

UTILIZATION OF ACADEMIC LEARNING MANAGEMENT SYSTEM TO ENHANCING
TEACHING AND LEARNING IN FEDERAL COLLEGES OF EDUCATION IN
NORTHWEST ZONE OF NIGERIA

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The study Assessed the Utilization of Academic Learning Management System in enhancing Teaching and Learning in Federal Colleges of Education in North West Zone, Nigeria. The study had two objectives. In line with the objectives, two research questions and two hypotheses were formulated and tested. The study adopted survey research design with population of 5,995 (five thousand, nine hundred and ninety-five) respondents which comprised 3,625 (three thousand six hundred and twenty-five) lecturers, and 2,370 (two thousand three hundred and seventy) senior. A sample size of three hundred and sixty-five (365) participants, consisting of two hundred and twenty-one lecturers (221) and one hundred and forty-four (144) senior management staff were used in the study. Data was collected through a self-structured questionnaire tagged “Utilization of Academic Learning Management System Questionnaire (UALMSQ)”. The result of the pilot study conducted showed a reliability value of 0.82. Data collected in the study was analysed using descriptive statistics while Chi-square statistical method was used to test the null hypotheses at 0.05 level of significance. The findings of the study among others revealed that the Utilization of Academic Learning Management System for Course Management is poor in Federal Colleges of Education in North West Zone, Nigeria. Based on the findings of the study, it was recommended among others that: Colleges of Education staff across board should be trained on the effective use and application of Academic Learning Management System tools in consonance with the goals and objectives of the education system through strategic adherence to innovation.

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Introduction

Technology has changed society in the 21st century as much as the industrial revolution changed society in the eighteenth and nineteenth centuries. The evolution of education has been significantly influenced by technological advancements, leading to the rise of online and remote learning as transformative

modalities. The history of online and remote learning dates back over a century, with correspondence courses and radio broadcasts playing a role in the 20th century (Olan, F., Arakpogun, E. O., Jayawickrama, U., Suklan, J., & Liu, S. 2022). Technological advancements such as internet connectivity, multimedia content, digital devices, Learning

Management Systems (LMS), and Artificial Intelligence (AI) have driven the shift, making learning more accessible to millions worldwide (Olan et al., 2022).

Higher institutions around the world have increasingly adopted technology and the internet as tools for teaching, curriculum development, staff development, and student learning (Usluel in Okeke, G. C. 2021). They are extensively using technology and the internet to develop alternative options for delivering courses to students, a task that entails guaranteeing the effective use of technologies in facilitating communication and activities that support education (Al-Khalifa, H. S. , 2010). Employing such innovations ensures that the learning process continues to move forward, regardless of where or when it occurs. Given that the internet is an excellent information source, educators can use specific web-based applications, such as academic learning management systems (ALMS), as teaching resources.

These applications, which are often termed e-learning platforms, enable lecturers to provide students with different materials and to interact with them in real time even when they are not located in the same physical space. This platform also allows lecturers to track the evolution of the learning process and monitor student performance on specific tasks (Martín-Blas & Serrano-Fernández, 2009). In recent years, education institutions around the world have become increasingly interested in digital learning to meet the growing student population, provide a broad and fast information base, and open up other areas of communication between students and teachers and among students themselves, on the other hand, through the use of technology (Khaddash & Al-Hadhrami, 2006).

Colleges of Education in Nigeria seem not to have seamlessly integrated Academic Learning Management Systems (ALMS) to enhance teaching and learning. ALMS, in its optimal utilization, offers a dynamic platform for collaborative learning, efficient course management, and objective assessment (Okeke, G. C. 2021). However, the current situation presents a stark contrast. Despite the global momentum toward digital education, there exists a significant gap in the awareness, availability, and utilization of ALMS in Nigerian Colleges of Education especially in the North West Zone, Nigeria.

Similarly, Ajemba, H. E., Ahmed, F. M., Ogunode, N. J., & OlatundeAiyedun, T. G. (2021) stated that the quality of education a student receives largely depends on the availability of quality digital learning resources provided, thus, in the recent times, students learn fast when digital tools are incorporated in the implementation of the teaching. The availability and utilization of ALMS are crucial in today's teacher education (Matazu, S. S., 2022). Over time, measures have been initiated to address this issue, including national policies advocating for technology integration in education. However, the persistence of the problem suggests that these efforts have not translated into widespread awareness, utilization and adoption at the grassroots level. The challenge according to Yamani and Elsigini (2021) is not merely technological but extends to issues of awareness among educators, inadequate infrastructure, and varying levels of digital literacy.

The consequences of this underutilization are profound. Colleges of Education continue to grapple with inefficient course management, limited opportunities for interactive learning, and a reliance on

traditional assessment methods. The gap between the ideal and the current state hinders the realization of the full potential of technology in education, impacting the quality of teacher training and, consequently, the overall educational system.

The mode of learning in educational sector is changing, given that the growth of technology has dramatically reshaped the teaching and learning processes. Technology integration has become an essential part of learning and teaching, and most especially, digital learning has become a key factor in the teaching field (Alkhalaf et al., 2012). The integration of ICT in teaching has opened new horizons for teachers to have more interactive and learner-centered classroom environment. Academic learning management systems (ALMS) are computer programmes that integrate functions for teaching, evaluation and administration of courses. ALMS have many features which include sharing of documents, discussion board, assessments, grade book and chat room. ALMS is increasing in higher education especially in developed countries, but many lecturers in developing countries like Nigeria, especially in North Western Zone, Nigeria state use only the parts or functions that replace older techniques for reproducing and distributing documents.

This research is prompted by the urgent need to bridge this gap and address the persistent challenges in the awareness and utilization of ALMS. The existing literature lacks a comprehensive understanding of the specific factors hindering the effective integration of ALMS in Nigerian Colleges of Education. By identifying and addressing these factors, the research aims to contribute not only to the academic discourse on educational technology but also to the practical

improvement of teaching and learning in Nigeria's teacher training institutions.

Assessment has a rich history dating back to ancient civilizations. The Chinese civil service exams, initiated during the Han Dynasty, are among the earliest examples of formalized assessments. In the Western world, assessment practices have evolved from oral exams in Ancient Greece to written examinations in medieval universities. The assessment landscape has witnessed significant shifts, reflecting changes in educational philosophy and pedagogy. Bloom (1956), a renowned educational psychologist, introduced Bloom's Taxonomy, a hierarchical framework classifying educational objectives. Assessment, according to Bloom, serves to evaluate cognitive skills ranging from simple recall to complex synthesis and evaluation

Marzano (2006), an educational researcher, emphasizes the formative aspect of assessment in his work. Assessment, according to Marzano, should be an integral part of the teaching and learning process, providing ongoing feedback to both educators and students. Wiggins (1993), an influential educational theorist, emphasizes the role of assessment in promoting understanding. He introduced the concept of "backwards design," where assessment is an integral part of the curriculum development process, ensuring alignment with learning objectives. Black and Wiliam (1998), in their seminal work on formative assessment, highlight the importance of ongoing, classroom-based assessments in improving learning outcomes. They argue that assessment should not only measure but also enhance learning. Stiggins (2002), a prominent figure in assessment for learning, defines assessment as "the process of gathering evidence of student learning to inform instructional decisions."

The concept of utilization, within the broader context of knowledge and information, has roots in early philosophical and scientific inquiries. Ancient scholars, such as Aristotle and Plato, emphasized the practical application of knowledge for societal benefit. Over time, this notion has evolved, gaining prominence in various fields, including education, management, and research. Frost (2007), a scholar in the field of organizational behaviour, defined utilization as the integration of knowledge into organizational practices. He highlighted the dynamic nature of utilization, emphasizing that it involves ongoing processes of knowledge application and adaptation (Frost, 2007).

In contemporary discussions, the concept of utilization has expanded beyond traditional research settings to encompass diverse fields, including technology, policy-making, and business. It now includes not only the direct application of knowledge but also the effective communication, dissemination, and adaptation of information to address practical challenges. The concept of utilization has a rich history, deeply rooted in the practical application of knowledge. Scholars from various disciplines have contributed nuanced perspectives, emphasizing the dynamic and multifaceted nature of utilization. From early philosophical inquiries to contemporary organizational practices, the concept continues to evolve, reflecting changing paradigms and approaches in utilizing knowledge for informed decision-making.

The Learning Management System (LMS) is a software which is managing the learning process that is created in different types of platforms, either can be used in traditional IT or cloud-based are called "Learning Management System" (LMS). There are many types of LMS some are used to keep and maintain learning

process, like web portals that assemble different links in the web and offer them to a learner, it may also view video files library to assist learner achieve their search (Kaewkiriya & Utakrit, 2012). LMSs are known by various names such as course management system (CMS), learning content management system (LCMS), virtual learning environment (VLE), and virtual learning system (VLS) (Wright et al., 2014). The Learning Management System is the backbone of e-learning which provides the essential components required for hosting of the e-learning contents. The Learning Management System is a software application which is used to automate the administration, tracking and reporting the education and training activities. According to Wright et al. (2014), learning management system is software that is use in learning content presentation which has a significant role and complexity in e-learning environment. Dobre (2015), defined LMS as a software (web) application used to plan, implement, and assess learning processes. An LMS provides instructors with a way to create and deliver content, monitor learner participation, and assess performance. E-Learning is now becoming the primary delivery mode of the education in higher education sector.

According to Angelova et al. (2015), LMSs are web-based tools for conducting quality online teaching and training. They are platforms for interaction with educational content that is created and presented in a suitable format. LMSs are software applications meant for the tracking, administration, reporting, documentation and delivery of educational contents. They help lecturers deliver instructional content to students, and also help to administer tests and assignments, track student progress, and manage the classroom situation. The course related activity such as lecture, online

assignments, discussion and quizzes are available to the students through this system. It provides common platform to both teacher and student for online learning and training (Prabha & Sanjeev, 2015).

There are several types of Learning Management Systems (LMS), each tailored to specific needs and contexts. Here are some common types and their key features:

Academic LMS

An Academic Learning Management System (LMS) is specifically designed to meet the needs of educational institutions such as schools, colleges, and universities. Here's more information about Academic LMS: Academic LMS allows educators to create, organize, and manage courses, including syllabi, lesson plans, and course materials. Students can enroll in courses, and administrators can manage enrollment and registration processes. Academic LMS includes gradebook functionality for instructors to record and track student performance. Supports various assessment methods, including quizzes, assignments, and exams. Provides communication features like discussion boards, email integration, and chat to facilitate teacher-student and student-student interactions. Supports the delivery of various types of educational content, including text, multimedia, and interactive resources

- Designed for schools, colleges, and universities.
- Features like gradebook management, course enrolment, and support for academic content.
- Supports traditional classroom settings and online learning.

Corporate LMS

A corporate learning management system (LMS) is a specialized software platform designed to facilitate employee training and development within organizations. It supports

the onboarding process by providing training modules and resources for new hires. Offers ongoing training opportunities for employees to enhance their skills. Helps organizations track and ensure compliance with industry regulations and internal policies.

- Geared towards employee training and development.
- Features include compliance tracking, employee progress monitoring, and integration with HR systems.
- Supports onboarding, compliance training, and skill development.

Open Source LMS

An Open-Source Learning Management System (LMS) is a type of LMS software that is freely available for anyone to use, modify, and distribute. Open Source LMS software is typically distributed under open-source licenses (e.g., GNU GPL), which means it can be used, modified, and distributed by anyone without licensing fees. Users have the freedom to customize and adapt the software to suit their specific needs. This includes adding new features, modifying the user interface, or integrating with other systems. Open source projects often have active communities of developers, users, and contributors who provide support, documentation, and updates. This can lead to a robust ecosystem of plugins and extensions.

- Free and customizable LMS software.
- Allows organizations to modify and adapt the system to their specific needs.
- Examples include Moodle and Sakai.

Cloud-Based LMS

- Hosted on external servers, eliminating the need for on-premises hardware.
- Scalable and accessible from anywhere with an internet connection.
- Often more cost-effective for smaller organizations.

Mobile Learning (m-Learning) LMS

- Optimized for mobile devices.
- Enables learning on smartphones and tablets.
- Supports responsive design and mobile-friendly content.

Social Learning LMS:

- Integrates social features like discussion forums, chat, and collaboration tools.
- Encourages learner interaction and peer-to-peer learning.
- Fosters a sense of community among learners.

Blended Learning LMS

- Supports a combination of in-person and online learning.
- Enables the integration of traditional classroom instruction with digital resources.
- Ideal for hybrid or flipped classroom models.

e-Commerce LMS

- Geared towards selling online courses and training programs.
- Includes features for course catalog, payment processing, and user registration.
- Often used by training companies and entrepreneurs.

Gamified LMS

- Incorporates gamification elements to enhance engagement.
- Uses game-like features such as badges, leaderboards, and points to motivate learners.

- Can make learning more enjoyable and interactive.

Analytics and Reporting LMS:

- Offers robust analytics and reporting tools.
- Allows administrators to track learner progress, assess the effectiveness of courses, and make data-driven decisions.

Note: The features of an LMS can vary widely depending on the type and specific needs of the organization or educational institution. When choosing an LMS, it's essential to consider the features that align with your goals and requirements.

Objectives of the Study

The specific objectives of this study are to:

1. determine the Utilization of Academic Learning Management System for Course Management in Federal Colleges of Education in North West Zone, Nigeria; and
2. ascertain the Utilization of Academic Learning Management System for Assessment in Federal Colleges of Education in North West Zone, Nigeria.

Research Questions

The following research questions are raised to guide the study.

1. How has Academic Learning Management System been utilized for Course Management in Federal Colleges of Education in North West Zone, Nigeria?
2. To what extent has Academic Learning Management System been utilized for Assessment in Federal Colleges of Education in North West Zone, Nigeria?

Research Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance:

H₀₁: There is no significant difference in the opinions of respondents on the Utilization of Academic Learning Management System for Course Management in Federal Colleges of Education in North West Zone, Nigeria;

H₀₂: There is no significant difference in the opinions of respondents on the Utilization of Academic Learning Management System for Assessment in Federal Colleges of Education in North West Zone, Nigeria

Methodology

The study adopted survey research design because the respondents are scattered in different parts of North West Zone, Nigeria with one or more characteristics in common. The population of 5,995 (five thousand, nine hundred and ninety-five) respondents which comprised 3,625 (three thousand six hundred and twenty-five) lecturers, and 2,370 (two thousand three hundred and seventy) senior was used. A sample size of three hundred and sixty-five (365) participants, consisting of two hundred and twenty one lecturers (221) and one hundred and forty-four (144) senior management staff were used in the study. The samples were randomly sampled using the recommendation of Research Advisors

(2006) sample size table (see appendix A). According to Research Advisors (2006) sample size table, for a population of 5,001 – 7,500, a sample size of 365 should be used. Data was collected through a self-structured questionnaire tagged “Awareness and Availability of Academic Learning Management System Questionnaire (AAALMSQ)”. The face and content validity of the research instrument was determined by experts within the field of education. To ascertain the reliability of the instrument, a pilot study with 20 lecturers and 10 senior management staff totalling 30 participants were used in Federal College of Education (Technical) Gusau. This is because the state is part of the study area but did not form part of the sampled institutions used in the main study. The result of the pilot test showed a reliability value of 0.82. Data collected in the study was analysed using descriptive statistics while Chi-square statistical method was used to test the null hypotheses at 0.05 level of significance.

Results

Research Question One: How has Academic Learning Management System been utilized for Course Management in Federal Colleges of Education in North West Zone, Nigeria?

Table 1: Utilization of Academic Learning Management System for Course Management in Federal Colleges of Education in North West Zone, Nigeria

SN	Statement	Respondents	SA	A	U	D	SD	Mean	SD	Remark
1.	The Academic Learning management System (LMS) is regularly used for course management in Colleges of Education.	Senior Mgt Staff	-	-	43	70	31	2.555	1.666	
		Lecturers	10	32	31	78	70	2.160	1.122	Negative
2.	Course materials and resources are effectively organized and accessible through the Academic LMS in Colleges of Education.	Senior Mgt Staff	-	-	31	74	39	3.000	0.100	
		Lecturers	-	13	-	13	70	2.827	1.196	Negative
3.	Assignments and assessments are efficiently administered via	Senior Mgt Staff	-	14	20	56	54	1.555	0.527	

	the Academic LMS in Colleges of Education.	Lecturers	-	1	10	14	70	3.052	1.123	Negative	
4.	The Academic LMS facilitates effective communication between instructors and students in Colleges of Education.	Senior Mgt Staff	-	-	16	11	14	2.888	1.269		
		Lecturers	-	28	1	13	60	2.377	1.114	Negative	
5.	Grades and feedback are easily accessible to students through the Academic LMS in Colleges of Education.	Senior Mgt Staff	-	-	30	10	8	2.277	1.715		
		Lecturers	-	-	29	13	60	2.172	1.170	Negative	
6.	The Academic LMS supports collaborative learning activities among students in Colleges of Education.	Senior Mgt Staff	-	14	16	10	8	2.666	1.414		
		Lecturers	-	-	68	92	61	2.974	1.088	Negative	
7.	Instructors actively use features like discussion forums and quizzes in the Academic LMS in Colleges of Education.	Senior Mgt Staff	-	8	22	94	20	2.888	1.269		
		Lecturers	-	1	51	10	61	2.172	0.971	Negative	
8.	The Academic LMS allows for the integration of multimedia elements in course content in Colleges of Education.	Senior Mgt Staff	8	9	43	76	8	2.888	1.054		
		Lecturers	1	-	41	68	111	2.477	0.937	Negative	
9.	Students find the Academic LMS user-friendly and beneficial for their learning in Colleges of Education.	Senior Mgt Staff	29	9	48	42	16	2.444	1.509		
		Lecturers	-	1	42	98	80	2.584	0.979	Negative	
10	The utilization of the Academic LMS enhances the quality of course management in Colleges of Education.	Senior Mgt Staff	31	-	31	37	38	1.888	1.269		
		Lecturers	-	1	40	98	82	2.717	1.176	Negative	
								<i>Response Mean = 2.82 1.12</i>			

Table 1, revealed that the responses of the two categories of respondents from item 1-10 were in negative response, it can then be concluded that, the Academic Learning Management System has not been utilized for Course Management in Federal Colleges of Education in North West Zone, Nigeria. This can be seen on the table which presents the average response mean of 2.82 which is lower than the rating mean of 3.0. Most of the items stated regarding this research question recorded a negative response means lower than the rating mean of 3.0, which indicated strong disagreement on the part of the participants. For instance, item number 10 on the table which revealed that the utilization of the Academic LMS enhances the quality of course management in Colleges of

Education. The item recorded the response means of 1.888, and 2.717 by the senior management staff, and lecturers respectively. Details showed that 31 senior management staff agreed with the item, 31 respondents undecided and 82 disagreed. Similarly, 1 lecturer strongly agreed with the item, 180 disagreed, 40 were undecided, with the item. By implication, this result implies that Academic Learning Management System has not been utilized for Course Management in Federal Colleges of Education in North West Zone, Nigeria.

Research Question Two: To what extent has Academic Learning Management System been utilized for Assessment in Federal Colleges of Education in North West Zone, Nigeria?

Table 2: Utilization of Academic Learning Management System for Assessment in Federal Colleges of Education in North West Zone, Nigeria

SN	Statement	Respondents	SA	A	U	D	SD	Mean	SD	Remark
1.	Examination assessments are regularly conducted through the Academic LMS in Colleges of Education.	Senior Mgt Staff	23	31	26	19	45	2.555	0.726	Negative
		Lecturers	1	43	71	47	60	2.250	0.997	
2.	The Academic LMS is effectively used for grading and providing feedback to students in Colleges of Education.	Senior Mgt Staff	22	3	38	27	54	2.111	1.269	Negative
		Lecturers	-	27	51	103	40	2.102	1.184	
3.	The Academic LMS allows for a variety of assessment methods (e.g., multiple choice, essays) in Colleges of Education.	Senior Mgt Staff	14	-	40	36	54	2.444	0.881	Negative
		Lecturers	-	-	1	152	41	2.605	1.173	
4.	The Academic LMS supports secure and reliable online assessment processes in Colleges of Education.	Senior Mgt Staff	-	-	25	70	49	2.777	0.440	Negative
		Lecturers	-	1	10	209	1	2.014	1.322	
5.	Instructors are comfortable using the Academic LMS for both formative and summative assessments in Colleges of Education.	Senior Mgt Staff	-	-	12	107	25	2.341	0.123	Negative
		Lecturers	-	-	1	142	78	2.773	1.253	
6.	The Academic LMS facilitates the timely release of assessment results to students in Colleges of Education.	Senior Mgt Staff	-	-	-	112	32	1.200	0.322	Negative
		Lecturers	-	-	1	112	108	2.296	0.215	
7.	There is proper training and support for instructors on the use of Academic LMS for assessments in Colleges of Education.	Senior Mgt Staff	-	-	-	107	37	2.000	1.581	Negative
		Lecturers	-	-	-	113	108	1.965	1.305	
8.	Students have access to their assessment results and feedback through the Academic LMS in Colleges of Education.	Senior Mgt Staff	-	-	-	127	17	2.711	1.536	Negative
		Lecturers	-	-	1	112	108	2.069	1.219	
9.	The Academic LMS is perceived as a reliable platform for conducting fair assessments in Colleges of Education.	Senior Mgt Staff	-	-	-	98	48	2.888	1.536	Negative
		Lecturers	-	30	31	81	79	2.244	1.097	
10	The level of utilization of the Academic LMS for assessment is satisfactory in Colleges of Education.	Senior Mgt Staff	-	-	3	95	46	2.333	1.414	Negative
		Lecturers	-	60	40	32	89	2.011	1.151	
<i>Response Mean</i>								= 2.36	1.03	

Lastly, in Table 2, majority of the responses of the two categories of respondents from item 1-10 were in negative response, it can then be concluded that, the extent to which Academic Learning Management System has been utilized for Assessment in Federal Colleges of Education in North West Zone, Nigeria is low. This can be seen on the table which presents the average response mean of 2.36 which is lower than the rating means of 3.0. Most of the items stated regarding this research question recorded a negative response means lower than the rating mean of 3.0, which indicated strong disagreement on the part of the participants. For instance, item number 2 on the table which revealed that the Academic LMS is effectively used for grading and providing feedback to students in Colleges of Education. The item recorded the response means of 2.111, and 2.102 by the senior management staff, and lecturers respectively. Details showed that 25 senior management staff agreed with the item,

38 respondents undecided and 81 disagreed. Similarly, 27 lecturers strongly agreed with the item, 143 disagreed, 51 were undecided, with the item. By implication, this result implies that Academic Learning Management System has not been utilized for Assessment in Federal Colleges of Education in North West Zone, Nigeria.

Hypothesis One: There is no significant difference in the opinions of respondents on the Utilization of Academic Learning Management System for Course Management in Federal Colleges of Education in North West Zone, Nigeria.

The opinions of senior management staff and lecturers on the Utilization of Academic Learning Management System for Course Management in Federal Colleges of Education in North West Zone, Nigeria are analysed using chi-square (χ^2). The summary of the hypothesis tested is presented in table 3:

Table 3: Summary of Chi-square test on the Utilization of Academic Learning Management System for Course Management in Federal Colleges of Education in North West Zone, Nigeria

Number	χ^2 cal.	χ^2 crit.	α	df	P-value	Decision
365	39.452	18.27	0.05	96	0.451	Retained

Table 3 revealed that the χ^2 cal. (39.452) is greater than the χ^2 crit. (18.27) at 96 degrees of freedom and at 0.05 level of significance. This result therefore means that there is significant difference in the opinions of senior management staff and lecturers on the Utilization of Academic Learning Management System for Course Management in Federal Colleges of Education in North West Zone, Nigeria. The implication of this result is to retain the hypothesis which says that there is no significant difference in the opinions of senior management staff and lecturers on the Utilization of Academic Learning Management System for Course Management in

Federal Colleges of Education in North West Zone, Nigeria.

Hypothesis Two: There is no significant difference in the opinions of respondents on the Utilization of Academic Learning Management System for Assessment in Federal Colleges of Education in North West Zone, Nigeria.

The opinions of senior management staff and lecturers on the Utilization of Academic Learning Management System for Assessment in Federal Colleges of Education in North West Zone, Nigeria are analysed using chi-square (χ^2). The summary of the hypothesis tested is presented in table 4:

Table 4: Summary of Chi-square test on the Utilization of Academic Learning Management System for Assessment in Federal Colleges of Education in North West Zone, Nigeria

Number	χ^2 cal.	χ^2 crit.	α	df	P-value	Decision
365	104.67	18.27	0.05	27	0.147	Retained

Table 4 revealed that the χ^2 cal. (104.67) is greater than the χ^2 crit. (18.27) at 54 degrees of freedom and at 0.05 level of significance. This result therefore means that there is no significant difference in the opinions of senior management staff and lecturers on the Utilization of Academic Learning Management System for Assessment in Federal Colleges of Education in North West Zone, Nigeria. The implication of this result is to retain the hypothesis which says that there is no significant difference in the opinions of senior management staff and lecturers on the Utilization of Academic Learning Management System for Assessment in Federal Colleges of Education in North West Zone, Nigeria.

Summary of Findings

In view of the research questions answered and hypotheses tested in the study, findings emerged that.

1. In opinions of senior management staff and lecturers, the Utilization of Academic Learning Management System for Course Management is poor in Federal Colleges of Education in North West Zone, Nigeria. On the test of hypothesis, no significant difference was observed in the response of the participants (p -value .451 > 0.05 alpha level).
2. In opinions of senior management staff and lecturers, the Utilization of Academic Learning Management System for Assessment is poor in Federal Colleges of Education in North West Zone, Nigeria. On the test of hypothesis, no significant difference was observed in the response of the participants (p -value .147 > 0.05 alpha level).

Discussions

Findings of the study also revealed that there is significant difference in the opinions of senior management staff and lecturers on the Utilization of Academic Learning Management System for Course Management in Federal Colleges of Education in North West Zone, Nigeria. As a result, hypothesis three which says that there was no significant relationship in the opinions of senior management staff and lecturers on the Utilization of Academic Learning Management System for Course Management in Federal Colleges of Education in North West Zone, Nigeria was retained. This connote that the hypothesis was not statistically significant and by Utilization of Academic Learning Management System for Course Management in Federal Colleges of Education in North West Zone, Nigeria is very low. This result is in agreement with the findings of Young (2016) which showed that, increasing knowledge sharing and innovation practices provides for positive social change for the personnel of these organisations, since the skills they learn within their organisations are immediately usable in their personal endeavours and are transferrable to those they interact with outside of their organizations. The finding contradicts the finding of Biljon and Renaud (2017) discovered that given the innate human ability to understand and remember visual representations, the considered inclusion of visualisations support objectivity, consistency and fairness in assessment. It also help students to engage in more depth with the subject matter, reaching a profounder

understanding thereof, in the process of producing the visualisations. In practice this means that supervisors should consider instructing candidates to include specific standard visualisations such as a chapter map, a literature overview diagram and a visualisation of their conceptual framework.

Lastly, findings showed that there is no significant difference in the opinions of senior management staff and lecturers on the Utilization of Academic Learning Management System for Assessment in Federal Colleges of Education in North West Zone, Nigeria. As a result, hypothesis two which says that there was no significant difference in the opinions of senior management staff and lecturers on the Utilization of Academic Learning Management System for Assessment in Federal Colleges of Education in North West Zone, Nigeria was retained. This connotes that the hypothesis was statistically not significant and by implication the Utilization of Academic Learning Management System for Assessment in Federal Colleges of Education in North West Zone, Nigeria is poor. This result is in agreement with the findings of Usman, Uchendu et al., Ohiorenaya and Eboreime. Usman finding showed that both knowledge acquisition and knowledge sharing has significant impact on performance of deposit money banks. The finding is also in agreement with Uchendu et al. who found a significant relationship between knowledge sharing, knowledge mapping, and lecturers' job performance. Ohiorenaya and Eboreime found a high positive correlation between knowledge management and performance in Nigerian universities.

Conclusion

Based on the findings it can be concluded that the awareness of Academic Learning Management System in Federal Colleges of Education in North West Zone, Nigeria is so high

but has not been sufficiently utilized. However, in consistent with the literature, the availability of Academic Learning Management System Infrastructure is very low in Federal Colleges of Education in North West Zone, Nigeria. The finding also pointed out that the Utilization of Academic Learning Management System for Course Management is poor in Federal Colleges of Education in North West Zone, Nigeria. Also, the finding confirmed that the Utilization of Academic Learning Management System for Assessment is poor in Federal Colleges of Education in North West Zone, Nigeria.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Institutions that want to keep their academic operations relevant and smooth should incorporate Academic Learning Management System into their management strategy. This will improve college management output and help to reposition colleges in the region.
2. Federal Government through the National Commission for Colleges of Education should budget appropriately for the provision of Academic Learning Management System infrastructure in the Federal Colleges of Education in the region. This will ensure the effective educational service delivery the Federal Colleges of Education.

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