Assessment of Knowledge, Attitude and Skills of Students on Integrated Learning Management System in Ekiti State Tertiary Institutions

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ABSTRACT

The study investigated the assessment of knowledge, attitude, and skills of students in integrated learning management systems in tertiary institutions at Ekiti State. A descriptive study was adopted for this study. The population for the study consisted of all State University in Ekiti State, while the sample size consisted 200 undergraduate accounting students and 200 students were selected in two selected institutions via purposive and simple random sampling technique. Students' skills were tested through practical experience in the class to ascertain their competency skills. The research instrument used for the study was a questionnaire on Knowledge, Attitude and Skills (KAS). Face and content validity of the instrument were ensured by experts in Educational Technology and ICT, while test-retest was adopted to ascertain the reliability of the instrument; the test was carried out in a school of the same characteristics that are not part of the sample to ensure the accuracy of the instrument items. A reliability coefficient of 0.75 was obtained. One null hypothesis was raised and tested at 0.05 level of significance. The data collected was analysed using Analysis of Variance. The study's findings revealed a significant relationship between the level of knowledge, skills and attitude of students towards integrated learning Management Systems. The study revealed that the knowledge of students significantly influences the attitude of students on virtual learning. It was recommended that training students on virtual learning should be encouraged to develop a good attitude toward the use of virtual learning for teaching delivery. It was also recommended that internet facilities be provided for the students to develop more interest in virtual learning. Students should be encouraged to get Android phones for the benefit of receiving lectures through virtual learning. Lecturers should encourage their students on the need for virtual learning in tertiary institutions.

Keywords: Knowledge, Attitude, Skills, virtual learning and Assessment

INTRODUCTION

The introduction of digital technology in education is observed to have transformed the method used for teaching and learning in higher education institutions. An integrated learning management system (ILMS) is an essential tool that provides a centralised platform for managing educational resources, facilitating communication, and enhancing overall learning experiences. In Ekiti State, the adoption of ILMS in tertiary institutions represents a significant shift towards modernised education. Accounting as a course requires a proper understanding of online tools such as LMS and other virtual tools such as Google Meet, zoom and Microsoft Teams. Therefore, An Integrated Learning Management System (ILMS) extends traditional LMS features by incorporating real-time virtual learning tools such as Google Meet, Zoom, and Microsoft Teams, allowing for synchronous and asynchronous learning

Based on the researcher's observation, ILMS require skills in both virtual and non-virtual tools. An Integrated Learning Management System (ILMS) combines a traditional LMS with virtual learning tools to enhance instructional delivery. Using LMS alone may not be sufficient for optimal learning outcomes. Integrating LMS

with other virtual tools enhances interaction and makes teaching more engaging. However, integrating assessment tools within an LMS allows for creating quizzes, assignments, and exams that can be graded automatically, providing immediate feedback to students. Additionally, LMS platforms often offer analytics and reporting features, enabling lecturers to monitor student progress, identify areas of improvement, and customize instruction to meet individual needs. Rouadi and Anouti (2020) opine that students learn faster through online learning than in a traditional classroom setting because students can learn at their own pace, going back and re-reading, skipping or accelerating through concepts as they choose.

As students require adequate skills to operate LMS and engage in virtual learning during the learning process, lecturers also need sufficient knowledge to deliver adequate instructions in teaching accounting. Bakia, Shear, Toyama and Lasseter (2012) emphasized that adequate knowledge is vital for lecturers in teaching. LMS allows lecturers to directly add students to the platform, create learning materials and upload them, grade students' work, receive feedback, and access students' performance. Setting up classrooms and classwork can be done in a minute, and these activities appear on students' calendars, providing a means for accessible communication.

The attitudinal disposition of students towards learning with ILMS may be positive or negative. However, students' attitude is a factor in the effective use of the learning management system; students may either have positive or negative attitudes towards the use of ILMS. Munasinghe and Wijewardana (2016) found that students generally have a positive attitude toward LMS, influenced by perceived usefulness and ease of use. This suggests that ILMS adoption in accounting education could be more effective if students perceive its benefits and ease of integration. A positive attitude towards integrating LMS in instructional delivery may develop self-study habits, strengthen LMS and increase learning competence (Omotunde, 2015). However, lecturers' attitudes toward using an LMS could vary depending on their technology experience and teaching preferences. Some lecturers may be more open to using an LMS and see it as a valuable tool for delivering course content and engaging with students. They may appreciate the benefits of using an LMS, such as providing timely feedback, tracking student progress, and facilitating online discussions. Beyond students' attitudes, lecturers' perceptions also play a crucial role in ILMS adoption. Research suggests that instructors with prior technology experience are more inclined to integrate LMS into their teaching (El-Gayar, Moran, & Hawkes, 2011)

Traditional methods of teaching, while effective, may face challenges such as limited access to resources, communication barriers, and difficulties in tracking student progress. Hu (2024) asserts that in traditional teaching methods, students may need to develop essential skills such as critical thinking, time management and research skills. Traditional methods often focus on memorization and passive learning, which may limit student's ability to apply knowledge in real-world situations.

The researcher observed that some reputable universities in southwest Nigeria have shifted towards adopting integrated LMS in various academic disciplines, including accounting. This shift is driven by recognizing the potential benefit of such technology for undergraduate accounting students. Ekiti State has a vibrant academic environment, particularly in undergraduate accounting. Universities in the state strive to provide quality education to equip students with the necessary knowledge and skills for the accounting profession. However, enhancing the learning experience has become a priority, leading to exploring innovative tools like Integrated LMS.

During the COVID-19 pandemic, traditional face-to-face instruction became unsustainable, particularly in courses requiring practical application, such as accounting. The shift to ILMS enabled universities to continue instructional delivery by integrating synchronous and asynchronous tools, bridging gaps in knowledge, critical thinking, and technological competence. Not all students were able to meet up with the face-to-face learning. Students taught with this approach were observed to have deficiencies in some learning outcomes in Accounting, such as knowledge of business principles, critical thinking and problem-solving skills, teamwork and collaboration, technological competence and a lifelong learning mindset. The deficiency in accounting learning outcomes has also necessitated using an integrated learning management system, which would help bring about the desired positive learning outcomes in financial accounting.

Objective of the Study

The study aims to assess the knowledge, attitude and skills of accounting students in Tertiary institutions in Ekiti State regarding the use of Integrated Learning Management System (ILMS). The objectives of the study also aim to:

1. evaluate the knowledge of accounting students towards the use of ILMS
2. assess the students' attitude to the use of ILMS
3. examine the proficiency of students in relation to ILMS in order to identify their strengths, flaws, and areas that require improvement, this would be done through self-reported.

Statement of the Problem

Despite the increasing adoption of online learning tools in tertiary institutions in Ekiti State, there remains a significant challenge in ensuring that students effectively utilize these systems to their fullest potential. Preliminary observations suggest varying levels of knowledge, attitude, and skills among students, which can impact their ability to engage with and benefit from ILMS. Specific issues include gaps in understanding advanced features, mixed attitudes towards the technology, and disparities in practical skills necessary for efficient use. 'This study seeks to identify and address these issues by assessing the current state of students' knowledge, attitudes, and skills regarding ILMS. By doing so, the research aims to provide actionable insights for enhancing the effectiveness of ILMS implementation and fostering a more conducive learning environment in tertiary institutions in Ekiti State.

The COVID-19 pandemic accelerated the adoption of ILMS, revealing both opportunities and challenges in students' engagement with online learning platforms. Attitudinal disposition of students to the effective use of different LMS tools for online learning led to the use of ILMS where students can choose their desire tools for learning. Low skill in one tool may not be the same in other tools. Therefore, to strengthen the efficient use of LMS, Zoom and Google Meet, the study needs to examine students' knowledge, attitudes and skills toward the effective usage of ILMS.

Research Questions

1. What is the level of knowledge of Accounting students in Ekiti State Tertiary Institutions regarding the Integrated Learning Management system (ILMS)
2. What are the attitudes of students towards the use of the integrated learning Management System for learning activities?
3. What technical and cognitive skills do students possess for effectively utilizing the integrated Learning Management System?

Research Hypotheses

1. There is no significant correlation between undergraduate accounting students' knowledge, attitude and skills in using ILMS for learning Financial Accounting in tertiary institutions in Ekiti State.

LITERATURE REVIEW

The learning management system is a robust platform that can accommodate other online applications for teaching and delivery. Singh, West and Colavizza. (2021) define LMS as application software that can track, document, report, and deliver educational courses, training programs, or learning and development programs. VLE, on the other hand, is a platform that gives online access to educational materials and tools, such as interactive multimedia resources, discussion forums, and assessment tools (Beetham & Sharpe, 2013). Integrating LMS and VLE technologies can provide several benefits for education, including increased student engagement, improved learning outcomes, and enhanced collaboration and communication (Gulati, 2019).

However, implementing integrated LMS technologies successfully depends on several factors, including institutional support, faculty training, and effective pedagogical strategies (Oliver & Herrington, 2001).

Institutions must provide the necessary infrastructure and support to ensure instructors can effectively use the integrated technologies. Faculty training is also essential to ensure that instructors are comfortable using the technologies and can effectively integrate them into their courses. Finally, effective pedagogical strategies, such as incorporating collaborative learning activities and providing frequent feedback, can also enhance the benefits of integrated LMS and VLE technologies (Garrison & Kanuka, 2004).

Learning nowadays can be imparted in different forms apart from physical or face-face means of teaching and learning delivery. The presence of the internet has significantly changed the atmosphere of the educational system. However, a learning management system is a platform that can help users create, share, administer, and track online lessons and tests. Therefore, learning management systems (LMS) are the most relevant and suited to meet the demands of higher education settings because of their integrated suite platform. Evale (2017).supported the claim that LMS has high global demand as an alternative learning pathway in both education and industry. These are emerging as some of the most significant initiatives and technologies for enhancing teaching and learning. Evale (2017) further describe LMS as a platform with the attributes of students' attendance, grades, assignment and chatting and predictors in determining students' performance in Java programming.

An integrated LMS offers lecturers tools for centralized course management, efficient content delivery, communication and collaboration, assessment and grading, analytics and reporting, virtual integration, as well as opportunities for personalized learning. These features enable lecturers to enhance their teaching methods, engage students more effectively, and improve the overall learning experience.
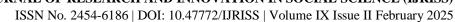
Students Competency Skills in Learning Accounting with Integrated LMS

For students to have adequate competency skills required, they must better understand the subject matter. Competency skills play a crucial role in accounting as they equip students with the necessary knowledge, abilities, and attitudes to succeed professionally. With integrated LMS, competency-based learning becomes more effective and efficient. According to Adeyemo (2023), An integrated LMS provides a platform for students to develop and enhance various competencies relevant to business education, such as critical thinking, problem-solving, communication, teamwork, leadership, and digital literacy.

Students' Attitude towards online learning

Johnson, Adams Becker, Estrada, and Freeman (2014) investigate students' attitudes towards LMSs. A survey was conducted among 300 undergraduate students from various faculties at a university in the United States. The survey asked people how often they used the LMS, how useful they thought it was, how easy it was, and how happy they were with it overall. The data were analyzed using descriptive of the survey type and regression analysis. The results revealed that the majority of students used the LMS frequently (M = 4.23, SD = 0.88) and found it to be useful (M = 3.95, SD = 0.92) and easy to use (M = 4.17, SD = 0.86). Furthermore, the overall satisfaction with the LMS was high (M = 4.08, SD = 0.90). Regression analysis revealed that frequency of use and ease of service were significant predictors of overall satisfaction with the LMS (p < .001). The findings of this study indicate that students have a positive attitude toward LMSs and perceive them to be useful and easy to use. The high level of satisfaction with the LMS suggests that it is meeting the needs of students and fulfilling its intended purpose. Educational institutions can use the results to improve the design and implementation of LMSs. The study is supported by Afolabi, and Aragbaye (2022), who found that students had a positive attitude toward using LMS and virtual learning.

Aboderin (2015) sought to find out the Attitudes of students toward e-learning. The study examined the various challenges of e-learning in NOUN. Also, the studies investigated the prospects of e-learning and the availability of e-learning facilities and determined the ICT competence of NOUN students. The design of the study is a descriptive survey type. The sample for the study consisted of 250 students randomly selected from all the faculties in the National Open University of Nigeria, Akure Study Center. Fifty students were drawn from each faculty using a simple random sampling technique, giving 250 students (respondents). A Cronbach

alpha statistics technique was employed to ensure the instrument's reliability, and a reliability coefficient of 0.84 was obtained. Aboderin (2015) found that NOUN students are optimistic about using e-learning.

Students Proficiency Skills in Learning Accounting with Integrated LMS

Adequate student proficiency will help to better understand the pedagogical approach in an online learning process. In a technologically advanced university, students are expected to be proficient in various online learning technologies that will help with teaching and learning outside the four walls of the classroom. Students' proficiency in handling integrated LMS software and the necessary device will reduce the lecturer's stress. Although technology alone does not create change (Yuen, Law, & Wong, 2003), For integrated LMS and VL to be established, attention must be paid to managing the appropriate physical infrastructure, human resources, software application and financial resources. When deciding on the required infrastructure for integrated LMS, higher institutions of learning may need to consult with vendors carefully since meeting the needs of students and teaching staff at all times necessitates delivering enough capacity and dependability.

The main elements of infrastructure and facilities include campus-wide wireless networks, a technologically advanced learning commons, and digital learning device (laptop/tablet/mobile) schemes for lecturers and students that may encourage a bring-your-own-device approach and facilitate individualized and self-paced learning as well as group collaboration (Difilipo, 2013). Furthermore, infrastructure and facilities must be updated regularly to meet the evolving demands of students and lecturers in teaching and learning.

Challenges Facing Students in using Online Learning Tools

The COVID-19 pandemic, monetary policy, government policy, insecurity, and other recent economic crises have forced the immediate implementation of online learning in some tertiary institutions. However, more is needed to know about its effectiveness and the challenges faced by the students. Basar, Mansor Jamaludin, and Alias (2021) investigated the effectiveness of online learning and the challenges it presents to pupils' learning abilities. This study employed a case study design using a survey questionnaire administered to 99 students from a secondary school in Jasin, Melaka. Data were analyzed descriptively (calculation of percentage and frequency). Generally, the findings indicated that the students have computers or smartphones and an internet connection at home. Besides, it was found that the ability and comfortability to use computers was high (>93%). However, their motivation in online learning was low (41.5%), and their ability to work in a group was moderate (66.7%). They also agreed that conventional teaching (face-to-face) was necessary for their learning (98%)

RESEARCH METHODOLOGY

The study adopted a descriptive survey research design. The population for the study consisted of all State Universities in Ekiti State, while the sample size consisted 200 undergraduate accounting students and 200 students were selected in two selected institutions via purposive and simple random sampling technique. The skill of students were tested through practical experience in the class to ascertain their competency skills. The survey-based evaluation was given to the students. The students skill was tested in the area of zoom application, google meet and LMS. The research instrument used for the study was questionnaire on Knowledge, Attitude and Skills (KAS). Face and content validity of the instrument were ensured by experts in Educational Technology and ICT while test-retest was adopted to ascertain the reliability of the instrument, the test was carried out in a school of the same characteristics that are not part of the sample to ensure the accuracy of the instrument items. A reliability coefficient of 0.75 was obtained. The data collected were analysed using descriptive and inferential statistics while the two hypotheses were subjected to Analysis of Variance (ANOVA). All the hypotheses were tested at a 0.05 alpha level.

RESULTS

Research Question 1: What is the level of knowledge of Accounting students in Ekiti State Tertiary Institutions regarding the Integrated Learning Management system (ILMS)

Table 1: Knowledge of Accounting Students in Ekiti State Tertiary Institutions regarding the ILMS

S/N	Items	Mean	SD
1	I am familiar with the basic features of the Integrated Learning Management System (ILMS), such as downloading course materials, submitting assignments.	2.91	1.13
2	I understand how to navigate through the ILMS platform to locate course-related resources.	2.84	1.06
3	I can independently resolve minor issues (e.g., login problems or file upload errors) while using the ILMS.	2.73	1.05
4	I am aware of how to participate in online discussions and forums on the ILMS platform.	2.90	1.14
5	I am knowledgeable about the benefits of using the ILMS to enhance my learning experience.	3.18	1.04
	Average Mean	**2.91**	

Mean Cut-off: 2.5

The table employed the cutoff mean as the benchmark against the average mean score for the student's knowledge of Financial Accounting in Tertiary Institutions in Ekiti State. The average mean score of 2.91 is higher than the cutoff mean of 2.5. The result shows that students have adequate knowledge of using an integrated learning management system to learn Financial Accounting in Ekiti State Tertiary Institutions.

Research Question 2: What are the attitudes of students towards the use of the integrated learning Management System for learning activities?

Table 2: Attitude of Students towards the use of ILMS for Learning Activities

S/N	Details	Mean	SD
6	Learning financial accounting through ILMS is frustrating	2.11	1.03
7	I enjoy using the ILMS platform to access course materials and submit assignments.	2.98	1.07
8	I find the ILMS platform easy to use and navigate for my academic tasks.	3.08	0.99
9	The ILMS is an effective tool for enhancing communication between students and lecturers.	3.49	0.72
10	I am motivated to use ILMS for all my learning activities (e.g., attending online lectures and participating in discussions).	2.99	1.09
	Average Mean	**2.93**	

Mean Cut-off: 2.5

The table employed cutoff mean as the benchmark against average mean score for the student's attitude towards the use of ILMS for learning Financial Accounting in Ekiti State tertiary Institutions. The average mean score of 2.93 is higher than the cutoff means of 2.5. The result shows that student have positive attitude towards using combination of other tools with LMS such as Zoom and Google Meet to learn Financial Accounting in Ekiti State Tertiary Institutions. Although, going by item 6, the mean score is lover than the cut-off mean which shows that some students shows negative attitude towards learning financial accounting because of their disposition that learning financial accounting with LMS is frustrating.

Research Question 3: What skills do students possess to effectively utilizing the integrated Learning Management System?

Table 3: Skills Possess by the students to effectively utilizing the integrated Learning Management System

S/N	Details	Mean	SD
11	I can log in to the ILMS platform and access my course materials without assistance.	3.59	0.78
12	I can easily upload assignments, documents, and other materials to the ILMS platform.	3.06	1.06
13	I am comfortable using the discussion forums and chat features on ILMS for academic communication.	2.53	1.08
14	I know how to use the ILMS to check my grades, feedback, and academic progress.	2.15	1.13
15	I can troubleshoot fundamental issues (e.g., login problems and file format issues) while using the ILMS independently.	2.19	1.14
	Average Mean	**2.70**	

Mean Cut-off: 2.5

The table employed cutoff mean as the benchmark against average mean score for the skills possess by the students to effectively utilize the integrated learning management system to learning financial accounting in Ekiti State Tertiary institutions. The average mean score of 2.70 is higher than the cut-off means of 2.5. The result shows that student generally have high skill level to learn financial accounting. The highest mean (**3.59**) shows that most students can log in and access course materials without assistance. However, lower mean scores on checking grades and academic progress (2.15) and troubleshooting issues (2.19) indicate that students struggle with advanced ILMS features.

Hypotheses Testing

Hypothesis 1: There is no significant correlation in the level of knowledge, skills and attitude of students towards Integrated Learning Management system (ILMS)

Table 4: Relationship in the level of knowledge, skills and attitude of students towards Integrated Learning Management system (ILMS

	Attitude	**Knowledge**	**Skills**
Attitude	1		
Knowledge	.960[*]	1	
Skills	.966[*]	.985[*]	1

*. Correlation is significant at the 0.05 level (2-tailed).

Table 1 shows correlation in the level of knowledge, skills and attitude of students towards Integrated Learning Management system (ILMS). The result indicated that there is a strong and statistically significant relationship among students' attitudes, knowledge, and skills towards the Integrated Learning Management System (ILMS). The correlation coefficients between attitude and knowledge (0.960), attitude and skills (0.966), and knowledge and skills (0.985) all indicate a very high positive correlation at 0.05 level of significance. The null hypothesis is not accepted, which implies that an increase in one variable is associated with a corresponding increase in the others. The above analysis underscore the interdependence of attitude, knowledge, and skills in the effective adoption and utilization of ILMS. Since the p-values (0.000) are significant at the 0.05 level, this confirms that knowledge, attitude, and skills are strongly interconnected, students who are knowledgeable about ILMS are also more likely to develop positive attitudes and better skills for its utilization.

DISCUSSION

The study revealed that students had adequate knowledge about using ILMS learning financial accounting in Ekiti State tertiary Institutions. This finding was in consonance with the study of Bakia, Shear, Toyama and Lasseter (2012) who emphasized that students and lecturers who have adequate knowledge would be able to directly add students to the platform, create learning materials and upload them, grade students' work, receive feedback, and access students' performance

The study also revealed that the students' attitude towards using ILMS was positive. This is in line with the study of Afolabi, and Aragbaye (2022), who found that students had a positive attitude toward using LMS and virtual learning. Also, the result of Johnson, Adams Becker, Estrada, and Freeman (2014) reported that the majority of students used the LMS frequently

The study further revealed that students had high level of skill to learn financial accounting with ILMS. This is supported with the findings of Adeyemo (2023) that an integrated LMS provides a platform for students to develop and enhance various competencies relevant to business education, such as critical thinking, problem-solving, communication, teamwork, leadership, and digital literacy

The study found that there is a significant relationship in the level of knowledge, skills and attitude of students towards integrated learning Management System. The result revealed that there is a strong and statistically significant relationship among students' attitude, knowledge and skills towards integrated learning management system. This is consistent with the study of Arbaugh (2000).that knowledge, skills and attitude influence the students engagement and performance in online learning systems.

CONCLUSION

Sequel to the findings of this study, it was concluded that;

1. students have a good understanding of ILMS but need support in resolving technical issues
2. students have positive attitude towards ILMS, some experience frustration, which could impact engagement levels.
3. students possess adequate skills for basic ILMS usage but require training on advanced features like troubleshooting and grade tracking.
4. there was a significant relationship in the level of knowledge, skills and attitude of students towards integrated learning Management System. an increase in one variable is associated with a corresponding increase in the others. This underscore the interdependence of attitude, knowledge, and skills in the effective adoption and utilization of ILMS

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made.

1. Conduct training workshops on ILMS troubleshooting and advanced functionalities
2. Provide technical support to students struggling with navigation issues
3. Develop interactive learning strategies to reduce frustration with ILMS based learning
4. Encourage integration of LMS to enhance students engagement.

Contribution to Knowledge

1. This research has contributed significantly to the enhancement of Learning Management System
2. The study also helped to identify the level of knowledge, skill and attitude of undergraduate accounting in learning financial accounting..
3. This research has significantly contributed to the study by bridging the gap between traditional system of teaching delivery and contemporary teaching method.
4. The research can provide empirical data on the assessment of knowledge, skills and attiude of students on integrated learning management system in Ekiti State Tertiary Institutions.

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