POST OCCUPANCY EVALUATION OF STUDENTS' HOSTEL ACCOMMODATION IN FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

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Abstract
The rate of increase in the number of young people seeking admission into universities or other higher institutions of learning and diversity of their needs, makes the issue of students housing a particular problem. Today housing the students is one of the major problems facing most of Nigeria's higher institutions of learning. This paper provides the results of post occupancy evaluation of students' hostel accommodation in Federal University of Technology, Minna. The main objectives of this study were to evaluate the state and conditions of the hostel accommodation whilst ascertaining the users' perception of the buildings with a view to providing practical recommendations for improved comfort. To achieve the desired objectives, data were obtained through primary and secondary sources. This comprised the use of structured questionnaires and observation schedule. A total of 120 Questionnaires were distributed while there was one observation schedule per hostel block. The results indicated that more beds were placed in the rooms than they were designed for, water supply was inadequate and maintenance of the hostels needed to be improved on. It is recommended that maintenance of the hostels should be out-sourced and hostel managers should control room occupancy to prevent overcrowding.

Keywords: evaluation, hostels, maintenance, university, user perception.

BACKGROUND TO THE STUDY

A university is a place of higher learning that unifies people from diverse backgrounds. There is the need to provide adequate accommodation in the school environment to enhance learning efficiency. Hostels are characterized by the provision of appropriate environment in which to study as well as to live and opportunities for social and informal academic interchange (Pride, 1999). The number of students seeking and getting admission into universities increases every year. This creates the challenge for an adequate or adaptive system to accommodate them, whilst maintaining satisfactory level of comfort. The increase in student population increases the difficulty and cost of controlling and maintaining standards in the hostels.

For many of the students that come into the university, this may be their first opportunity of living outside their homes. Therefore, the design of student hostels should provide a sense of good architecture which would have a lasting impression on their minds. Thus, it is imperative that the hostel environment and condition be well maintained. The aim of this study is to evaluate the state and conditions of the hostel accommodation at the Federal University of Technology, Minna, whilst ascertaining the users' perception of the buildings with a view to providing practical recommendations for improved comfort.

Growth of Universities in Nigeria

Universities are generally acknowledged to be the zenith and citadel of learning and research. In Nigeria the growth of universities has been in phases or generations. Presently, Nigeria has witnessed about four generations of University growth (Olugbenga, 2010). The fourth generation has particularly brought about a surge in the number of universities in Nigeria. The history of university education in Nigeria began in 1948 with the establishment of the University College Ibadan as an affiliate of the University of London. After the independence of Nigeria in 1960, it was granted full status of a university in 1962 (Adeogun, et al., 2009).

Four regional universities that would later become Federal Universities were also added to the University of Ibadan following the recommendation of the Ashby report on university education in 1960 (Ashby, 1960). They are:

1. University of Nigeria, Nsukka - 1960
2. Ahmadu Bello University, Zaria -1962

3. University of Lagos, Lagos - 1962
4. University of Ife, Ile-Ife -1962

These five universities became the forebears of university education in Nigeria and are regarded as the First generation universities. The Second generation of Nigerian Universities was brought into being as a result of the Third National Development Plan (1975-1980) and gave rise to eight more universities: the Universities of Maiduguri, Jos, Sokoto, Ilorin, Calabar, Port Harcourt, Benin and Bayero University Kano (Ogunu, 1990).

The return of democratic rule to Nigeria in 1979 after military rule, also referred to as the Second Republic, gave rise to the emergence of state owned universities as a result of constitutional changes which allowed states to have their own universities. This change kick started the Third generation of universities between 1981-1990 (Ajayi and Ekundayo, 2008). A total of six state owned universities (Imo, Ondo, Lagos, Akwa-Ibom, Oyo and Cross-River states), five federal universities of technology (located in Akure, Bauchi, Minna, Owerri and Yola), two universities of agriculture (Markudi and Abeokuta) as well as one federal conventional university (Abuja) were established.

The Fourth generation of universities (1991- date) gave birth to the introduction of privately owned universities into the university education system in Nigeria. Nigeria by 2015, had 40 federal universities, 40 state universities and 61 private universities (NUC, 2016). Concerns however, exist as to the sufficiency of these universities in meeting up with the number of applicants and prospective students seeking entry into these universities as there is an enrollment of only about 17% of applications into universities (Nigeria Education Fact Sheet, 2012). There exists a vast room for expansion that seems to be currently being filled by private universities. This may be a precursor to a fifth generation of universities that are able to fill the void and bridge the enrollment gap of prospective students seeking to gain entry into Nigerian universities.

Growth and Development of Federal University of Technology, Minna
The Federal University of Technology (FUT) Minna was established on 1st February 1983. It is one of the five federal universities of technology established to promote science and technology in the country. The other federal universities are located in Akure, Bauchi, Owerri, and Yola. The University operated solely in Bosso campus for 21 years. The land for the main campus was acquired at Gidan Kwano village along Minna/Bida road in 1992 by the then Military President, General Ibrahim Babangida. The main campus covers a total land area of 10,650 hectares and it is located 10 kilometres away from the city of Minna (History of Federal University of Technology, Minna, 2014). A large number of the students travel from the Bosso campus to the new campus with the help of the school bus shuttle on a daily basis. Over the years, the University has grown in terms of faculties/schools, departments, infrastructure and human resources.

Hostel Accommodation at Federal University of Technology, Minna
In the quest to accommodate the students, the University has made provision for students' hostels in both Bosso and Gidan Kwano campuses. The hostels in Bosso Campus include, blocks L, M, N and O for female students and blocks P and Q for male students. In Gidan Kwano campus, the female hostels comprise of blocks C, D, E, F and G while the male hostels are blocks A and B. The hostels in Bosso campus have a combined capacity to accommodate 1600 students, while the combined capacity of the hostels in Gidan Kwano campus is 940. Majority of the students therefore reside off campus. Hostel accommodation totaling 2,540 is grossly inadequate in meeting the need to provide decent, conducive and convenient accommodation for a student population of about 13,000. This situation where desired student accommodation is insufficient generally leads to overcrowding and squalor as is evident by complaints from students (Pacetv, 2014). This in turn leads to a deterioration of hostel facilities as they tend to be overloaded, overstretched and abused (Residence Life, 2014).

RESEARCH METHOD
Descriptive survey research method was used for this study. Two research instruments were adopted – Questionnaire and Observation Schedule.The questionnaire consisted of nineteen questions which basically focused on the physical conditions of the students' hostels. It also focused on the students' perception of the standard of living provided in the hostels. The observation schedule was used in this research for the researchers to document the state of disrepair of the hostels. A total of 13 aspects

were observed. A copy of the observation schedule was used to assess each of the hostels (both male and female) at Bosso and Gidan Kwano campuses.

Population of the Study
The population of the study area comprised of all the hostels in Federal University of Technology, Minna, Niger State. There are 2 blocks of male hostels and 4 blocks of female hostels at the Bosso campus while at the Gidan Kwano campus there are 5 blocks of female hostels and 2 blocks of male hostels. Questionnaires were administered to 120 students, and observation carried out on all the hostels.

Sampling Method and Sample Size
A non-probability sampling method was adopted in the selection of the respondents for this study. Specifically, purposive sampling method was adopted to select the respondents for two reasons. Firstly, due to the evaluation approach to assess the hostel facilities and secondly due to the aim of this study to evaluate the state and conditions of the hostel accommodation. According to Zikmund (2003, p. 382) purposive sampling is "a non-probability sampling technique in which a researcher selects the sample based on his/her judgment about some appropriate characteristics required of the sample members".Thus, through a process of purposive sampling, the researchers selected 40 students in Bosso Campus hostels comprising of 24 male and 16 female and 80 students in Gidan Kwano Campus hostels comprising of 36 male and 44 female. The rationale for the selection was based on the premise that the selected students had lived for a considerable number of years and interacted with the spaces being evaluated and might otherwise have been affected by it. However, unlike statistical sampling, the sample is not a representative of the entire population of students living in both campus hostels.

Rooms in the Hostel Blocks
Hostel accommodation on both campuses is fully utilized beyond capacity. The hostel accommodation allocated for male students at Gidan Kwano campus has 83 rooms each for Blocks A and B. Figures 1 and 2 illustrate the front views of Blocks A and B.

Figure 1: Front view of hostel Block A for male students at Gidan Kwano Campus

Figure 2: Front view of hostel Block B for male students at GidanKwano Campus

There are 12 rooms each for blocks C, D, E, F, and G, which accommodate the female students at Gidan Kwano campus. Figures 3 and 4 illustrate views of two of the female hostels namely Blocks E and G.

Figure 3: Side view of Block E, female hostel at Gidan Kwano campus

Figure 4: Front view of Block G, female hostel at Gidan Kwano campus

60 rooms are provided each in blocks P and Q where the male students are accommodated in Bosso campus. Figures 5 and 6 provide illustrations of blocks P and Q.

Figure 5: Front view of hostel Block P for male students at Bosso campus

Figure 6: Front and side view of hostel Block Q for male students at Bosso campus

Blocks L, M, N and O, which accommodate the female students, have 20 rooms each at Bosso campus. Figures 7 and 8 illustrate views of Blocks M and N.

Figure 7: Side view of hostel Block M for female students at Bosso campus

Figure 8: Side view of hostel Block N for female students at Bosso campus.

Table 1 shows the distribution of rooms and bed spaces in the hostels on both campuses. In summary, there are 426 rooms for students in the hostels on both campuses with a total of 2,944 bed spaces.

Table 1: Distribution of rooms and bed spaces in the hostels

Block	Campus	Gender	Total No. Of Rooms	No. Of Bedspaces In A Room	Total No. Of Bedspaces
A	GIDAN KWANO	MALE	83	4	332
B	GIDAN KWANO	MALE	83	4	332
C	GIDAN KWANO	FEMALE	12	6	72
D	GIDAN KWANO	FEMALE	12	6	72
E	GIDAN KWANO	FEMALE	12	6	72

F	GIDAN KWANO	FEMALE	12	6	72
G	GIDAN KWANO	FEMALE	12	6	72
L	BOSSO	FEMALE	20	12	240
M	BOSSO	FEMALE	20	12	240
N	BOSSO	FEMALE	20	12	240
O	BOSSO	FEMALE	20	12	240
P	BOSSO	MALE	60	8	480
Q	BOSSO	MALE	60	8	480
TOTAL			426		2944

PRESENTATION AND DISCUSSION OF RESULTS

Sex and Level of Study of Respondents

Out of the120 questionnaires distributed, 60 were given to male students and 60 were given to female students. However, one of the female students did not return her questionnaire so there are a total of 119 respondents. Only one student was in 400 level as most of the 400 level students were on industrial attachment and therefore not on campus.

Table 2: Status of the respondents

		Frequency	**Percentage**
GENDER	MALE	60	51.4%
	FEMALE	59	49.6%
	Total	**119**	**100.0%**
LEVEL OF STUDY	PRE-DEGREE	4	3.36%
	100	35	29.41%
	200	44	36.98%
	300	28	23.53%
	400	1	0.84%
	500	7	5.88%
	Total	**119**	**100.0%**

Facilities in the Hostels

The number of wardrobes, lockers, ceiling fans, sockets and light fittings in the rooms were obtained from the respondents. Table 3 indicates the distribution of these facilities.

Table 3: Distribution of Facilities in the hostels

Facilities	Number In Each Room	Frequency	Percentage
Wardrobes In Rooms	None	29	24.4%
	1-3	16	13.4%
	4-6	44	37.0%
	7-9	30	25.2%
	Total	119	100.0%
Lockers In Rooms	None	30	25.2%
	1-3	27	22.7%
	4-6	40	33.6%
	7-9	16	13.5%
	Above 9	6	5.0%
	Total	119	100.0%
Ceiling Fans In Rooms	None	5	4.2%
	1	86	72.3%
	2	24	20.1%
	3	4	3.4%
	Total	119	100.0%
How Many Are	None	15	12.6%

Functioning	1	83	69.8%
	2	14	11.8%
	3	1	0.8%
	All	6	5.0%
	Total	119	100.0%
How Many Sockets In Your Room	1-2	29	24.4%
	3-4	63	52.9%
	5-6	22	18.5%
	Above 6	5	4.2%
	Total	119	100.0%
How Many Sockets Are Functioning	None	38	31.9%
	1-2	40	33.6%
	3-4	29	24.4%
	5-6	4	3.4%
	All	8	6.7%
	Total	119	100.0%
Lighting Fittings In Rooms	1-2	113	95.0%
	3-4	6	5.0%
	Total	119	100.0%
How Many Lighting Fittings Are Functioning	None	15	12.6%
	1-2	93	78.2%
	3-4	3	2.5%
	All	8	6.7%
	Total	119	100.0%

Table 3 also indicates the facilities that are functioning in the respondents' rooms. The study revealed that 81% of the male hostels have only one ceiling fan in their rooms, 19% of the rooms in the male hostel have no single ceiling fan, while all the female hostels have ceiling fans in their rooms. 53% of them have one, 41% have 2 and 8% have 3 ceiling fans respectively in their rooms. Figure 9 shows a room with a ceiling fan and Figure 10 shows a room without ceiling fan.

Figure 9: A room with ceiling fan

Figure 10: A room without ceiling fan

The study revealed that in 31.9% of the rooms, the sockets are not functioning. As a result of the absence of functioning sockets, students often make illegal electrical connections in the room as shown in Figures 11 and 12. An exposed distribution board was observed in one of the hostels as illustrated in Figure 13.

Figure 11: A room with illegal

Figure 12: Room with illegal connection to fan electrical connections to socket

Figure 13: An exposed distribution board in the hostel

Toilets and Showers in the Hostels

Table 4 indicates that the majority - 82.4% of the toilets and showers are not directly attached to the hostel rooms, but are at the end of the corridor for collective use by the students.

Table 4: Distribution of toilets and showers in the hostels.

.	Response	Frequency	Percentage
Does Your Room Have Toilet And Shower Attached?	Yes	21	17.6%
	NO	98	82.4%
	Total	119	100.0%

Supply of Water to the Hostels

Table 5, shows that a majority of 56.3% of the respondents receive water supply daily in the rainy season. 32.8% of the respondents are hardly ever supplied water in the dry season.

Table 5: Frequency of water supply to the hostels

	Supply of Water	Frequency	PERCENTAGE
Water supplied in rainy season	Daily	67	56.3%
	Thrice a week	6	5.0%
	Twice a week	4	3.4%
	Once a week	2	1.7%
	Hardly ever	40	33.6%
	Total	119	100.0%
Water supplied in dry season	Daily	50	42.0%
	Thrice a week	21	17.7%
	Twice a week	6	5.0%
	Once a week	3	2.5%
	Hardly ever	39	32.8%
	Total	119	100.0%

Over Crowding in the Hostels

In Hostel A (male) – Gidan Kwano, which has a statutory allocation of 4 students per room, the study revealed that 86% of rooms studied have between 4-6 students, while 7-9 students are resident in the remaining 14% of rooms. This shows that 14% of the rooms in this hostel are overcrowded.

In Hostel B (male) – Gidan Kwano, which similarly has a statutory allocation of 4 students per room, the study indicates that 7% of respondents rooms have 1-3 students in a room, 40% have 4-6 students, 46% have between 7-9 students and a further 7% have 10-12 occupants while none of the rooms studied have more than 12 occupants. 53% of the rooms are overcrowded and 7% are under occupied. Hostel B can therefore be said to be overstretched in terms of its occupancy.

The female hostel in Gidan Kwano campus comprising blocks C, D, E, F, G has legal occupancy of 5 students per room. The study shows that 73% of rooms have 4-6 occupants per room, 20% have 7-9 occupants and 7% have 10-12 occupants while none had 1-3 occupants or above 12 occupants. This hostel is therefore overcrowded in 27% of rooms.

In Bosso Campus, Blocks P and Q (male) posed identical results. These hostels have a statutory allocation of 8 students per room; 60% of the rooms studied have 7-9 occupants, 20% have 4-6 occupants, 7% have 1-3 occupants while 13% are occupied by 10-12 students. Therefore 13% of the rooms are overcrowded while 27% are under occupied.

In Blocks L, M, N and O (female) hostel in Bosso campus, the study shows that 80% of hostel has 9-12 students per room while 20% has above 12 students per room. As its statutory allocation is 9 per room, 20% of the rooms are overcrowded.

Students' Perception of Comfort in the Hostels

Table 6 indicates that majority, 45.4% of the students perceive the hostel accommodation as uncomfortable, while 39.5% consider the hostels as very uncomfortable.

Table 6: Perceived level of comfort by students in the hostels.

	Level of Comfort	Frequency	Percentage
Comfort in the hostel	Very uncomfortable	47	39.5%
	UNCOMFORTABLE	54	45.4%
	COMFORTABLE	18	15.1%
	VERY COMFORTABLE	0	0.0%
	Total	119	100.0%

Discussion of Findings

Many of the rooms had less wardrobes and lockers than the number of occupants in the room (see table 3). The design of the hostels is not flexible to accommodate the increasing number of students as well as accommodate new levels of information and communication technology. All these should be looked into in future designs, to make the new hostels more functional and easily adaptable.

About two-thirds of the hostels had a ceiling fan in the rooms with a slightly lesser number functioning. Every room had at least one socket, but one-third of the rooms do not have any functioning socket (see table 3). Students in those rooms made illegal connections through the fan fixture.

Also, findings showed that lack of good water supply, poor management and maintenance are major issues highlighted by the students as reasons for lack of comfort in their hostels. The exposed electricity distribution board observed in one of the hostels is a danger to the students and should have been covered immediately by hostel managers. About half of the respondents claim to be supplied water daily in the rainy season, with about one-third hardly ever receiving water; a slightly greater fraction were not supplied water in the dry season (see table 5). Due to the conditions of the hostel, and the overcrowded situation of the rooms, 45% of the respondents are uncomfortable in the hostel, while 40% are very uncomfortable (see table 6).

RECOMMENDATIONS

Based on the information provided by the students evaluated and the observations of the researchers, it is necessary to make some recommendations on ways of improving the functionality and comfort of the student hostels. The following recommendations are therefore made:

i. There is need for the hostel managers to control room occupancy to avoid overcrowding or underutilization of rooms. This can be achieved by proper monitoring of the number of students per room.

ii. The University management should outsource maintenance and management of the student housing to ensure adequate services and facilities are provided for the students. The services and facilities include adequate water supply and regular maintenance of fittings such as fans and sockets.

iii. The University management should partner with developers to build hostels utilizing Build, Operate and Transfer contract or similar forms of building contract as it is very obvious that

there is need for more hostel accommodation to cope with the large number of students in Nigerian universities.

CONCLUSION

This paper has assessed the conditions of the hostel accommodation in Federal University of Technology, Minna through post occupancy evaluation. From the results obtained in this study, it can be concluded that the occupants of the hostels are unsatisfied with the state and maintenance conditions of the hostels. The problems of overcrowding can be addressed by proper control of the number of students allowed in each room by hostel managers. It is observed that if attention is paid to the maintenance and repairs of the basic services and facilities in the hostels, a greater student satisfaction would have been received from the respondents. Hostels, as living spaces should offer adequate services as well as functional and aesthetic satisfaction to students.

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