Attitude of Teachers Towards the Use of LMS for Teaching and Learning in Secondary Schools in Delta State

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Abstract

This research investigated teachers' perspectives on utilizing Learning Management Systems (LMS) for educational purposes in secondary schools in Delta State. The study was guided by one research question and a null hypothesis, employing a descriptive ex-post facto research design. The total population of the study consisted of 10,764 secondary school teachers in Delta State, with a sample size of 370 teachers selected using proportionate stratified and convenience sampling techniques. Data collection was done through a validated questionnaire endorsed by experts in Guidance and Counselling and Measurement and Evaluation fields. The instrument demonstrated high reliability with a Cronbach alpha coefficient of 0.84. The research question was addressed using mean and standard deviation analysis, while the hypothesis was tested using an independent samples t-test at a significance level of 0.05. Statistical analysis was conducted using the Statistical Package for Social Sciences (SPSS) version 26. Results indicated that teachers exhibited a positive attitude towards LMS use in teaching, and there was no significant difference in attitude between male and female teachers in Delta State's secondary schools. The study recommended that more training and support should be provided to teachers on how to use LMS effectively.

Keywords: attitude, teachers, use of LMS, teaching and learning

1. Introduction

The onset of the COVID-19 pandemic in 2019 resulted in significant repercussions, especially in the education sector, causing an unparalleled worldwide educational crisis. UNESCO highlighted that over 1.5 billion students globally were affected by the pandemic's consequences (UNESCO, 2020). The closure of schools and implementation of social distancing measures necessitated swift and innovative approaches to ensure the continuity of teaching and learning.

As governments and educational institutions grappled with the challenges posed by the pandemic, various emergency management mechanisms were adopted to mitigate the disruption to education. The closure of physical schools prompted a shift towards remote learning methodologies, utilizing digital platforms and technologies. Virtual classrooms, video conferencing tools, online educational resources, and e-learning platforms became the primary means of delivering instruction and engaging students. Educators had to adapt their teaching methodologies to suit the online environment, leveraging various digital tools and pedagogical strategies to maintain student engagement and foster effective learning experiences. They had to explore innovative approaches such as virtual labs, interactive simulations, and collaborative online projects to simulate hands-on learning experiences. One of such technologies is the learning management system (LMS).

According to Sharma and Vatta (2013), a learning management system (LMS) can be defined as a software program that operates on a server-based or cloud-based platform. This system serves as a centralized repository of information, encompassing details about users, courses, and content. Its primary purpose is to provide an environment where learning and teaching can take place, transcending the limitations of time and space. By utilizing a learning management system, educational institutions, organizations, and individuals can create virtual learning environments that facilitate efficient and effective educational experiences. The LMS acts as a digital hub where learners and instructors can interact, access course materials, engage in discussions, submit assignments, and receive feedback.

One of the key advantages of an LMS is its ability to overcome the constraints of traditional classroom settings. With an LMS, learners can access educational resources and participate in activities at their own convenience, eliminating the need for synchronous learning. This asynchronous nature of learning allows individuals to engage in self-paced learning, accommodating diverse schedules and geographical locations.

Furthermore, a learning management system serves as a comprehensive platform that houses various components necessary for successful online learning. It provides a structured framework for organizing and delivering course content, including multimedia materials, documents, quizzes, and assessments. The system also offers features for tracking learners' progress, generating reports, and facilitating communication between instructors and learners. The server-based or cloud-based nature of an LMS ensures that users can access the platform anytime and anywhere with an internet connection. Learners can log in to the system using their unique credentials, granting them access to their enrolled courses and associated resources. Instructors, on the other hand, can utilize the LMS to manage course content, track student performance, and communicate with learners.

Despite the significance of learning management systems (LMS) in the educational system, their effectiveness relies heavily on the attitudes of teachers, the perceived benefits, challenges, and the extent of implementation within the school system. Attitude plays a crucial role in shaping a teacher's approach to new technology. Teachers' attitudes, which can evolve through developing new perspectives on technology, determine whether they adopt or resist it and form beliefs that impact their actions. Teachers' attitudes are recognized as the primary determinant of the integration of new technology in schools to facilitate the acquisition of vital skills.

The existing literature highlights that the implementation of online learning platforms such as Learning Management Systems (LMS) is faced with various obstacles. For example, Danner and Pessu (cited in Alumona & Akinseinde, 2023) indicated that the integration of Information and Communication Technology (ICT) tools in higher education, like schools, is hindered by factors like limited computer access, internet connectivity issues, and insufficient competencies among students and educators. Similarly, Ndemo (2020) identified challenges in online teaching infrastructure, lack of experience and skills among teachers and students in using platforms like Moodle, varying levels of ICT proficiency, and complex home environments, all of which hinder the successful integration of technology in classrooms. It is noteworthy that even students with devices may lack the digital skills required for effective online learning. This underscores the critical role of teachers in motivating students and addressing the educational needs of the modern era, where teachers significantly influence the learning process's effectiveness. Therefore, the active engagement of teachers is essential for the successful utilization of LMS as an educational tool.

Consequently, there is a need for a study to explore teachers' perspectives on their attitudes towards LMS to identify potential perceptual disparities that hinder its effective adoption. Hence, the aim of the study is to examine the attitude of teachers towards the use of LMS for teaching and learning in secondary schools in Delta State.

1.1 Research Questions

1.   What is the attitude of teachers towards the use of LMS in teaching and learning in secondary schools in Delta State?

1.2 Hypotheses

1.   There is no significant difference between the attitude of male and female teachers towards the use of LMS in teaching and learning in secondary schools in Delta State

2. Method

The research utilized a descriptive ex-post facto research design and focused on teachers in public secondary schools in Delta State, where there are 477 public secondary schools with a total of 10,764 teachers. The study's sample size consisted of 370 teachers selected using proportionate stratified and convenience sampling techniques. Data collection was done

through a questionnaire comprising two sections: one for Demographic Data and the other for Attitude Towards the use of Learning Management System rating scale. The scale ranged from strongly disagree to strongly agree on a 4-point scale. The questionnaire underwent face and content validation by experts in Guidance and Counselling and Measurement and Evaluation, ensuring its validity.

To establish reliability, the questionnaire was tested on 50 teachers from secondary schools outside the study area, yielding a high Cronbach alpha reliability coefficient of 0.84. Researchers, assisted by three research assistants, administered the questionnaire directly to respondents after obtaining informed consent. The completed questionnaires were promptly collected for analysis. Descriptive and inferential statistics were used for data analysis, with mean and standard deviation addressing the research question, while an independent samples t-test was employed to test the hypothesis at a significance level of 0.05 using the Statistical Package for Social Sciences (SPSS) version 26.

3. Results

Research Question 1: What is the attitude of teachers towards the use of LMS in teaching and learning in secondary schools in Delta State?

Table 1. Mean Rating of the Attitude of Teachers Towards the Use of LMS in Teaching and Learning in Secondary Schools in Delta State

S/N	Statement	Mean	SD	Remark
1	I like to get more training on how to use Learning Management System (LMS)	3.11	0.92	Positive
2	LMS helps the teacher to organize his subjects	3.09	0.90	Positive
3	I discuss with my colleagues about how to use the LMS	3.07	0.82	Positive
4	I feel that the use of LMS facilitates the teaching process	3.05	0.92	Positive
5	Using LMS Increases the interaction between teachers and students	3.04	0.87	Positive
6	Using LMS provides interesting learning	3.03	0.87	Positive
7	I see that LMS reduces the role of the teacher in the classroom and increases the role of the student	2.99	0.98	Positive
8	LMS leads to a change in the lesson practices	2.99	0.97	Positive
9	Using LMS contribute to the clarity of the content of scientific material	2.99	0.92	Positive
10	LMS contributes in integrate the educational resources effectively	2.98	0.99	Positive
11	Using LMS offers a great benefit in teaching	2.98	0.93	Positive
12	LMS offers better results than the normal education and practice	2.97	0.93	Positive
13	LMS helps the learner to learn without coming to the university	2.97	0.93	Positive
14	I expect that - in the future - the use of LMS will become a necessity for all teachers	2.96	0.98	Positive
15	The learning by using the LMS will gradually replace the normal Education	2.94	0.95	Positive
16	I feel excited when someone talks to me about the use of LMS in teaching	2.93	0.93	Positive
17	I asked for help from others in case I face a problem while I am using the LMS	2.92	0.89	Positive

18	LMS increases the flexibility in educational institutions systems	2.92	0.94	Positive
19	Using LMS increase students' achievement	2.91	0.93	Positive
20	LMS increases the capacity of the educational institutions	2.90	0.96	Positive
21	Using LMS facilitates teachers' role	2.88	0.96	Positive
22	LMS helps to achieve the effective and active teaching	2.86	1.02	Positive
23	LMS makes it easy for teachers to provide students with individual learning environment	2.80	0.99	Positive
24	LMS helps to deliver the information to students quickly	2.38	1.01	Negative
25	LMS encourages change in the competitive criteria of the educational environment	2.31	0.89	Negative
26	Learning by using LMS increases the chances for cooperation between educational institutions	2.26	0.92	Negative
	Average Mean	**2.89**	**0.94**	**Positive**

Criterion Mean = **2.50**

Table 1 displays the average rating of teachers' attitudes towards utilizing Learning Management Systems (LMS) for teaching and learning in secondary schools in Delta State. The mean scores for teachers varied between 2.26 and 3.11, with an overall average mean of 2.89. The benchmark mean set for evaluation is 2.50, indicating that teachers exhibited a positive attitude towards incorporating LMS in teaching and learning activities in secondary schools in Delta State.

Hypothesis 1: There is no significant difference between the attitude of male and female teachers towards the use of LMS in teaching and learning in secondary schools in Delta State

Table 2. t-test Analysis of the Difference between the Attitude of Male and Female Teachers Towards the Use of LMS in Teaching and Learning in Secondary Schools in Delta State

Sex	*n*	Mean	*SD*	*df*	*t*	*P*	Remark
Male	197	2.90	0.47	367	0.289	0.773	Not Significant
Female	172	2.89	0.46				

$\alpha = 0.05$

Table 2 presents the t-test analysis comparing the attitudes of male and female teachers towards utilizing Learning Management Systems (LMS) for teaching and learning in secondary schools in Delta State. The results indicate that males (M = 2.90, SD = 0.47) and females (M = 2.89, SD = 0.46); t (367) = 0.289, p > 0.05 at the significance level. Consequently, the null hypothesis is upheld, signifying that there is no significant distinction between the attitudes of male and female teachers regarding the use of LMS in teaching and learning in secondary schools in Delta State.

4. Discussion

The first finding revealed that the teachers had positive attitude towards the use of LMS in teaching and learning in secondary schools in Delta State. A corresponding hypothesis showed that there is no significant difference between the attitude of male and female teachers towards the use of LMS in teaching and learning in secondary schools in Delta State. These findings are encouraging. They suggest that teachers are open to the use of LMS in the classroom, and that they see the potential benefits of this approach. The fact that teachers appear to be positive about the use of LMS is likely due to a number of factors. For example, teachers are likely to have had training in how to use LMS in the classroom, and they are likely to be aware of the benefits of using LMS to improve learning. Additionally, teachers may be motivated to use LMS because they see it as a way to improve their own teaching practices and effectiveness.

The findings discussed align with various other studies in the field. For example, Faturoti (2022) discovered that teachers exhibited favourable attitudes towards integrating Information and Communication Technology (ICT) in the classroom setting. Additionally, Agbele and Oyelade (2020) observed similar positive attitudes among teachers towards ICT utilization, particularly during the COVID-19 lockdown period. Similarly, Coccoli (2017) conducted research that corroborated these findings, indicating a general positivity among teachers regarding the incorporation of ICT tools and resources into their teaching practices. These studies collectively underscore the widespread recognition among educators of the benefits and potential of ICT in enhancing teaching and learning experiences. The consistent positivity observed across these studies suggests a broader trend among educators towards embracing technology-enhanced learning approaches.

5. Conclusion and Recommendation

Based on the findings of the study, it can be concluded that teachers in Delta State are generally supportive of the use of LMS in teaching and learning, but they perceive the challenges of implementation to be high. This indicates a positive attitude towards integrating technology into education, highlighting the potential benefits of LMS in enhancing the teaching and learning experience. The research underscores the importance of understanding teachers' perspectives and the practical obstacles they face when adopting new educational technologies. By recognizing these challenges, educators and policymakers can address issues related to training, infrastructure, and support to facilitate a smoother integration of LMS in educational settings. Ultimately, this research sheds light on the complexities of technology adoption in education and emphasizes the need for strategic planning and support to maximize the benefits of LMS implementation.

On the basis of the findings and conclusion drawn, the following recommendations were made:

1. Providing more training and support to teachers on how to use LMS effectively.

2. Investing in the necessary infrastructure and resources to support LMS implementation.

3. Developing clear and consistent guidelines for the use of LMS in schools.

4. Engaging with stakeholders, such as teachers, students, and parents, to get their feedback on LMS implementation and make necessary adjustments.

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