MANAGEMENT EFFICIENCY OF PRIVATE UNIVERSITY FACILITIES: A STUDY OF COVENAT UNIVERSITY'S RESIDENTAL ESTATE

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Abstract

Facility efficiency is an integral part of the overall management of any organisation as the actualization of its goal and objectives require the provision, maximum utilization and appropriate management of facilities. To this end, the need to study and ascertain the efficiency in management of facilities in Nigerian private universities was undertaken.

In achieving the aim of the study, one hundred and ninety six questionnaires were distributed to the residents of the university's staff quarters made up of diverse housing for the various cadre of its faculty using the non-probability sampling technique. A total of 124 questionnaires were returned representing a response rate of 63.26% and collated data was analysed accordingly using the weighted arithmetic mean.

Findings showed that inhabitants of the university staff quarters were satisfied with the management of the university's facilities by the Physical Planning and Development unit (PPD) as eight of her major facilities were optimally functioning and maintained while three other systems were in need of attention.

Keywords: Facilities Management, residential, staff quarters, Covenant University

Introduction

Housing constitutes not only a basic human need but also a vital component of man's welfare, life sustenance and survival (Bello & Bello 2006). In the hierarchy of man's needs, housing has been ranked second to food. It is believed to have a profound influence on health, efficiency, social behaviour satisfaction and general welfare of the community (Onibokun 1982). For housing to produce these impacts, it must be adequately provided with functional infrastructure and facilities. Akanbi (2004) stated that the increase in population of a country also creates an increase in the need for housing.

In the educational sector, the demand for school infrastructure at all levels from the primary to the university has far outstripped the growth in the construction of new schools and the expansion of the existing one. At the tertiary level, the phenomenal growth in the number of applicants for admission every year has lead to the rapid development of new institutions, including private universities. Today, almost all the 36 states and Abuja (the Federal Capital Territory) have a federal and/or state college of education, polytechnic and university. In spite of these positive developments, the demand for admission still far outstrips the supply at the tertiary level. The result is that over the years the existing institutions have had to double or even triple their intake without a commensurate expansion of facility, including buildings. From the foregoing, it is evident that Nigeria's higher educational institutions have to grapple with increasing demand for the management of their facilities, especially buildings resulting from overcrowding.

The provision of housing for the members of the faculty is no exception. The adequate provision of staff quarter accommodation buildings in a university has various advantages and disadvantages to its inhabitants. By far, the advantages usually out-weigh the disadvantages. Some of these advantages include punctuality to classes as against having to come from outside the university, which could be characterised by traffic congestion and thus fostering lateness to work. The peace and tranquility derivable from a campus environment is also very important in an institution where adequate housing is being provided as faculty from various parts of the country would be attracted because of infrastructural provision such as: security, internet connectivity, functional public utility such as constant power supply and portable water and the provision of housing for the academic and non academic staff. This ultimately increases human productivity in terms of output. In some tertiary institutions, there is no provision for accommodation for their staff, but in Covenant University, about 85% of its academic staff are accommodated within the University. The onus of managing accommodation facilities therefore fall on the management of the University which is expected to manage same effectively with little or no challenge.

This research therefore focuses on Covenant University's efficiency in the management of her facilities in the staff quarters by Physical Planning and Development (PPD) of the University charged with the responsibilities of development and maintenance of the physical assets of the entire University.

Covenant University, being the main focus of this research is one of the six private universities in Ogun State located in Canaanland, Ota. The mission based university founded in 2002 by the Living Faith Church Worldwide aka Winners Chapel spear headed by Dr. David O. Oyedepo. The university has two main Colleges housing 20 departments. The Colleges are the College of Development Studies (CDS) and the College of Science and Technology (CST). It occupies a total landed area of 560 acres and in a bid to sustain the evident manpower growth, the Church has recently acquired 82 acres of land to accommodate the increasing number of staff of the University. The University has mapped out various segments of its Campus for various purposes. These include, the academic area, students hostels, recreational areas, staff quarters, circulation areas, sewage treatment and disposal areas and a landfill. For the effective productivity of particularly the students and academic staff, the area zoned for staff residence is at the rear where serenity is of an utmost level. However, to accommodate the various cadres of academic staff, this area is further zoned into various staff quarters. These staff quarters consist of:

- 2.1 The Graduate Assistant Quarters: This comprises a set of 6 buildings with six flats each, culminating to a total of 36 flats. These flats have the following appurtenances: a living room/dinning, kitchenette and ensuite bedroom.
- 2.2 Post Graduate Halls: These comprise of six, three storied blocks of twenty flats each, totalling one hundred and twenty flats. Of the twenty flats, eight are one bedroom flats while the balance of sixteen is two bed roomed. Each two bedroom flats each have the following appurtenances: living room, dinning area, kitchen, toilet and bath.
- 2.3 Three Bedroom Luxury Apartments: This set of apartment consists of nine, three storey blocks, with each block having eight luxury flats. Appurtenances of each flat comprise: a living room, three bedrooms (en-suite), dinning section, kitchen and store.
- 2.4 Professors Village: This section is made up of a set of twenty-two, four bedroom detached houses each having steward quarters comprising two bedrooms, a kitchen and convenience. The duplex has the following spaces: Family lounge, main lounge, guest toilet, kitchen, dinning area, visitor's room, master bedroom and two other bedrooms (all rooms en-suite).
- 2.5 Terraced Suites: These are two bedroom terrace buildings totalling thirty six in number originally meant to cater for the accommodation needs of academic staff on sabbatical leave. The buildings have the following spaces: 2 bedrooms (en-suite), kitchen, visitor's convenience, main lounge and dinning section.

Apart from the above accommodation, the University in a bid to cater for more of its staff established and partially completed a new estate in January 2010. Having different types of housing units, the new residential estate consist of:

- 2.6 Twenty-Six Number Detach Houses: These houses were built with the exact specification of houses in the Professor's Village as aforementioned.
- 2.7 Blocks of Two Bedroom Flats: These consist of thirty-two flats in four blocks of eight flats. The appurtenances of each flat include: Living room, dinning area, kitchen, visitor's toilet inclusive of an ensuite two bedroom.

2.8 Blocks of Three Bedroom Flats: These comprise forty-eight flats in twelve blocks having four flats with each having the following spatial provisions: a living room, three bedrooms, (en-suite master bedroom), dinning section, visitor's toilet, kitchen and store.

Though, not many studies exist on facilities management efficiency in Nigeria which maybe due to the behavior of people showing indifference and adapting to the general poor performance of social services (Yewande et al 2010), literature for this current attempt was drawn from not only Facilities management but also from the field of property management. Ho et al (2006) empirically tested the relationship between building management regimes and the conditions of private apartment buildings in Hong Kong. The paper developed an assessment scheme to assess the health and safety conditions of 134 apartment buildings. Multiple regression models were employed to analyze the effect of building management regimes on building conditions and the optimal functional form of the regression models was selected using Box-Cox transformation. The empirical results of the study suggested that the presence of incorporated owners and property management agents (PMA) are significant factors in enhancing building conditions. The authors concluded that the empirical results would assist building owners in determining which management regimes to adopt should they want better building conditions. The government may also consider giving more support to owners by incorporating them and employing PMAs to create a pleasant living environment for society. The authors had a robust study on property management; however, it was at the neglect of facility management.

Lam (2008) investigated the actual impact of management practices on performance quality of the outsourced professional housing maintenance services in Hong Kong. The study hypothesized that there was positive correlation between output performance quality and input management factors. Triangulation methodology was used to develop and test the correlation whereby literature review and qualitative interviews with the maintenance consultancy management practitioners of the Hong Kong Housing Authority (HKHA) were used to generate the hypothesis which was then tested by quantitative regression, using data from the maintenance consultancies of the Authority. The findings from the hypothesis was transformed into sub-hypotheses, which were primarily positive relationships, between service quality and individual input factors of competition level, past performance, project leadership and quality benchmarking. Results of the qualitative and quantitative studies

confirmed and validated the hypotheses, and hence substantiated that there is a significant correlation between performance quality and the relevant management practices in the outsourcing process of professional housing maintenance services. The study concluded on the note that whilst the correlation is validated in the context of professional housing maintenance services of the HKHA, it forms a conceptual baseline on which further research can build to test its significance for many other public and private sector settings, and for various professional property management services. The author had a robust empirical study; however, the study was at the neglect of facilities management.

Adewunmi and Ogunba (2008) resolved the confusion on the role of the traditional estate surveyor with respect to the discipline of facilities management through a critical examination of the attitude and training of property surveyors. With a focus on Lagos metropolis, a population of 1,234 was adopted. The data collection instrument employed was the self-administered questionnaire and data collected were analyzed using descriptive statistics (frequency counts and Likert scales). The authors finding revealed that most estate surveyors incorrectly believe they can handle all aspects of facilities management, but feel threatened in this all-encompassing role by other built environment professionals. The paper however concluded that surveyors need to define their areas of best relative contribution to facilities management.

Mustapha and Hamimah (2008) aimed at determining the extent of facility management in Malaysia and reviewed the changes in the property sector that may positively contribute to opportunities in facility management and the challenges that need to be taken into account. In particular, the paper focused on the changes that are taking place, both at the corporate and at government level. It also considered issues arising in the local market based on personal observation and discussions with professionals in the property management sector in Malaysia. The review focused on areas where facility management is being actively implemented which include types of property facility management, the management method used and the extent of facility management being adopted.

Asiabaka (2008) focused on the need for effective facility management in schools in Nigeria. The paper described the concept, nature, types of school facilities, need for facilities in schools and facility management problems. The author suggested methodologies for facilities management and concluded that school facilities give meaning to the teaching and learning process. The paper recommended that school managers carry out comprehensive

assessment of the facilities to determine areas of need which will assist in policy formulation as it relates to facility management in schools.

Olujimi (2010) analysed the relationship between infrastructural facilities and rental values of residential properties in Akure, Nigeria. The paper investigated the available infrastructural facilities in residential properties and analysed their influence in the determination of the rental values of the properties. Akure was divided into four residential zones and one hundred and ninety tenants were randomly selected for interview. Eleven infrastructural facilities were identified as peculiar to residential properties in Akure. The study employed the multiple regression model to determine the influence of infrastructural facilities in the rental values of the property while the step-wise analysis revealed that wallfence and installed burglary proof are significant determinants of rental values of residential properties in Akure. However, Pearson's Product Moment Correlation Coefficient matrix was used to verify the significant level of the independent variables. The study concluded that housing should be provided with necessary infrastructural facilities to enhance its functions as a place of habitation and this would increase the rental values, which the property developers would enjoy on their residential properties.

Arogundade (2010) examined the problems of facilities in South West Nigerian universities. The study population consisted of all academic staff in 10 public universities in South West Nigeria, while the sample was made up of 500 academic staff randomly selected from the 10 universities. A self-designed instrument tagged "Problem of Facilities in Universities Questionnaire (PFUQ)" was used to collect relevant data for the study. The data collected were analyzed using frequency counts and percentage scores. The findings showed that, the financial support to the universities was not adequate, the universities were not provided with adequate facilities while students and staff maintenance culture contributed to high destruction of the available facilities. Based on the findings, it was recommended that the government should provide adequate funds to the universities in its annual budgetary allocation. Besides, adequate provision of facilities should be provided while students should be well educated on how to maintain available facilities in Nigerian universities.

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In order to generate data for this study, a total of 196 questionnaires were administered to the staff of Covenant University residing in the various residential apartment types in the staff quarters of Covenant University. A total of 124 questionnaires were returned and found useful for the study as elaborated in Table 1.

Table 1. Questionnaire Administration within the Staff Quarters of Covenant University

Type of Property	No. of	No. of	Percentage (%) Level of			
	Questionnaires	Questionnaires	Responses			
	Administered	Returned				
Graduate Assistant	18	14	77%			
Quarters						
Post Graduate Hall	60	40	66%			
3Bedroom Luxury	36	18	50%			
Apartments						
Professors Village	11	7	63%			
Terraced Suites	18	12	66%			
Detached Houses	13	8	61%			
(New Estate)						
2Bedroom Flats	16	12	75%			
(New Estate)						
3Bedroom Flats	24	13	54%			
(New Estate)						

The collated data were then subjected to analysis in order to generate conclusive results for the study.

In order to understand the research area, the researcher asked respondents to identify the facilities available in the quarters, the analysis is as shown in Table 2.

Table 2. Facilities Available in the Staff Quarters, Post Graduate Quarters and 3Bedroom Luxury Quarters.

	Staff Quarters		Post	Graduate	3Bedroom Luxury Quarters		
Facilities				s			
	Availabl	Not	Availabl	Not	Availabl	Not	
	e	Availabl	e	Availabl	e	Availabl	
		e		e		e	
Water supply	14	0	40	0	18	0	
Sewage Disposal	14	0	40	0	18	0	
Electricity Supply	14	0	40	0	18	0	
Water Treatment Plant	0	14	40	0	18	0	
Living Room	14	0	40	0	18	0	
Kitchen	14	0	40	0	18	0	
Dinning Area	0	14	40	0	18	0	
Toilet and Bath	0	14	40	0	18	0	
Store	0	14	0	40	18	0	
Visitors Room	0	14	0	40	0	18	
Family Lounge	0	14	0	40	0	18	
Main Lounge	0	14	0	40	0	18	

Guest Toilet	0	14	0	40	0	18
Study	0	14	0	40	0	18
Elevator	0	14	0	40	0	18
Hot/Cold Water Supply	14	0	40	0	18	0
Lawns	14	0	40	0	18	0
Internet Connection	14	0	40	0	18	0
Street Light	14	0	40	0	18	0
Parking Lot	14	0	40	0	18	0
Ceiling Fan	14	0	40	0	18	0
Air Conditioners	0	14	0	40	0	18
Reception	0	14	0	40	0	18
Intercom	0	14	0	40	0	18
Garage	0	14	0	40	0	18
Kitchen Pantry	0	14	0	40	0	18

Table 2 shows the facilities that are available in the Graduate Assistant Quarters of the university some of which are; water supply, adequate sewage disposal, electricity supply, lawns, internet connection amongst others marked available while the facilities not available are; reception, elevator, kitchen pantry, garage, guest toilet, main lounge and other facilities labelled with an availability of zero. The Table also shows the facilities that are available in the Post Graduate Quarters of the university, some of which are; water supply, sewage disposal, electricity supply, lawns, internet connection, toilet and bath, dinning area, kitchen

amongst others, while the facilities not available are; reception, kitchen pantry, garage, guest toilet, main lounge, study amongst others marked with a zero availability.

For the 3bedroom luxury quarters of the university, the Table shows the facilities that are available in them some of which are; water supply, sewage disposal, electricity supply, lawns, internet connection, toilet and bath, dinning area, kitchen amongst others, while the facilities not available are; reception, kitchen pantry, garage, guest toilet, main lounge, study, intercom amongst others marked with zero availability.

Table 3. Facilities Available in 2 Bedroom Luxury Quarters, 3Bedroom New Estate and **Professors Village**

Facilities	2Bedroom Luxury Quarters		3Bedroom Estate	m New	Professors Village		
	Availab le	Not Availabl	Availabl e	Not Availabl	Availabl e	Not Availabl	
		e		e		e	
Water Supply	12	0	13	0	7	0	
Sewage Disposal	12	0	13	0	7	0	
Electricity Supply	12	0	13	0	7	0	
Water Treatment Plant	12	0	13	0	7	0	
Living Room	12	0	13	0	7	0	
Kitchen	12	0	13	0	7	0	
Dinning Area	12	0	13	0	7	0	
Toilet and Bath	12	0	13	0	7	0	
Store	0	12	13	0	7	0	
Visitors Room	0	12	0	13	7	0	

Table 3 shows the facilities that are available in the 2bedroom luxury quarters of the university, some of which are; water supply, sewage disposal, electricity supply, lawns, internet connection, toilet and bath, dinning area, kitchen amongst others marked available while the facilities not available are; reception, kitchen pantry, garage, guest toilet, main lounge, family lounge, study, intercom amongst others. Also, the Table shows the facilities that are available in the university's new estate's 3bedroom luxury flats. Some of which are;

water supply, sewage disposal, electricity supply, lawns, internet connection, toilet and bath, dinning area, kitchen amongst others marked available while the facilities not available are; reception, kitchen pantry, garage, guest toilet, main lounge, family lounge, study, intercom amongst others marked by zero availability.

Lastly, the Table shows the facilities that are available in the professors village of the university, some of which are; water supply, sewage disposal, electricity supply, lawns, internet connection, toilet and bath, dinning area, kitchen, study, garage, guest toilet amongst others, while the facilities not available are; reception, intercom amongst other facilities marked zero in availability.

Table 4. Facilities Available in Terraced Suites and Detached Houses (New Estate).

	Terraced Su	iites	Detached Estate	House New		
Facilities	Available Not Available		Available	Not Available		
Water Supply	12	0	8	0		
Sewage disposal	12	0	8	0		
Electricity Supply	12	0	8	0		
Water Treatment Plant	12	0	8	0		
Living Room	12	0	8	0		
Kitchen	12	0	8	0		
Dinning Area	12	0	8	0		
Toilet and Bath	12	0	8	0		
Store	0	12	8	0		
Visitors Room	0	12	8	0		
Family Lounge	0	12	8	0		

Main Lounge	12	0	8	0
Guest Toilet	12	0	8	0
Study	0	12	8	0
Elevator	0	12	0	8
Hot and Cold Water Supply	12	0	8	0
Lawns	12	0	8	0
Internet Connection	12	0	8	0
Street Light	12	0	8	0
Parking Space	12	0	8	0
Ceiling Fan	12	0	8	0
Air Conditioners	12	0	8	0
Reception	0	12	0	8
Intercom	0	12	0	8
Garage	0	12	8	0
Kitchen Pantry	0	12	8	0

The Table shows the facilities that are available in the terraced suites of the university, some of which are; water supply, sewage disposal, electricity supply, lawns, internet connection, toilet and bath, dinning area, kitchen, air conditioners, guest toilet, main lounge amongst others marked available, while the facilities not available are; reception, kitchen pantry, garage, family lounge, study, intercom amongst others marked by zero availability.

Lastly, the Table shows the facilities that are available in the detached house new estate of the university, some of which are; water supply, sewage disposal, electricity supply,

lawns, internet connection, toilet and bath, dinning area, kitchen, kitchen pantry amongst others marked available while the facilities not available are; reception, garage, guest toilet, main lounge, family lounge, study, intercom amongst others facilities marked by zero availability.

Efficiency of Facilities

In order to determine the efficiency of the available facilities within the staff quarters, the researcher assigned the weighted arithmetic mean was utilised by assigning various digits to specific terms as described below:

- 5- Very Efficient
- 4 Efficient
- 3- Indifferent
- 2- Fairly Efficient
- 1- Not Efficient

Thereafter, the results were tabularised and the mean of individual facility's efficiency ranked to ascertain the most efficient managed facility.

Table 5: Efficiency of Facilities

Services	Percentage	5	4	3	2	1	Mean	Ranking
Electricity Supply	VE – 58.3, E-41.7	63	45	0	0	0	4.5833	Ist
Water	VE – 45.4, E-54.6	49	59	0	0	0	4.4537	2 nd
Supply								
Cleaning of	VE-7.4, E-79.6, FE-	8	86	0	2	12	3.7037	8 th
Common	1.9,							
Areas	NE-11.1							

Table 5 depicts the adequacy of facilities management for the aforementioned facilities tabularised above. In response to electricity supply, 58.3% of respondents stated that electricity supply was very adequate while another 41.7% of the respondents opined that it was just adequate. The mean for electricity was ascertained at 4.5833 thereby ranking it as the best managed facility. Water supply was adjudged second most efficint behind electricity supply as 45.4% and 54.6% of respondents chose it as being "very adequate" and "adequate" respectively. Its mean was ascertained at 4.4537. Repair works of the facilities in the staff quarters was judged third as 75.9% respondents adjudged this service adequate while another

11.1% were indifferent about its efficiency. 13.0% of respondents further opined this variable as being fairly adequate. Overall, the mean for repair works was ascertained at 4.3888.

Security in the staff quarters was adjudged fourth best by a representation of 51.9% respondents who opined it very adequate, while some other respondents presumed it 37.0% adequate. Lastly, 11.1% or respondents opined it as fairly adequate thereby culminating in a mean representation of 4.2962. In order of importance, street lighting was acclaimed fifth most maintained, the lawns ranked sixth while sewage disposal was ranked seventh most efficiently maintained. The hot and cold water system was opined to be least efficient service in the residential estate.

The research findings showed that facilities available in the staff quarters are: water supply, sewage disposal, electricity supply, water treatment plant, living room, kitchen, dinning area toilet and bath, internet connection, parking lots, ceiling fans, airconditioners and street light facilities. The ranked order showing the maintenance of University facilities has shown that more imput is needed in the proper management of some of her facilities which include: hot and cold water systems, fumigation mechanisms, internet facilities and the cleaning of common areas.

Conclusion

In a bid to enhance facility management in Covenant University, her Directorate of Works (Physical Planning Department, PPD) is encouraged to map out an effective internal evaluation system in order to build a feedback mechanism by which the performance of her facilities can be monitored round the clock. This system would provide the top management executives of the works department with sufficient information to evaluate the performance and ensure the longevity and sustainability of the various facilities in the University.

Furthermore, the measurement of the adequacy of facilities is of importance. The University should evolve and adopt qualitative and quantitative techniques in measuring the adequacy of the facilities in relation to human occupancy ratio.

In conclusion, this research has shown that the Physical Planning and Development unit of the university (PPD) has shown effectiveness in the management of Covenant University staff quarters albeit, more room for improvement still exist

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