

Facilities Management Practices and Teaching-Learning Effectiveness in Colleges of Education Niger State, Nigeria

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Abstract: This study examined the relationship between facilities management practices and teaching-learning effectiveness in Colleges of Education in Niger State, Nigeria. A descriptive correlational research design was adopted. The population comprised 950 lecturers, from which 247 were selected using multistage sampling techniques. Data were collected using two validated instruments: the Facilities Management Practices Questionnaire (FMPQ) and the Teaching-Learning Effectiveness Questionnaire (TLEQ), with Cronbach's Alpha reliability coefficients of 0.78 and 0.85 respectively. Descriptive statistics of mean and standard deviation were used to answer the research questions, while Spearman's rank-order correlation was employed to test the hypothesis at 0.05 level of significance due to non-normal data distribution. The findings revealed that facilities management practices were at a high level and had a significant positive relationship with teaching-learning effectiveness. The study recommends sustaining quality through innovative maintenance systems and regular needs assessment.

Keywords: Facilities Management Practices, Teaching-Learning Effectiveness, Colleges of Education

Introduction

Colleges of Education in Nigeria play a vital role in producing qualified teachers for primary and basic secondary education. However, the learning environment in many of these institutions remains inadequate and poorly maintained which can attest to declining in academic standards. Niger State, Nigeria, like many other states, grapples with deteriorating infrastructure, outdated equipment, overcrowded classrooms, and inadequate learning resources all of which compromise the quality of education. Akinyemi (2020) notes that teachers often feel discouraged and frustrated when the necessary tools for teaching are either unavailable or in poor condition. A quality education requires a conducive learning environment. Teachers require functional tools and clean classrooms, while students need a safe space to sit and learn. In many Colleges of Education in Niger

State, Nigeria, it seems that the buildings are aging, equipment is damaged, and there is a significant lack of electricity and internet access. These issues may adversely impact the teaching methods of teachers and the learning experiences of students. The condition of classrooms, libraries, ICT centers, laboratories, as well as the availability of water, electricity, and sanitation services, can directly influence the ability of teachers to teach effectively and students to learn meaningfully. When facilities are insufficient or poorly maintained, both teachers and students struggle to achieve the desired educational outcomes (Okebukola, 2021). The success of any educational initiative is closely linked to the state of its facilities. Teaching and learning do not occur in isolation; they are facilitated or hindered by the surrounding physical and digital infrastructure. In Nigeria, particularly in Niger State, Colleges of Education are vital for teacher training. However, many of these institutions appear to suffer from significant infrastructural neglect, which may hinder their effectiveness. Effective teaching and learning necessitate functional classrooms and laboratories, reliable water and electricity supply, efficient ICT and internet access, as well as comfortable staff offices and learning environments. Without these essential resources, both teachers and students may be unable to perform at their best. Facilities management involves the comprehensive oversight of the physical environment within educational institutions. This includes the maintenance of buildings, classrooms, laboratories, libraries, and other critical infrastructure. Effective facilities management guarantees that these resources are available, operational, and conducive to academic pursuits. According to Barrett et al. (2019), well-maintained buildings and classrooms create an environment that supports learning. Inadequate infrastructure can obstruct the teaching process and impact lecturers' capacity to fulfill their responsibilities effectively. When lecturers have access to well-maintained facilities and feel secure, they can concentrate on conducting meaningful research without distractions (Earthman, 2004). Zhao et al. (2020) asserted that access to modern teaching tools such as projectors, smart boards, and computers is essential for effectively delivering courses. Updated teaching resources enable lecturers to remain abreast of educational advancements and enhance their teaching quality. Functional laboratories and well-stocked libraries are crucial for practical subjects and research, thereby enriching the educational experience for both lecturers and students. Adequate logistical arrangements, including scheduling, maintenance, and transportation, guarantee the smooth operation of academic activities (Hill et al., 2020).

Effective teaching, supported by good facilities and a secure environment, results in improved student engagement and learning outcomes, which positively reflects on lecturers' effectiveness (Earthman, 2004). However, facilities management practices encompass plans and actions aimed at ensuring that the physical assets and infrastructure within educational institutions are maintained, operated, and enhanced in a manner that aligns with their overall objectives. Rondeau (2017) noted that regular planned

maintenance activities help prevent equipment and facility breakdowns. This proactive approach aims to avert unexpected failures and extend the life cycle of assets within educational institutions. Managing the physical assets in colleges of education will fundamentally require the implementation of management practices as suggested by Asabiaka, as cited in Usman (2016), Egbuchiwe (2018), Oluwatoyin (2014), and Uchendu, Ekanem, and Jonah (2013), which include preventive, routine, emergency, predictive, and corrective strategies. The preventive management practice is conducted on physical assets to avert breakdowns and ensure longevity (Usman, 2016). Routine management practice refers to a maintenance service that is conducted periodically, as scheduled by school managers, on the facilities at intervals that may be monthly, quarterly, or even annually, depending on the agreed schedule (Egbuchiwe, 2018). Emergency management practice involves immediate repairs and urgent actions taken in response to sudden facility breakdowns without delay. Predictive management practice utilizes computer software to forecast equipment failures based on factors such as age, user demand, and performance metrics related to facilities, equipment, and resources within the school (Oluwatoyin, 2014). Corrective management practice entails repairs to buildings and equipment resulting from natural wear and tear or defective items. The quality of school facilities significantly impacts the learning environment. Arjanto & Telussa (2024) asserted that school facilities enable lecturers to perform their duties effectively and assist learners in achieving their educational goals. Furthermore, they highlighted that the availability and proper utilization of school facilities can influence lecturers' motivation to teach effectively, which in turn positively affects students' academic performance. Consequently, it is essential for school facilities to receive adequate attention, as they play a crucial role in supporting lecturers' job effectiveness and enhancing the quality of education. Owoye (2000) and Ajayi (2002) established a positive correlation between school facilities and school effectiveness. The researchers emphasized that the availability, relevance, and sufficiency of school facilities contribute to lecturers' effectiveness, while unattractive school buildings and overcrowded classrooms can lead to poor student performance due to ineffective teaching.

According to Adeyemi (2020), an effective school organization must possess suitable physical conditions, including aesthetic appeal, availability of instructional materials, and a favorable location, which are essential for successful teaching and learning. Maulana (2023) argued that poor physical working conditions often lead to mental fatigue, truancy, frustration, discomfort, and health issues, all of which ultimately diminish lecturers' effectiveness. Adeyemi (2020) opined that the availability of resources significantly benefits lecturers and reflects their ingenuity and commitment to delivering effective lectures. The state of facilities within a learning environment plays a crucial role in determining both lecturers' effectiveness and students' performance. This is due to the fact that inadequate

or malfunctioning facilities can hinder the learning process and reduce academic productivity. Numerous studies indicate that the lack of infrastructural facilities, particularly buildings, has resulted in an unproductive learning environment in Nigeria (Olatunji, 2013; Adedipe, 2007; Akinfolarin, 2008). Orodho et al. (2013) found that the challenges related to the availability and adequacy of learning resources negatively impacted lecturers' effectiveness in employing various teaching methods and focusing on individual learners. Effectiveness serves as a measure of job performance and the quality desired. An employee's effectiveness reflects the extent to which the organization's goals are achieved through their commitment and job performance (Eborunkan, 2019). The level of effectiveness can vary, being either high or low, depending on the employee's contributions. Effectiveness can be assessed through job evaluations and by appraising the degree to which organizational objectives have been met.

Operationally, based on the extensive literature review regarding the concept of effectiveness, it can be concluded that effectiveness pertains to the fulfillment of the objectives for which various academic departments were created, achieved through competent staff membership. The effectiveness of lecturers within the department, in alignment with established rules and regulations, is contingent upon the practices of facilities management. The effectiveness of teaching and learning stands as a critical factor influencing the quality of educational delivery in higher learning institutions. The education system may face significant challenges if lecturers fail to perform their duties as anticipated. Consequently, the effectiveness of lecturers is vital for any advancements in education. Lecturer effectiveness pertains to how they execute the professional responsibilities assigned to them at any given time. These professional responsibilities, as noted by Arjanto and Telussa (2024), encompass teaching, research, and community service. Ahmad (2010) further detailed the essential knowledge bases required for effective teaching, which include content knowledge, lesson planning, curriculum development, assessment of students' work, monitoring and supervising students, engaging with students and parents, classroom management, and participation in departmental and school meetings. All these elements are centered on the curriculum within the educational system. Teaching and learning effectiveness is shaped by numerous factors, such as the sufficiency of instructional materials, classroom dimensions, lighting, ventilation, seating arrangements, and access to technology. When facilities are inadequate or in disrepair, it adversely impacts lesson delivery, student engagement, and learning outcomes. According to Okebukola (2021), educators operating in well-equipped environments exhibit higher motivation levels, and students are likely to experience improved academic engagement and retention. In contrast, ineffective facilities management practices lead to increased absenteeism, decreased motivation, diminished cognitive performance, and heightened safety risks.

Statement of the Problem

Colleges of Education in Nigeria are crucial in training qualified teachers for primary and basic secondary education. Nevertheless, despite the significant role that lecturers play in ensuring quality education delivery, there is growing concern regarding the effectiveness of teaching and learning in these institutions. Reports indicate a decline in effective teaching, low levels of classroom engagement, insufficient research output, and poor student performance, raising serious doubts about how well lecturers are meeting their fundamental responsibilities, which include teaching, research, and community service. These challenges persist despite various interventions such as capacity-building initiatives, workshops, curriculum revisions, and policy reforms aimed at enhancing teaching standards in Colleges of Education. This situation underscores the urgent need to explore the factors affecting teaching and learning effectiveness; it seems that many Colleges of Education in Nigeria struggle with inadequate management of facilities, which can contribute to a decline in both teacher effectiveness and student performance. Supporting this, Adewale and Ibrahim (2022) reported that numerous Colleges suffer from outdated classrooms, malfunctioning equipment, and insufficient safety measures. Such issues appear to hinder lecturers' ability to work effectively and to equip students with essential employability skills. One might question the effectiveness of lecturers in their service delivery under these circumstances. Poor facilities may dissuade lecturers from exerting their best efforts, thereby impacting the overall quality of education.

Furthermore, it seems that lecturers working under such conditions may develop a lackadaisical or indifferent attitude towards their responsibilities. There have been reports of many lecturers not attending classes regularly, with some extending classes to just before examinations. Consequently, some appear to schedule lectures outside the official timetable, contrary to the Colleges of Education's regulations that stipulate the conclusion of lectures two weeks prior to examinations. This behavior could diminish their effectiveness and commitment.

Despite the challenges that have been identified, government agencies, college authorities, and various stakeholders have made efforts to enhance the situation through improvements in infrastructure and policy reforms. Nevertheless, it appears that these initiatives have not completely resolved the issues, primarily due to ineffective implementation, insufficient funding, and lack of adequate monitoring. Consequently, a more thorough investigation is required to comprehend why these problems continue to exist and how they can be addressed more effectively. This study is based on the premise of determining whether facilities management practices influence teaching and learning effectiveness, especially in public colleges of education in Niger State, Nigeria.

Purpose of the Study

The study examined the relationship between facilities management practices and teaching-learning effectiveness in colleges of education in Niger State, Nigeria. Specifically, the study sought to: determine the level of teaching-learning effectiveness in colleges of education in Niger State, Nigeria.

Research Questions

One research question was raised to guide the study:

1. What is the relationship between facilities management practices and teaching-learning effectiveness in colleges of education in Niger State, Nigeria?

Research Hypothesis

H⁰: There is no significant relationship between facilities management practices and teaching-learning effectiveness in colleges of education in Niger state, Nigeria.

Methodology

The descriptive research design of the correlational type was adopted for the study. The population of this study consisted of 950 lecturers of public Colleges of Education in Niger state, Nigeria. The sample selected for the study comprises 247 lecturers.

Two sets of self-designed instruments were used to collect relevant data for the study. These are Facilities Management Practices Questionnaire (FMPQ) and Teaching-Learning Effectiveness Questionnaire (TLEQ). The instruments contained two sections A and B. Section A seeks information on Facilities Management Practices, while section B seeks information on Teaching-Learning Effectiveness. For each of the items, the respondents responded on a modified 5-point Likert-type scale as Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree. And **section B** which contains the rating of teaching-learning effectiveness. For each of the items, the respondents respond on a modified 5-point Likert-type scale as Very Effective, Effective, Moderately Effective, Ineffective and Very Ineffective. The questionnaire was duly validated with Cronbach Alpha reliability coefficients of 0.78 and 0.85 respectively. Mean and standard deviation were used to answer the research questions while spearman's rank-order correlation analysis was used, due to non-normality of the data distribution, to test the hypothesis at 0.05 level of significance.

Data Analysis and Discussion of Findings

Table 1: Shown the result of test of Normality.

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
TLE_Score M	.340	247	.000	.720	247	.000
FMP_Score M	.304	247	.000	.699	247	.000
a. Lilliefors Significance Correction						

A test of normality was performed on the data using Shapiro-Wilk test the Shapiro-Wilk yielded $P=.000 < 0.05$ which is significant. This means that the data is normally distributed. Hence, the Spearman's Ranked Correlation, a non-parametric measure was used to compute the correlation between the FMP and TLE. The results are as shown in Tables 1 above.

Research Question: What is the relationship between facilities management practices and teaching-learning effectiveness in colleges of education in Niger State, Nigeria?

The result is presented in table 2 below.

Descriptive Statistics			
	Mean	Std. Deviation	N
FMP_Score M	4.2227	.70927	247
TLE_Score M	4.0850	.88280	247

The results revealed a high overall perception of facilities management practices, with a mean score of 4.22 (SD = 0.71), indicating that facilities management practices were effective. Similarly, teaching-learning effectiveness recorded a high mean score of 4.09 (SD = 0.88), suggesting that teaching-learning effectiveness were perceived as very effective.

Testing of Hypothesis

Hypothesis: There is no significant relationship between facilities management practices and teaching-learning effectiveness in colleges of education in Niger State, Nigeria.

The result is presented in table 3 below.

Correlations			FMP_Score M	TLE_Score M
Spearman's rho	FMP_Score M	Correlation Coefficient	1.000	.597**
		Sig. (2-tailed)	.	.000
		N	247	247
	TLE_Score M	Correlation Coefficient	.597**	1.000
		Sig. (2-tailed)	.000	.
		N	247	247
Correlation is significant at the 0.05 level (2-tailed).				

To examine the relationship between facilities management practices and teaching-learning effectiveness in colleges of education in Niger State, Nigeria, descriptive and inferential statistics were employed. A Spearman's rank-order correlation analysis was conducted due to non-normality of the data distribution, and the result showed a strong, positive, and statistically significant relationship between facilities management practices and teaching-learning effectiveness ($p = 0.597$, $p < 0.000$). This means that improvements in facilities management practices are associated with corresponding increases in the effectiveness of teaching-learning.

Discussion

The findings revealed the importance of adequate and well-managed educational facilities in fostering effective teaching-learning environments in colleges of education in Niger State, Nigeria. This findings agrees with Maulana (2023) who submitted that with poor physical working conditions, there are usually mental fatigue, truancy, frustration, discomfort, and poor health, all those consequently reduces lecturers' effectiveness. And also, Adeyemi, (2020) was of the viewed that the level of available resources is indeed a plus to the lecturers and goes to show the level of ingenuity and commitment of the lecturers toward effective delivery of lecture. The condition of facilities in a learning environment determines lecturers' effectiveness and students' performance.

Conclusion and Recommendations

The findings of this study revealed that facilities management practices in colleges of education in Niger State are very effective as shown in the high overall mean score. This implies that the available facilities are managed in ways that significantly improve educational performance. Also, teaching-learning effectiveness was rated very high, suggesting that educational delivery, lecturer-student engagement, and achievement of

learning outcomes are positively perceived. These results indicate the critical role of strong facilities management in promoting effective teaching and learning, thereby strengthening the competence of colleges of education to achieve their academic objectives.

Based on the findings and conclusion, it is recommended that the existing high standards in facilities management be sustained and further improved through innovative tools such as computerized maintenance management systems to improve maintenance efficiency. Regular needs assessments should be institutionalized to ensure facilities remain adequate and responsive to changing practical demands. Uninterrupted capacity development programmes for facilities managers and academic staff should be prioritized to foster effective resource utilization and a strong maintenance culture. Furthermore, sustainable financial support mechanisms should be established through government commitment and stakeholder partnerships to guarantee timely repairs, replacements, and upgrades. Finally, fostering a participatory approach that engages administrators, lecturers, students, and external partners will promote a common sense of ownership and responsibility in maintaining and improving facilities for long-term teaching-learning effectiveness.

References:

1. Adedipe, N. O. (2007). University quality assurance, finding strategy and task allocation. A paper presented at the workshop on tertiary education financing in University Lagos on April, 23-24.
2. Adepoju, T.L. & Akinola O.B. (2007). An Overview of the Existing Quality Assurance Criteria in Nigerian Higher Institutions and Policy Implications. Ibadan: Alafas Nigeria Company.
3. Adewale, T., & Ibrahim, S. (2022). Challenges of ICT Integration in Nigerian Colleges of Education. *Journal of Educational Technology*, 14(3), 45-57.
4. Adeyemi, M. (2020). School facilities and their influence on student achievement in Nigeria schools. *Journal of Educational Administration*, 40(1), 22-35.
5. Ajayi, I.A. (2002). Resource factors as correlates of secondary school effectiveness in Ekiti State. *Nigerian Journal of Counselling and Applied Psychology*, 1(1), 153-164.
6. Ahmed, A.H (2010). Students' Problems with Cohesion and Coherence in EFL Essay Writing in Egypt: Different Perspectives. *Literacy Information and Computer Education Journal (LICEJ)*, 1-214-221.
7. Akinfolarin, C.A. (2008). Resource utilization in vocational and technical education in Colleges of Education in South-West, Nigeria. An Unpublished Ph.D. Thesis, University of Ado- Ekiti, Ado-Ekiti.
8. Akinyemi, A.I. (2020). Facilities maintenance and academic productivity in Nigerian tertiary institutions. *African Journal of Educational Management*, 28(1), 50-63.

9. Arjanto, T., & Telussa, S. (2024). The impact of physical facilities on teaching and learning in secondary schools. *Journal of Educational Infrastructure*, 15(3), 234-247.
10. Barrett, P., Zhang, Y., Moffat, J., & Kobbacy, K. (2019). "A holistic, multi-level analysis identifying the impact of classroom design on pupils' learning." *Building and Environment*, 59, 678-689.
11. Bolapeju, M. A. (2022). Employers' Assessment of Graduates' Utilization of Employability Skills: Influence on Organizational Growth and Sustainable Development in Nigeria. ERIC.
12. Earthman, G.I. (2004). "Prioritization of 31 Criteria for School Building Adequacy." American Civil Liberties Union Foundation of Maryland.
13. Eborunkan, J.O (2019). Teacher effectiveness as a correlate of students' academic performance in public secondary schools in Ondo state, Nigeria. Unpublished M.Ed thesis, department of educational management, Ekiti state University, Ado Ekiti.
14. Egbuchiwe, U.V. (2018). Management of human and physical resources in Nigeria education system. In C.A. Iloh, C.P. Enueme, J.O.N. Igbinnedion & T.C. Ezugoh (Eds). *Comprehensive text in educational administration, planning and supervision*, 168-188. Enugu: Chembus Communication Ventures LTD.
15. Federal Republic of Nigeria (2014). National policy on Education. Lagos; NERDC Press.
16. Hill, E., Maier, P., & Cole, G. (2020). "Administrative support in higher education: Enhancing teaching and research efficiency." *Higher Education Management*, 32(2), 123-137.
17. Maulana, M. (2023). School physical conditions and student achievement: A global perspective. *Journal of School Facilities*, 42(1), 5-18.
18. Okebukola, P. (2021). Improving quality in Nigerian teacher education through effective infrastructure. *National Education Journal*, 7(1), 15-28.
19. Olatunji, A.A. (2013). Post-occupancy evaluation of Lagos State Polytechnic Facilities: A User-Based System. *JpEmerging. Trend.Eng. Appl.Sci.(JETEAS)*, 4(2), 229-236.
20. Oluwatoyin, I.O. (2014). Maintenance strategies and condition of public secondary school buildings in Ado-Odo/Ota Local Government Area Ogun State, Nigeria. Unpublished Ph.D thesis. Submitted to the School of Postgraduate Studies. Covenant University, Ogun State, Nigeria.
21. Owoeye, J.S. (2000). The effect of interaction of location, facilities and class size on academic achievement of secondary school students in Ekiti State, Nigeria. An Unpublished Ph.D. Thesis, University of Ibadan, Ibadan. *Science Journal of Humanities* 4(2), 196-205.
22. Rondeau, E.P (2017). Facility Management. John Wiley & Sons, Lagos.

23. Uchendu, C.C., Ekanem, E.E., & Jonah, S.T. (2013). Resource maintenance for the provision of educational services in public and private secondary schools in River State, Nigeria. *European Journal of Business and Social Sciences* 2(1), 15-23.
24. Usman, Y.D. (2016). Educational resources: An integral component for effective school administration in Nigeria. *Research on Humanities and Social Sciences*, 6(13), 27-37.
25. Zhao, Y., Lei, J., Yan, B., & Tan, H. (2020). "Technology use and teacher effectiveness in higher education: An empirical study." *Journal of Educational Technology Development and Exchange*, 13(1), 41-49.