

MANAGEMENT OF ONLINE LEARNING AND EFFECTIVE INSTRUCTIONAL DELIVERY IN PUBLIC UNIVERSITIES IN NORTH EASTERN NIGERIA

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Abstract

This study investigated impact of management of online learning and effective instructional delivery in public universities in North Eastern Nigeria Eight research questions guided the study and eight hypotheses were tested at 0.05 level of significance. Descriptive survey design was adopted for the study. The population consisted of 7,055 academic staff from the 16 public universities in North Eastern Nigeria. A sample of 706 academic staff members representing 10% of the population was used for the study. Multistage sampling procedure was used to select the sample for the study. The instrument used for data collection was a questionnaire titled “Management of Online Learning and Effective Instructional Delivery Questionnaire (MOLEIDQ)” with a reliability coefficient of 0.99. A total number of 706 copies of the questionnaire were taken to the field and administered to the respondents but only 697 questionnaires were returned. Mean Scores and Standard Deviation were used for answering the research questions. Chi-square test of goodness-of-fit was used to test the hypotheses at 0.05 level of significance. The findings of the study revealed that management of online learning in the areas of content management system and learner management system have significant positive impact on effective instructional delivery in public universities in North Eastern Nigeria. It was concluded that management of online learning have significant positive impact on effective instructional delivery in public universities in North Eastern Nigeria. It was therefore, recommended among others that Vice-chancellors should allocate adequate resources for the adoption of advanced content management systems in their institutions and ensure that faculty members are adequately trained to utilize these systems effectively.

Keywords: Online learning, Effective instructional delivery, Content management, Learner management

Introduction

The university education system plays a central role in supplying the manpower needed by a country the world over. Achieving the objectives of universities relies heavily on effective instructional delivery. However, challenges such as lack of clarity, monotony, and inflexibility have been observed to be affecting instructional delivery by the researcher in public universities in North Eastern Nigeria. Concerns raised by stakeholders such as students, highlight issues such as unclear instruction, disorganized content, and difficulty in following steps sequentially, which could confuse learners and hinder their comprehension. This raises questions about the management of online learning tools, such as content management systems, as well as the adequacy of learner management and communication tools which could be used for effective instruction delivery in universities.

Effective instruction delivery refers to the interaction among the students, the teacher, the content, the knowledge, skills and dispositions students will need for learning and collaborating

with others in a diverse society and rapidly changing world (Frey, Fisher, & Pumpian, 2016). The process of instructional delivery could involve applying a repertoire of instructional strategies to communicate and interact with students around academic content, and to support student engagement. In the university system, effective instructional delivery could be the actual accomplishment of assigned task by lecturers. It could be actual work done against the expected standard of achievement. According to Amaewhule and Udofia (2022), there are numerous activities which lecturers carry out which determine how effective and productive their instruction might be, such activities include the drawing or preparing of lecture notes, reading text, delivery of lectures, evaluation of students and reporting of student's progress. Other activities carried out by lecturers include, maintenance of discipline among students during lectures, keeping of marking of students scripts, compilation of students performance scores, counseling and supervision of students projects. These areas which relate to the individual lecturer's instructional delivery needs could be improved by management of online learning.

Management of online learning involves overseeing various aspects of the online education process to ensure its effectiveness and efficiency (Picciano, 2017). Picciano maintained that it involves developing a comprehensive plan that aligns online learning initiatives with institutional goals and objectives which include setting priorities, allocating resources, and defining success metrics. Management of online learning refers to designing and updating online courses and programs to meet learning objectives, incorporating instructional strategies, multimedia resources, and interactive elements (Shea & Bidjerano, 2019). It can be the application of principles of instructional design to create engaging and effective online learning experiences which could include designing learning activities, assessments and multimedia content aimed at enhancing effective instruction delivery. According to Black and Wiliam (2018), management of online learning refers to process of providing training and support for faculty members to effectively design, deliver and facilitate online courses. This may include pedagogical training, technical support and resources for course development among others. For the purpose of this study, emphasis is given to content management system and learner management system.

Content Management System (CMS) revolves around the idea of simplifying the process of creating, managing and publishing digital content (Albers, 2020). At its core, Albers maintains that a CMS could provide an interface for users to organize, edit, and publish content without requiring advanced technical skills or knowledge of programming languages. Content management can enable users to create various types of content such as articles, blog posts, images, videos and web pages directly within the CMS interface which may enhance effective instructional delivery. A CMS typically offers features for organizing content into categories, tags, or hierarchies for easier navigation and management thereby enhancing lecturers' presentation. This could allow lecturers to structure their content in a logical manner and maintain consistency across their website or application. The CMS platforms support multiple user roles with varying levels of access and permissions. According to Smith (2019), many CMS platforms offer workflow management features that enable collaboration among multiple users or teams. Workflows may include approval processes, content review cycles, and automated notifications to streamline the content publishing process which can help lecturers' instructional delivery. Administrators can define roles such as authors, editors, and administrators, each with specific capabilities and restrictions to ensure security and accountability. Content creation tools often include text editors, media uploaders, and formatting options to facilitate the creation process and enable learner management system.

Learner Management System (LMS) focuses on facilitating the administration, documentation, tracking, reporting and delivery of educational courses, training programs, or learning and development initiatives (Phillips, 2017:45). It is referred to as a centralized platform for learners, instructors, administrators, and managers to interact with learning materials and activities that could support effective instructional delivery. The LMS serves as a comprehensive platform for managing the entire learning process, from course administration and content delivery to learner engagement and assessment, ultimately facilitating effective instructional delivery (Rosenberg, 2019). Learners' management system may serve as a centralized system for managing learners, courses and resources enabling administrators to handle user registrations, course enrolments and access permissions for effective instruction delivery. The LMS may facilitate course delivery by providing features for organizing, uploading, and delivering learning content such as presentations, videos, quizzes and assignments using appropriate communication tools.

Instructional delivery not effectively carried out may affect the achievement of the established objectives of university education. There is likelihood that the use of management of online learning in the areas of content management system and learner management system in the university may result to effective instructional delivery in the university hence the study area may not be an exception. It is against this background that the researcher seeks to investigate management of online learning as a determinant of effective instructional delivery in Public Universities in North Eastern Nigeria.

Statement of the Problem

The university system serves as the cornerstone for a country's manpower development, making effective instructional delivery crucial to achieving its objectives. However, instructional delivery in universities seem to face challenges, including issues related to clarity, monotony, and inflexibility. Stakeholders such as students, parents, philanthropist, government and non-governmental organizations have raised concerns about some lecturers' inability to provide clear instruction, poorly organized lessons, and confusing steps that hinder students' understanding. This has led to questions about whether the management of online learning through tools like content management systems, learner management systems, and communication tools could address these challenges in the universities.

In North Eastern Nigeria, the researcher observed instances where lecturers rely excessively on lecture-based instruction without incorporating interactive, hands-on, or participatory learning activities which seems to limit learners' active engagement and retention of information which questions the assessment mechanisms and training for instructors in the university. These issues could be an indication of weak instructional delivery which is likely an indication that management of online learning is not regularly carried out by university management staff to have a clear guide and direction of what may be the best guide for effective instructional delivery.

Public universities management staff in North Eastern, Nigeria seem to sacrifice management of online learning for offline learning by lecturers. Over the years, there have been efforts made by relevant stakeholders such as the National Universities Commission (NUC) and Nigerian Association for Educational Administration and planning to ensure effective management of online learning in universities through training in form of workshops, seminars and conferences. Despite the efforts to sustain effective instructional delivery, the researcher observed that there are insufficient opportunities for interaction, collaboration and peer learning among instructors. There also seem to be lack of access to resources, technology, support services, or instructional materials necessary for instructors which can likely create

barriers and frustration for effective instructional delivery in public universities. These issues may be responsible for the ineffective instructional delivery in the university. It is against this background that the study seeks to investigate management of online learning and effective instructional delivery in Public Universities in North Eastern Nigeria.

Purpose of Study

The purpose of this study was to investigate the impact of management of online learning on effective instructional delivery in Public Universities in North Eastern Nigeria. Specifically, the study sought to;

1. Determine the impact of content management system on effective instructional delivery in Public Universities in North Eastern Nigeria.
2. Ascertain the impact of learner management system on effective instructional delivery in Public Universities in North Eastern Nigeria.

Research Question

The following research questions guided the study.

1. What is the impact of content management system on effective instructional delivery in Public Universities in North Eastern Nigeria?
2. What is the impact of learner management system on effective instructional delivery in Public Universities in North Eastern Nigeria?

Hypotheses

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

1. Content management system have no significant impact on effective instructional delivery in Public Universities in North Eastern Nigeria.
2. Learner management system have no significant impact on effective instructional delivery in Public Universities in North Eastern Nigeria.

Methodology

Descriptive survey design was adopted for the study. The population consisted of 7,055 academic staff from the 16 public universities in North Eastern Nigeria and a sample of 706 academic staff members representing 10% of the population from 16 public universities in North Eastern Nigeria was used for the study. Multistage sampling procedure was used to select the sample for the study. The instrument used for data collection was a questionnaire titled "Management of Online Learning and Effective Instructional Delivery Questionnaire (MOLEIDQ)" which was validated by three experts and with a reliability coefficient of 0.99. A total number of 706 copies of the questionnaire were taken to the field and administered to the respondents but only 697 questionnaires were returned. The instrument was administered by the researcher with the help of three research assistance. Data collected were analysed using Mean Scores and Standard Deviation for answering the research questions while Chi-square test of goodness-of-fit was used to test the hypotheses at 0.05 level of significance. The decision rule for rejection or otherwise of the hypotheses was based on p value and alpha value. Hypotheses of no significant influence was not rejected for any hypothesis whose p value was equal to or greater than alpha value of 0.05 ($p \geq 0.05$). While any hypothesis whose p value was less than alpha value of 0.05 ($p < 0.05$) was rejected.

Results

Question One: What is the impact of content management system on effective instructional delivery in Public Universities in North Eastern Nigeria?

Table 1: Mean and Standard Deviation Scores for Impact of Content Management System on Effective Instructional Delivery in Public Universities in North Eastern Nigeria.

S/No	Items Description	N	SA	A	D	SD	M	STD	Decision
1	Course design enables the teaching of right content by lecturers.	697	172	268	168	89	2.75	0.97	Agree
2	Keyword search makes instruction relevant to learners.	697	137	287	202	71	2.70	0.90	Agree
3	Content creation guides fruitful impartation of knowledge.	697	142	273	189	93	2.67	0.95	Agree
4	Content editing enhances update of knowledge given to learners.	697	89	297	210	101	2.54	0.89	Agree
5	Content organisation facilitates productive engagement of students.	697	95	280	199	123	2.50	0.94	Agree
Cluster Mean and Standard Deviation							2.63	0.93	Agree

Source: *Researcher's Field Survey Results (2024)*

Table 1 shows that the Mean ratings of item 1-5 are 2.75, 2.70, 2.67, 2.54 and 2.50 with the corresponding Standard Deviations of 0.97, 0.90, 0.95, 0.89 and 0.94 respectively. Based on the decision rule, all the item 1, 2, 3, 4 and 5 were above the cut-off mark of 2.50. This indicates that, the survey respondents highlighted the importance of various aspects of content management in enhancing the quality of teaching and learning. They noted that course design ensures lecturers teach the right content, while keyword search tools make instruction more relevant to learners' needs. Additionally, content creation was recognized as vital for the fruitful impartation of knowledge, and content editing was seen as crucial for keeping the knowledge delivered to learners up to date. Finally, respondents emphasized that proper content organization facilitates productive student engagement, fostering a more effective learning environment. The cluster mean of 2.63 was above the cut-off point of 2.50 and the cluster standard deviation of 0.93 which indicated a low value that tend to be close to the mean. This means that content management system has positive impact on effective instructional delivery in Public Universities in North Eastern Nigeria.

Question Two: What is the impact of learner management system on effective instructional delivery in Public Universities in North Eastern Nigeria?

Table 2: Mean and Standard Deviation of Scores for Impact of Learner Management System on Effective Instructional Delivery in Public Universities in North Eastern Nigeria

S/N	Items Description	N	SA	A	D	SD	M	STD	Decision
6	Lecturers' registration supports potent conveying of ideas.	697	102	301	146	148	2.51	0.98	Agree
7	Authentication of lecturers guarantee	697	85	291	235	86	2.54	0.86	Agree

	access to current material for productive coverage of content.								
8	Creating courses facilitate fruitful coverage of content.	697	85	316	169	127	2.52	0.92	Agree
9	Uploading course materials enhance operative conveying of ideas.	697	101	331	181	84	2.64	0.87	Agree
10	Enrolling of lecturers in courses support productive class interaction.	697	179	280	199	39	2.86	0.86	Agree
Cluster Mean and Standard Deviation							2.71	0.87	Agree

Source: *Researcher's Field Survey Results (2024)*

Table 2 shows that the Mean ratings of items 6-10 are 2.51, 2.54, 2.52, 2.64 and 2.86 with the corresponding Standard Deviations of 0.98, 0.86, 0.92, 0.87 and 0.86 respectively. Based on the decision rule, item 6, 7, 8, 9 and 10 were above the cut-off mark of 2.50. Item by item analysis showed that respondents were of the opinion that lecturers' registration supports the effective conveyance of ideas, while the authentication of lecturers ensures access to up-to-date materials for comprehensive content coverage. Additionally, creating courses was seen as essential for facilitating meaningful content delivery, and uploading course materials was recognized as a key factor in improving the clarity and efficiency of idea dissemination. Furthermore, enrolling lecturers in courses was noted to promote productive classroom interactions, ultimately contributing to a more dynamic and effective learning environment. The cluster mean of 2.71 is above the cut-off point of 2.50 and the cluster standard deviation of 0.87 which indicated a low value that tend to be close to the mean. This means that learner management system has positive impact on effective instructional delivery in Public Universities in North Eastern Nigeria.

Hypothesis 1: Content management system have no significant impact on effective instructional delivery in Public Universities in North Eastern Nigeria.

Table 3: Chi-square Analysis of the Significant Impact of Content Management System on Effective Instructional Delivery in Public Universities in North Eastern Nigeria

Responses	SA	A	D	SD	Df	P-value	Remark
Observed Frequency	127	281	194	95			
					3	0.000	Sig.
Expected Frequency	174.3	174.3	174.3	174.3			

$P=.000 < 0.05$; $DF=3$

Table 3 shows that $P < .05$ at 3 degree of freedom. This shows that the null hypothesis which states that content management system has no significant impact on effective instructional delivery in Public Universities in North Eastern Nigeria was therefore, rejected. This result

clearly shows that content management system has significant impact on effective instructional delivery in Public Universities in North Eastern Nigeria.

Hypothesis 2: Learner management system have no significant impact on effective instructional delivery in Public Universities in North Eastern Nigeria.

Table 4: Chi-square Analysis of the Significant Impact of Learner Management System on Effective Instructional Delivery in Public Universities in North Eastern Nigeria.

Responses	SA	A	D	SD	Df	P-value	Remark
Observed Frequency	88	421	87	101			
					3	0.000	Sig.
Expected Frequency	174.3	174.3	174.3	174.3			

$P=.000 < 0.05$; $DF=3$

Table 4 shows that $P < .05$ at 3 degree of freedom. Thus, the null hypothesis which states that learner management system has no significant impact on effective instructional delivery in Public Universities in North Eastern Nigeria was rejected. This implies that learner management system has significant positive impact on effective instructional delivery in Public Universities in North Eastern Nigeria.

Discussion of Findings

The first finding revealed that content management system has significant positive impact on effective instructional delivery in Public Universities. This finding agrees with the finding of Sing and Solanki (2017), who found that online content management has significant impact on teachers' performance in technical education. This study also revealed that online content management will determine the quality of performance of teachers. It was recommended that teachers should be trained to enhance their use of online learning in secondary schools. The result further showed that key aspects of content management contribute to enhancing the quality of teaching and learning. The respondents emphasized that course design ensures lecturers deliver the right content, while keyword search tools make instruction more relevant to learners' needs. Shalley (2021) also found out that content management has significant influence on academic staff performance in the university. It was also found out that content management enhances effectiveness of academic staff job performance. The researcher found out from the field that, content creation is essential for the successful impartation of knowledge and content editing was identified as critical for maintaining up-to-date information. Finally, respondents underscored the importance of proper content organization, which fosters productive student engagement and contributes to a more effective learning environment. Therefore, content management system has significant positive impact on effective instructional delivery in Public Universities.

The second finding revealed that learner management system has significant positive impact on effective instructional delivery in Public Universities. This finding is consistent with Abba (2017) who found that there is significant impact of Internet services and resources on academic activities of university lecturers' in Adamawa state Nigeria. This implies that lecturers' registration on learner management system through internet services supports the effective conveyance of ideas, while the authentication of lecturers ensures access to up-to-

date materials for comprehensive content coverage. Also, Matovu (2014) found out that that ICT facilities such as computers Management Information System and internet were the most commonly used for examination management and they were mainly applied for processing examination results, tracking students' academic progress, grading of students according to their performance, communication between lecturers and heads of department, communication to students via emails. Researcher's field survey revealed that creating courses was also deemed essential for facilitating meaningful content delivery and uploading course materials was recognized as crucial for improving the clarity and efficiency of idea dissemination. Moreover, enrolling lecturers in courses was noted to foster productive classroom interactions, which ultimately contribute to a more dynamic and effective learning environment. The study discovered that learner management system has significant positive impact on effective instructional delivery in Public Universities.

Conclusion

This study established that management of online learning have significant positive impact on effective instructional delivery in Public Universities in North Eastern Nigeria. It was therefore concluded that content management system and learner management system have significant positive impact on effective instructional delivery in Public Universities in North Eastern Nigeria.

Recommendations

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

1. Vice-chancellors should allocate adequate resources for the adoption of advanced content management systems in their institutions and ensure that faculty members are adequately trained to utilize these systems effectively.
2. The National Universities Commission should support the widespread implementation of learner management systems (LMS) across universities, ensuring that these systems are standardized, user-friendly, and secure.

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