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FACTORS SHAPING FACILITY MANAGEMENT PERFORMANCE IN TERTIARY INSTITUTIONS OF OYO STATE, NIGERIA

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ABSTRACT: *This study investigated the factors shaping facility management (FM) performance in tertiary institutions of Oyo State, Nigeria with a view to provide information that will enhance tertiary institution facility management practice. The study's research methodology employed a descriptive survey design, incorporating data from students and staff in four tertiary institutions. Five hundred and seventeen (517) and two hundred and eighty (280) questionnaires were administered on both students and maintenance staff units/departments of four tertiary institutions in the study area, out of which four hundred and eighty (480) and two hundred and fifty (250) representing 92.84% and 89.30% retrieval rate respectively, were considered adequate enough for the study. The high response rates indicate a strong interest and concern among stakeholders regarding FM in their institutions. The study adopted a stratified random sampling technique, and data collection was performed using questionnaires. The study employed factor analysis to identify key factors influencing FM performance, revealing insights into the perceptions and challenges faced by respondents. The findings highlight positive perceptions of FM, coupled with areas requiring improvement. The identified challenges include insufficient funds and human resources, poor building design and construction, budget restrictions, and inadequate supervision during and after construction. Recommendations were proposed to address these challenges, emphasizing enhanced maintenance protocols, standards for accommodation facilities, continuous training for facilities managers, stakeholder collaboration, regular performance assessments, investment in technology, and periodic policy reviews. The study concluded by stressing the critical need for improvements in FM practices within tertiary institutions in Oyo State.*

KEYWORDS: Accommodation standards, Facilities management, Maintenance protocols, Performance assessments, Policy review, Stakeholder collaboration, Technology integration, Tertiary institutions.

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INTRODUCTION

Tertiary institutions are not only citadels of learning; they also afford nations the capacity to connect seamlessly with the new international knowledge system within the arena where an effective facilities management practice exists. Since the learning environment is a critical factor in determining effective teaching and learning, Price (2003) observed that deplorable facilities will pose a serious threat to the achievement of this objective. In developed economies, challenges associated with aging and expanding facilities have been identified by higher education leaders as major determinants of research and academic performance (Marmolejo, 2007). In developing economies like Nigeria, the need for better management of facilities in tertiary institutions is a matter of urgency, as revealed by the Nigerian Universities Commission (NUC, 2006), because they are central in supporting the core objectives of teaching, learning, and research.

Different definitions for facility management have emerged from individuals and organizations alike. From an individual's perspective, Enoma (2005) referred to FM as an age-old practice born out of necessity from when buildings were constructed to support human activities. Bennet and Iossa (2006) observed that decisions for requisite FM services were, hitherto, made intuitively without recourse to a thorough analysis of what is required and how it is to be applied, and these decisions often come too little too late; after plans, designs, and costs are already in place, and construction, in most cases, has been completed. Asiabaka (2008) described FM as the application of scientific methods in the overall management of the physical learning environment to achieve educational goals and objectives. FM's primary function is to handle and manage support services to meet the basic needs of the organization, its employees, and core operations

For societies, tertiary institutions are assumed to be the key to technology, productivity, and the other ingredients of international competitiveness and economic growth. The tertiary institution also shapes and preserves the value that defines culture. And it is believed to be a major engine of social justice, equal opportunity, and democracy. Tertiary institutions face immediate pressure to preserve existing colleges on their campuses and enhance the capacity of their higher education system to address growing demands. To serve the current population of students, tertiary institutions must maintain, renovate, and expand their buildings where necessary and keep equipment and technology current to meet changing workplace needs. For higher institutions, the money for maintenance comes from the government as part of each school's annual budget.

But in spite of this, many tertiary institutions in Nigeria, including those in Oyo State, face challenges in facility management, which hinder them from fulfilling their primary goal of equipping graduates with both practical and theoretical knowledge of technologies. Student-utilized facilities often lack proper maintenance, leading to decreased satisfaction, which contradicts the purpose of facilities management. Accommodation facilities, such as student hostels, sometimes fall short of the required standards, resulting in overcrowding and discomfort (Akomolafe, 2016; Ainon & Rosmaizura, 2018). Despite the recognized significance of effective facility management (FM) in tertiary institutions, challenges persist, particularly within the context of Oyo State, Nigeria. The growing complexity of building systems, coupled with the evolving nature of FM practices, necessitates a closer examination of the factors influencing FM performance in the region.

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This study therefore, aims to investigate factors shaping facility management performance in tertiary institutions of Oyo State, Nigeria to provide information that will enhance tertiary institution facility management practice.

EMPIRICAL REVIEW

Investing in building facilities and making a profit is the primary goal of the FM organisation. The difficulty for professionals is to stay profitable while dealing with ever-tightening legislation and occupant demands. Meanwhile, the environmental benefits of sustainable practices are recognised by all, and the increased cost and often ambiguous financial return of these initiatives are still perceived as roadblocks (Aliyu et al., 2016). Early FM engagement during the pre-construction stage, according to Xianhai (2013), can lead to concerns such as inefficient use of building materials and equipment. Changes in environmental circumstances and a lack of a maintenance culture contribute to the ageing and damage of building facilities, according to Asiabaka (2008). Time restrictions, a shortage of understanding and a lack of top managers' commitment were the critical challenges to implementing a consistent and complete sustainable FM practice (Elmualim et al., 2010).

Sarpin et al. (2016) briefly assessed the shortcomings and obstacles to sustainable development in FM practices. The study identified the competence of professionals, knowledge, organisational factors and authority issues. Education, environmental policies/legislation and FM skills are required to provide a positive working environment to monitor the output of FM service to guarantee the country's economic success (Akinsola et al., 2012). In addition, Asiabaka (2008) described a lack of policy guidance for infrastructural growth, a lack of managerial process expertise, nonchalant or passive attitudes towards facilities deterioration, a lack of qualified experts, insufficient qualifications and insufficient funding as fundamental factors affecting FM practices.

Cobbinah (2010) attributed the factors to lack of funds, improper maintenance culture, increased cost of maintenance, pressure from end-users, errors during construction and ineffective maintenance carried out by facility personnel. Koleoso et al. (2017) mentioned that the time at which work is completed, mistakes during the construction process, design problems, late response in carrying out maintenance, unavailability of competent maintenance personnel, scared skilled workers, insufficient finance, age of buildings and the general condition of the building all affect FM practices. Several other studies have also emphasised the problems faced by FM practitioners when conversing with end-users (Shah, 2007; Then, 2013; Thomsen et al., 2013; Risholt et al., 2013; Moum et al., 2017). Focusing on measurable aspects and technological capabilities, facility managers frequently overlook issues such as everyday facility use and users' behaviour alignment with recommended solutions (Sezer, 2012; Gram-Hanssen et al., 2017). Also, the use of buildings by end-users in a way that was not intended can potentially jeopardise effective FM practices (Gram-Hanssen et al., 2017).

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METHODOLOGY

The research methodology employed in this study involved careful planning and execution to address specific research questions and control variables for drawing meaningful conclusions. The research design utilized a descriptive survey research design, chosen for its appropriateness in assessing opinions on facility management performance in selected tertiary institutions in Oyo State. Surveys were deemed suitable for their ability to explain and predict causal relationships through systematic observation and predetermined research questions, especially when researchers have a high level of control and participation. The population of the study consisted of students and staff from four tertiary institutions in Oyo State, namely the University of Ibadan, Lead City University, The Polytechnic of Ibadan, and Ibadan City Polytechnic. A sampling frame was defined, including staff members of the Physical Planning Unit, staff members of the Work and Services Department, and users of the facilities, especially students. Table 1 below depicts what the entire study population of the study looks like

Table 1: Study Sample Frame

S/N	Tertiary Institutions	Student Population	Maintenance Unit Population
1	University of Ibadan	41,743	230
2	Lead City University, Ibadan	7,335	42
3	The Polytechnic Ibadan, Ibadan	23,000	137
4	Ibadan City Polytechnic, Ibadan	9,630	55
	Total	**81708**	**464**

Source: *Researcher's Compilation, 2024.*

DISCUSSIONS AND FINDINGS

Factors Influencing Facility Management Performance in Selected Tertiary Institutions

The table reveals the factors influencing facility management performance in selected tertiary institutions in the study area. Beginning from Table 3 below, it reveals the mean rankings of selected universities and polytechnics based on various factors influencing Facility Management (FM) performance in University of Ibadan, Lead City University, The Polytechnic, Ibadan, and Ibadan City Polytechnic. Both universities identify poor integration, design errors, and the deterioration of facilities as high-impact factors; which means that the three listed factors are the factors that have significant effect on facility management performance in the two selected universities. There are differences in mean scores for factors such as; lack of discernible maintenance culture, poor attitudes of building users, and inadequate financial support. Lead City University seems to have a lower mean for lack of discernible maintenance culture, indicating a perception of lower impact compared to the University of Ibadan. Reckless use of facilities is considered a low-impact factor in the University of Ibadan but is not present in the top factors for Lead City University. Both polytechnics share similar high-impact factors, including low priority for maintenance, inadequate motivation for FM personnel, poor integration of management/stakeholder knowledge, design errors, and deterioration of facilities. The Polytechnic Ibadan generally has higher mean scores for high-impact factors, indicating a slightly stronger perception of these factors' importance. Ibadan City Polytechnic shows a higher mean score for poor workmanship

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compared to The Polytechnic Ibadan. The differences in mean scores highlight the need for tailored strategies. For example, Lead City University may focus on improving discernible maintenance culture, while the University of Ibadan may address poor attitudes of building users. Polytechnics can concentrate efforts on common high-impact factors, such as low priority for maintenance and inadequate motivation for FM personnel, to enhance overall FM performance.

Table 2: Mean Ranking of the Selected Universities and Polytechnics

S/N	Factors	University of Ibadan			Lead City University			The Polytechnic, Ibadan			Ibadan City Polytechnic		
		Ranking	Mean	Perf. Lv.	Ranking	Mean	Perf. Lv	Ranking	Mean	Perf. Lv	Ranking	Mean	Perf. Lv
1	Reckless use of Facilities	20	2.55	Low	20	1.94	Low	20	2.13	Low	20	2.20	Low
2	Lack of discernable maintenance culture	19	2.93	Moderate	19	2.11	Low	19	2.37	Low	19	2.30	Low
3	Poor integration of management/stakeholder knowledge	18	3.03	Moderate	18	2.31	Low	18	2.43	Low	18	2.30	Low
4	Design errors	17	3.03	Moderate	17	2.37	Low	17	2.71	Moderate	17	2.40	Low
5	Deterioration of facilities or structures as a result of their age	16	3.08	Moderate	16	2.37	Low	16	2.89	Moderate	16	2.60	Low
6	Poor workmanship	15	3.09	Moderate	15	2.94	Moderate	15	3.04	Moderate	15	2.60	Low
7	Inappropriate strategic leadership and responsibility for driving essential change	14	3.09	Moderate	14	3.09	Moderate	14	3.16	Moderate	14	2.80	Moderate
8	Lack of Qualified and Professional Facility Managers	13	3.16	Moderate	13	3.14	Moderate	13	3.19	Moderate	13	3.00	Moderate
9	Unnecessary bureaucracy, i.e. excessively Complicated Administrative Procedure	12	3.17	Moderate	12	3.17	Moderate	12	3.23	Moderate	12	3.10	Moderate
10	Irregular of fixed budget	11	3.25	Moderate	11	3.20	Moderate	11	3.27	Moderate	11	3.20	Moderate
11	Lack of Successful Maintenance Programmes by the Maintenance Department	10	3.29	Moderate	10	3.23	Moderate	10	3.30	Moderate	10	3.20	Moderate
12	Poor attitudes of Building Users towards FM	9	3.35	Moderate	9	3.29	Moderate	9	3.33	Moderate	9	3.30	Moderate
13	Inadequate Financial Support from the Management of F.M unit	8	3.37	Moderate	8	3.31	Moderate	8	3.33	Moderate	8	3.30	Moderate
14	Low Priority for Maintenance	7	3.39	Moderate	7	3.34	Moderate	7	3.41	High	7	3.40	Moderate
15	Inadequate motivation for FM personnel	6	3.42	High	6	3.37	Moderate	6	3.46	High	6	3.50	High
16	Poor integration of management/stakeholder knowledge	5	3.62	High	5	3.40	Moderate	5	3.53	High	5	3.50	High
17	Design errors	4	3.67	High	4	3.43	High	4	3.54	High	4	3.50	High
18	Deterioration of facilities or structures as a result of their age	3	3.72	High	3	3.60	High	3	3.57	High	3	3.60	High
19	Poor workmanship	2	3.76	High	2	3.60	High	2	3.61	High	2	3.80	High
20	Inappropriate strategic leadership and responsibility for driving essential change	1	3.76	High	1	3.71	High	1	3.83	High	1	3.90	High
		Weighted Mean = 3.29			**Weighted Mean = 3.05**			**Weighted Mean = 3.17**			**Weighted Mean = 3.08**		

Source: Field Survey, 2023.

Keys: 1.00 – 2.00 (Very Low), 2.01 – 3.00 (Low) 3.01 – 4.00 (Moderate) 4.01 – 5.00 (High) 5.01 – 6.00 (Very High)

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This table shows the mean rankings of selected tertiary institutions based on various factors influencing Facility Management (FM) performance in the tertiary institutions. It can be deduced from the table that the top factors that affect FM performance across the selected tertiary institutions include inadequate motivation for FM personnel, poor integration of management/stakeholder knowledge, design errors, deterioration of facilities or structures due to age, poor workmanship, and inappropriate strategic leadership and responsibility for driving essential change. Factors such as lack of discernible maintenance culture, irregular or fixed budget, and lack of successful maintenance programs are considered to have a moderate impact on FM performance. The identified high-impact factors are consistent across the tertiary institutions, suggesting common challenges that need attention for improving FM performance. The Weighted Mean of 3.19 indicates a moderate overall performance level across all factors for the selected tertiary institutions.

Table 3: Mean Ranking of Selected Tertiary Institutions

S/N	Factors	Ranking	Mean	Performance Level
1	Reckless use of Facilities	17	2.33	Low
2	Lack of discernible maintenance culture	16	2.62	Low
3	Poor integration of management/stakeholder knowledge	16	2.62	Low
4	Design errors	15	2.94	Low
5	Deterioration of facilities or structures as a result of their age	14	3.05	Moderate
6	Poor workmanship	13	3.12	Moderate
7	Inappropriate strategic leadership and responsibility for driving essential change	12	3.16	Moderate
8	Lack of Qualified and Professional Facility Managers	12	3.16	Moderate
9	Unnecessary bureaucracy, i.e. excessively Complicated Administrative Procedure	11	3.18	Moderate
10	Irregular of fixed budget	11	3.18	Moderate
11	Lack of Successful Maintenance Programmes by the Maintenance Department	10	3.23	Moderate
12	Poor attitudes of Building Users towards FM	9	3.28	Moderate
13	Inadequate Financial Support from the Management of F.M unit	8	3.33	Moderate
14	Low Priority for Maintenance	7	3.35	Moderate
15	Inadequate motivation for FM personnel	6	3.42	Moderate
16	Poor integration of management/stakeholder knowledge	5	3.46	Moderate
17	Design errors	4	3.47	Moderate
18	Deterioration of facilities or structures as a result of their age	3	3.56	Moderate
19	Poor workmanship	2	3.64	Moderate

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20	Inappropriate strategic leadership and responsibility for driving essential change	1	3.75	Moderate
	Weighted Average = 3.19			

Source: *Field Survey Results, 2023*

The table above shows the ANOVA table for factors influencing the facility management performance across the selected tertiary institutions. The F-statistic is 2.636, and the associated significance level (p-value) is 0.001. The F-statistic of 2.636 suggests that there is more variability between groups than within groups, supporting the idea that there are significant differences in Facility Management Performance across the selected tertiary institutions. The significant F-statistic suggests that the factors influencing FM performance are not uniform across the selected tertiary institutions. There are notable differences in how these factors manifest among the institutions. The p-value (0.001) indicates that the differences in means between the groups are statistically significant. Based on the ANOVA results, it appears that there are significant differences in the factors influencing Facility Management performance among the selected tertiary institutions. The factors contributing to this difference are likely more varied between institutions than within them. The ANOVA results support the idea that the differences in FM performance are not merely due to random chance. The factors contributing to these differences are likely meaningful and significant.

CONCLUSION AND RECOMMENDATIONS

In conclusion, the findings of this study underscore the critical role of facilities management in tertiary institutions, emphasizing its impact on instructional delivery and overall academic experiences. The recognition of facilities management as a pivotal discipline for supporting core operations aligns with the assertions of academic authorities in the field. However, challenges persist within the tertiary institutions of Oyo State, Nigeria, hindering their ability to fulfill their primary mission of providing high-quality education. The identified challenges encompass various aspects, ranging from inadequate maintenance of student-utilized facilities to shortcomings in accommodation standards, such as overcrowded student hostels. These issues directly impact students' satisfaction and, subsequently, the effectiveness of facilities management.

Despite the acknowledged significance of effective facilities management, the evolving nature of building systems and FM practices necessitates a continuous examination of the factors influencing FM performance. The study highlights the pressing need for improvements in facilities management practices within the context of Oyo State, considering the growing complexity of educational institutions and the increasing expectations placed on them.

1. Based on the study's findings, the following recommendations are put forth to Facilities Managers in Nigeria's Tertiary Institution:

2. Enhanced Maintenance Protocols: Implement robust maintenance protocols for student-utilized facilities to ensure regular upkeep, addressing issues promptly, and thereby enhancing overall satisfaction.

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3. Standards in Accommodation Facilities: Establish and enforce clear standards for accommodation facilities, particularly student hostels, to prevent overcrowding, ensure comfort, and create conducive living environments.

4. Continuous Training for Facilities Managers: Given the evolving nature of building systems and facilities management practices, institute regular training programs for facilities managers to keep them abreast of the latest developments and best practices in the field.

5. Stakeholder Collaboration: Foster collaboration between educational institutions, government bodies, and private stakeholders to pool resources and expertise, addressing challenges collectively and improving facilities management across the tertiary education sector.

6. Regular Performance Assessments: Implement a system for regular performance assessments of facilities management practices, incorporating feedback from students, staff, and other stakeholders. This will enable continuous improvement and adaptation to changing needs.

7. Investment in Technology: Explore the integration of modern technologies, such as facility management software and smart building solutions, to streamline processes, improve efficiency, and enhance the overall management of educational facilities.

8. Policy Review: Periodically review and update policies related to facilities management to ensure alignment with current educational and technological trends, as well as the evolving needs of students and academic staff.

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