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An Assessment of the E-Learning Readiness of Lecturers of Kashim Ibrahim College of Education Maiduguri Borno State Nigeria

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Abstract

This study sought to evaluate the readiness of lecturers at Kashim Ibrahim College of Education Maiduguri for e-Learning. The main objective was to assess the level of preparedness among the lecturers in embracing e-Learning as an instructional approach. A sample of 56 academic staff, comprising 36 males and 20 females, participated in the study. Seven research questions and seven hypotheses guided the investigation. Mean and standard deviation were used to address the research questions, while chi-square analysis was employed to test the hypotheses. The findings indicated that the college demonstrated readiness to implement an e-Learning programme. Based on the results, three recommendations were made. Firstly, the management of Kashim Ibrahim College of Education Maiduguri should direct all schools in the college to incorporate e-Learning effectively into their pedagogy by redesigning their courses. Secondly, other tertiary institutions in Borno State should follow the example set by Kashim Ibrahim College of Education Maiduguri and create an enabling environment for the adoption of e-Learning in their respective institutions. Finally, the Borno State Government should actively support the establishment of e-Learning facilities in all tertiary institutions within the state.

Keywords:
Kashim Ibrahim College of Education Maiduguri e-Learning, Pedagogy

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Background to the Study

Educational institutions worldwide have since the 1970s acknowledged the vast potential of the Internet as a tool for learning and communication (Waikato University, n.d.). Over the years, both developed and developing nations have increasingly embraced e-Learning as a cost-effective and accessible means of providing up-to-date education to individuals of all backgrounds, regardless of geographical constraints. In the present "Information Age," continual learning is essential for societal success, and many consider e-Learning to be the most effective solution in facilitating this process (Talentlms, 2014). Kashim Ibrahim College of Education Maiduguri, located in Borno State, Nigeria, recognizes the importance of integrating e-Learning into its educational system to overcome barriers like limited infrastructure and resources, and provide accessible, flexible, and up-to-date education. However, successful implementation of e-Learning requires careful evaluation of various factors influencing readiness. This study aims to assess critical aspects like technological access, computer skills, online skills, training, infrastructure, administrative support and resources to ensure effective implementation and sustainability of e-Learning initiatives at the college. Assessing these variables will provide insights into priority areas to strengthen e-learning programmes. The findings of this study have the potential to inform strategic planning to facilitate integration of e-learning.

Similarly, in Nigeria, extensive research has explored e-Learning readiness, facilities, implementation, and adoption primarily in the university context. Studies conducted by researchers such as Salawudeen (2006), Kizito & Bijan (2006), Oguzor (2011), Anene et al. (2014), Chiaha et al. (2013), and Aboderin & Kumuyi (2013) have shed light on various aspects of e-Learning at universities. However, there remains a gap in knowledge regarding e-Learning practices in colleges of education. To address this gap, this study aims to assess the e-Learning readiness among lecturers at Kashim Ibrahim College of Education Maiduguri.

E-Learning has emerged as a powerful tool in providing accessible and flexible education to learners of all backgrounds. Kashim Ibrahim College of Education Maiduguri recognizes the importance of embracing e-Learning to enhance teaching methodologies and ensure quality education for its students. By assessing e-Learning readiness among its lecturers, the college aims to bridge the gap in knowledge and enhance its e-Learning capabilities, ultimately benefiting its students and the wider community.

Incorporating e-Learning at Kashim Ibrahim College of Education Maiduguri will empower learners, enabling them to acquire knowledge and skills regardless of geographical constraints. The college is committed to actively embracing this innovative approach in education and contributing to societal development through cutting-edge e-Learning practices.

The purpose of the study is to evaluate the e-Learning readiness of lecturers at Kashim Ibrahim College of Education Maiduguri. Specifically, the study aims to investigate the following aspects:

1. Technology access of the lecturers.
2. Basic computer skills of the lecturers.

3. Internet/online skills of the lecturers.
4. Online teaching training undergone by the lecturers.
5. Availability of ICT infrastructure for successful e-Learning implementation.
6. Administrative support from the college management.
7. Resource support provided by the college management.

The significance of this study lies in the insights it will provide to the college management, lecturers, students, and the Borno State Government regarding the readiness for implementing e-Learning in the college. To reach a wider audience, the study will be published in reputable journals and shared on the Internet. The study will address the research questions related to technology access, computer skills, Internet/online skills, online teaching training, availability of ICT infrastructure, administrative support, and resource support. Additionally, seven null hypotheses will guide the study, examining potential gender differences in the aforementioned areas.

Methodology

The research design employed in this study was a descriptive survey. The study was conducted in Maiduguri, Borno State, Nigeria. All academic staff members of Kashim Ibrahim College of Education Maiduguri, Borno State, Nigeria, comprised the population for this study. The total population of the study consisted of the academic staff of the college. The sample size for the study was composed of fifty-six lecturers, with thirty-six male lecturers and twenty female lecturers. According to Nwana (1981), when the population reaches one hundred or more, a sample size of 40% should be selected. Therefore, 40% of the population was selected using the simple random sampling technique.

To collect data for the study, a 38-item structured questionnaire known as the e-Learning Readiness Assessment Questionnaire (E-LRAQ) was used. The researcher adapted this questionnaire and had it validated for both face and content by experts in Computer Science and Measurement and Evaluation at the University of Maiduguri. The instrument's reliability was assessed using SPSS Version 20, and a Cronbach's Alpha (α) Index of 0.895 was obtained.
The questionnaire utilized a five-point rating scale. Data collection involved the direct administration of the instrument by the researcher. The collected data was analyzed using mean and standard deviation statistics. A cut-off points of 1.50 was set to determine acceptance or rejection of each item. Items with a mean rating below 1.50 were rejected, while items with a mean rating of 1.50 and above were accepted. The hypotheses were tested at a significance level of $P<0.05$ using the chi-square statistic.

Results

The results of the study are displayed in the tables below based on the research questions and hypothesis.

Research Question 1

What are the lecturers' current technology access?
The data addressing this research question can be found in table 1.

Table 1: Technology Access of the Lecturers - (n=56)

S/No	Items	Mean	SD	Decision
1.	I have access to a reliable computer (at school, Cyber Cafe)	2.05	1.02	Accepted
2.	I have access to a computer with necessary software installed	2.36	1.27	Accepted
3.	I have access to a computer and Internet connection at home	2.36	1.27	Accepted
4.	I have access to a computer installed with search engines (e.g., Google, Ask)	2.02	0.90	Accepted
5.	I have access to a computer	2.86	4.40	Accepted

Table 1 illustrates the mean score of the respondents for each item in this section (Technology Access of the Lecturers): Item 1 ($\dot{X} = 2.05$), item 2 ($\dot{X} = 2.36$), item 3 ($\dot{X} = 2.36$), Item 4 ($\dot{X} = 2.02$), and item 5 ($\dot{X} = 2.86$).

All items, namely 1, 2, 3, 4, and 5, exceed the criterion mean ($\dot{X} = 1.50$) established for the study. Hence, as the table indicates, the respondents agreed.

Research Question 2
What are the lecturers' fundamental computer skills? The data addressing this research question can be found in table 2.

Table 2: The Basic Computer Skills of the Lecturers - (n=56)

S/No	Items	Mean	SD	Decision
1.	I know how to save/open documents to/from a hard disk or other removable storage device.	1.64	0.64	Accepted
2.	I am comfortable with tasks such as installing software and changing configuration settings on my computer.	1.82	0.72	Accepted
3.	I know how to resolve common hardware or software problems or I can access technical support if I encounter a problem.	2.82	5.81	Accepted

Table 2 presents the mean scores of the respondents in this section (Basic Computer Skills), and all the mean scores of the items in this section are above the criterion mean ($\dot{X} = 1.50$) established for this study. Therefore, as indicated by the table, all lecturers possess the basic computer skills.

Research Question 3
What is the lecturers' Internet/Online skills?
The data addressing this research question are presented in the table below.

Table 3: Internet/Online Skills of the Lecturers - (n=56)

S/No	Items	Mean	SD	Decision
1	I have an email address and I can send emails with file attachments.	1.63	0.65	Accepted
2	I am familiar with online etiquette.	2.00	0.93	Accepted
3	I know how to surf the Internet and navigate web pages (go to next or previous page).	1.53	2.09	Accepted
4	I can use web browsers (e.g., Internet Explorer Google Chrome, Mozilla Firefox) confidently.	1.80	0.86	Accepted
5	I know how to resolve common errors while surfing the Internet, such as "page not found" or "connection timed out."	2.09	0.82	Accepted
6	I am comfortable with tasks like conducting searches, setting bookmarks, and downloading files.	1.96	0.76	Accepted
7	I know how to access an online library and other resource databases.	2.38	2.79	Accepted
8	I know how to effectively use asynchronous tools (e.g., discussion boards, chat tools).	1.98	0.84	Accepted

The mean responses in Table 3 indicate that all Kashim lecturers possess Internet/Online skills since the mean scores of all the respondents are higher than the criterion mean score ($\dot{X} = 1.50$) established for this study.

Research Question 4
What online teaching training undergone by the lecturers?
Data answering this research question 4 are contained in the table that follows:

Table 4: Online Teaching Training - (n=56)

S/No	Items	Mean	SD	Decision
1	I have training on the use of the Internet.	1.96	0.81	Accepted
2	I have attended online classes before.	2.14	0.98	Accepted
3	I have used a Learning Management System (LMS) such as Blackboard Learn Desire2Learn, etc. before.	2.04	0.93	Accepted
4	I have the skills to modify and add and assessment using an online Learning Management System (LMS).	2.14	0.86	Accepted
5	I have attended seminars/workshops related to online learning activities.	1.89	0.68	Accepted

Table 4 revealed that items, 17, 18, 19, 20, and 21 with mean scores ($\dot{X}$ = 1.96, 2.14, 2.04, 2.14 and 1.89) respectively are all above the mean score ($\dot{X}$ =1.50) set for this study. The lecturers are in complete agreement with all the items of this section (Training) as shown by their mean responds.

Research Question 5
Are there available ICT infrastructures for a successful E-Learning implementation?
Data answering this research question 6 are contained in table below:

Table 5: ICT infrastructure for a successful E-Learning implementation - (n=56)

S/No	Items	Mean	SD	Decision
1	There is sufficient ICT hardware for e-Learning use	2.20	1.00	Accepted
2	There is a stable Internet connection in the college	2.11	0.95	Accepted
3	There is a steady supply of electricity on the campus	2.05	0.98	Accepted
4	There is an existing contingency plan in case of breakdown	2.68	3.03	Accepted

Table 5 shows that items 22, 23, 24 and 25 with mean scores ($\dot{X}$ = 2.20, 2.11, 2.05 and 2.68) respectively in this section are above the cut-up mean ($\dot{X}$ =1.50) set for this study. Hence, all respondents agreed to accept all items in ICT infrastructures for a successful E-Learning implementation. Hence ICT Infrastructure for a Successful E-Learning Implementation is in place in the college.

Research Question 6
Are there administrative supports from the college management?
Data answering this research question 6 are contained in table 6 below:

S/No	Items	Mean	SD	Decision
1	There is a commitment on the part of institutional leaders to use technology to achieve strategic academic goals.	2.08	0.72	Accepted
2	The institution is willing to employ assign an academically capable and/or experienced faculty to oversee the of the E-Learning environment.	2.05	0.70	Accepted
3	The institution is willing to accept e-Learning as a mode for teaching and learning.	2.68	0.94	Accepted
4	The institution ensures to put up a committee that will work directly with the development of online courses and programmes.	2.77	1.04	Accepted
5	The institution provides teachers with professional development opportunities to assist them in improving their online teaching.	2.57	1.08	Accepted
6	The institution is willing to provide a professional support system in place to ensure teacher success in delivering the online course.	2.64	1.05	Accepted
7	Computing is firmly integrated into culture.	4.73	8.70	Accepted

Table 6 shows the respondents mean score of this section (Administrative Support [Commitment and Policies]) and the mean scores of all items in this section are above the cut-up mean ($\dot{X}$ = 1.50) set for this study. This means that there is administrative support (Commitment and Policies) for the successful implementation of E-Learning programme in the college.

Research Question 7: Is there resource support (Financial, Human, Technical) by the college Management?
Data answering this research question 6 are contained in table 7 below:

Table 7: Resource support (Financial, Human, Technical) (n=56)

S/No	Items	Mean	SD	Decision
1	The institution has experienced human resources, or a department that organizes trainings related to online learning	2.63	1.07	Accepted
2	Adequate and timely support is available to the teacher and students when technical issues arise.	2.71	1.09	Accepted
3	The institute has a courseware delivery system (LMS) through which courses and programmes are delivered.	2.71	1.09	Accepted
4	The online platform used for course delivery has the necessary system capacity to support the learning activities of the course.	2.80	1.07	Accepted
5	The online platform provides appropriate tools for communication and collaboration.	2.70	1.02	Accepted

Table 7 shows the mean scores of the respondents in this section (Resource Support [Financial, Human, Technical)) and the mean scores of all the items are above the criterion mean ($\dot{X}$ = 1.50) set for this study. Hence, all the respondents agreed that there is resource support (financial, human and technical) in the college.

Hypothesis 1: There is no significant difference in the average ratings of technology access among lecturers based on gender.
Table 8 provides the data that supports this hypothesis.

Table 8

Gender	N	Mean	X2-cal	Df	X2 critical	Decision
Male	36	2.46	1.35	40	7.8150	Accepted
Female	20	1.04				

The chi-square analysis using Table 8 demonstrates that there is no significant difference in the mean ratings of technology access among lecturers based on gender. The calculated X2-cal value (1.3540) is less than the critical value (7.8150) at a significance level of 0.05 and 3 degrees of freedom. Therefore, the null hypothesis is accepted.

Hypothesis 2: There is no significant difference in the average ratings of basic computer skills among lecturers based on gender.
Table 9 presents the data supporting this hypothesis.

Table 9

Gender	N	Mean	X2-cal	Df	X2 critical	Decision
Male	36	1.95	0.79	64	7.8150	Accepted
Female	20	0.82				

Based on Table 9, the calculated X2-cal value (0.7928) is lower than the critical value (7.8150) at a significance level of 0.05 and 3 degrees of freedom. Thus, there is no significant difference in the mean ratings of basic computer skills among lecturers based on gender, and the null hypothesis is accepted.

Hypothesis 3: There is no significant difference in the average ratings of Internet/Online skills among lecturers based on gender.
Table 10 provides the data supporting this hypothesis.

Table 10

Gender	N	Mean	X2-cal	Df	X2 critical	Decision
Male	36	1.95	3.30	64	7.8150	Accepted
Female	20	0.70				

According to Table 10, the calculated X2-cal value (3.2930) is lower than the critical value (7.8150) at a significance level of 0.05 and 3 degrees of freedom. Therefore, there is no significant difference in the mean ratings of Internet/Online skills among lecturers based on gender, and the null hypothesis is accepted.

Hypothesis 4: There is no significant difference in the average ratings of online teaching training among lecturers based on gender.
Table 11 displays the data supporting this hypothesis.

Table 11

Gender	N	Mean	X2-cal	Df	X2 critical	Decision
Male	45	2.23	2.76	64	7. 8150	Accepted
Female	19	0.94				

Based on the data in Table 11, the calculated X2-cal value (2.7572) is lower than the critical value (7.8150) at a significance level of 0.05 and 3 degrees of freedom. Therefore, there is no significant difference in the mean ratings of online teaching training among lecturers based on gender, and the null hypothesis is accepted.

Hypothesis 5: There is no significant difference in the average ratings of available ICT infrastructures for successful E-Learning implementation based on gender.
Table 12 contains the data supporting this hypothesis.

Table 12

Gender	N	Mean	X2-cal	Df	X2 critical	Decision
Male	36	1.80	0.88	64	7.8150	Accepted
Female	20	0.76				

The data in Table 12 reveals that the calculated X2-cal value (0.8775) is lower than the critical value (7.8150) at a significance level of 0.05 and 3 degrees of freedom. Therefore, there is no significant difference in the mean ratings of available ICT infrastructures for successful E-Learning implementation based on gender, and the null hypothesis is accepted.

Hypothesis 6: There is no significant difference in the average ratings of administrative supports from the college management based on gender.
Table 13 provides the data supporting this hypothesis.

Table 13

Gender	N	Mean	X2-cal	Df	X2 critical	Decision
Male	36	2.30	0.89	64	7.8150	Accepted
Female	20	0.99				

Based on the information in Table 13, the calculated X2-cal value (0.8901) is lower than the critical value (7.8150) at a significance level of 0.05 and 3 degrees of freedom. Hence, there is no significant difference in the mean ratings of administrative supports from the college management based on gender, and the null hypothesis is accepted.

Hypothesis 7: There is no significant difference in the average ratings of resource support provided by the college management based on gender.
Table 14 provides the data supporting this hypothesis.

Table 14

Gender	N	Mean	X2-cal	Df	X2 critical	Decision
Male	36	2.30	0.19	64	7 .8150	Accepted
Female	20	0.99				

According to the provided data in Table 14, the calculated X2-cal value for testing the hypothesis of no significant difference in the mean ratings of the resource support provided by the college management based on gender is 0.1901. This value is significantly lower than the critical value of 7.8150 at a significance level of 0.05 and 3 degrees of freedom. Therefore, there is no significant difference in the mean ratings of the resource support provided by the college management based on gender, and the hypothesis is accepted.

Discussions

Generally, the findings of the present study contrasted the results of other studies on e-learning. Most of the studies conducted on E-Learning were based on universities in the country. Findings of the reported studies revealed E-Learning infrastructure deficiencies, acute shortages of trained personnel who can perform application of software, operating systems and lack of a stable Internet connection and network administration in the Nigerian universities (Anene, Imam & Odumuh, 2014). However, private higher education institutions are more IT-driven than public higher education institutions. This is because private higher education institutions are self-financing and considered small since they are owned by a few persons, it is assumed they have greater operating agility and make faster

adoption decisions than their public counterparts. The self-financing characteristics justify why private higher education institutions should be ahead of public higher education institutions in exploiting the huge socio-economic potentials of E-Learning (Edemoh & Ogedebe, 2014).

The findings from this study indicated that Kashim Ibrahim College of Education Maiduguri exhibited readiness for implementing e-learning programmes. The lecturers at this college possess the necessary technology access, basic computer skills, and online skills required for effective e-learning. Furthermore, there is sufficient ICT infrastructure, administrative support, and resource support in place for the successful implementation of e-learning initiatives. This is a significant contrast to the deficiencies reported in other studies focused on public universities in Nigeria.

Summary

In summary, the study indicates that the lecturers have access to technology, possess basic computer skills, Internet/online skills, and have undergone online teaching training. The college provides ICT infrastructures, administrative support, and resource support for successful e-Learning implementation. In all cases, the null hypothesis, which states that there is no significant difference, has been accepted. This means that gender does not have a significant impact on the variables being measured.

Conclusion

On the basis of the findings and discussions of the study the following conclusions were reached: the lecturers have access to current technology; they have the necessary basic computer skills; and they have Internet/Online skills**.** Similarly, they have received online teaching training on the use of the Internet; there was available ICT infrastructure for a successful E-Learning implementation in the college; there were also available administrative supports from the college management. On the issue of the resource support provided by the college management, the institution was financially ready to venture into e-learning.

Recommendations

The following recommendations can be made based on the study's findings and conclusions:

1. Borno State Government: It is recommended that the government prioritize and allocate resources to establish e-Learning facilities in all tertiary institutions within the state. This includes providing essential infrastructure such as reliable Internet connections, consistent electricity supply, and up-to-date computer equipment.
2. Kashim Ibrahim College of Education, Maiduguri: The college should take the lead in effectively integrating e-Learning into their teaching methods. They should instruct all schools within the college to redesign their courses and incorporate e-Learning methodologies and technologies.
3. Other tertiary institutions in Borno State: Institutions in the state should learn from the efforts of Kashim Ibrahim College of Education and create an environment that supports the adoption of e-Learning. This includes investing in infrastructure, providing professional development opportunities for teachers, and establishing technical support systems.

Based on the conclusions and recommendations, it is clear that Kashim Ibrahim College of Education Maiduguri has a strong foundation for implementing e-Learning. The findings indicate that the lecturers at Kashim Ibrahim College of Education are prepared to implement e-Learning to supplement their traditional courses. By implementing these recommendations, both the college and other institutions in Borno State can enhance their readiness for e-Learning and effectively utilize the potential of online education.

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