoption by secondary school teachers. To enhance the effectiveness of LMS adoption and utilization by secondary school teachers, all education stakeholders must adopt comprehensive approaches that combine robust systems, uninterrupted electricity, adequate training and substantial investments in technological infrastructure. This strategy will better align with teachers' needs and ensure more fruitful and widespread adoption of LMS for educational purposes.

6. Recommendations

Based on the findings and conclusions of this study, the following recommendations are made:

1. Future research should incorporate other variables such as qualification, motivation, accessibility and self-efficacy.
2. Research should be expanded to include various teacher populations and to ensure findings are broadly applicable and can inform widespread best practices.
3. Schools should invest in technological infrastructure to ensure all teachers have equal access to quality ICT facilities, addressing disparities related to school support.
4. Future research should focus on other moderating variables other than gender to make research robust such as Age, school ownership and rural and urban Area.
5. Research should focus on students as beneficiary of LMS rather than teachers only.

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