Influence of Availability and Serviceability of Student Accommodation Facilities on student performance in Federal University of Technology Minna

Article · December 2019

5 authors, including:

Adama Unekwu Jonathan
Federal University of Technology Minna
7 PUBLICATIONS   17 CITATIONS

SEE PROFILE

Ocheja David
Federal University of Technology Minna
1 PUBLICATION   0 CITATIONS

SEE PROFILE

Adeyosoye Babatunde Ayoola
Federal University of Technology Minna
14 PUBLICATIONS   28 CITATIONS

SEE PROFILE

Philip Ayuba
Federal University of Technology Minna
13 PUBLICATIONS   42 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:

Project   Durability performance of green concrete composite consisting steel fibrous and rice husk ash View project

Project   Facilities management View project

Influence of Availability and Serviceability of Student Accommodation Facilities on student performance in Federal University of Technology Minna

Adama, U. J.[1], Ocheja, D.[1], Ayoola, A. B.[1], Ayuba, P.[2] & Ogunbode, E. B.[3]
[1]Department of Estate Management & Valuation, Federal University of Technology, Minna.
[2]Department of Architecture, Federal University of Technology, Minna
[3]Department of Building, Federal University of Technology, Minna.
jonathan.adama@futminna.edu.ng

Student accommodation facilities are provided by institutions of higher learning in order to enhance the academic experience of the students. Accommodation facilities provide the basis for quality tertiary education. Extant studies affirmed that adequacy of hostel facilities affect the academic performance of students residing in hostel. Although, most Nigerian tertiary institutions are characterised by inadequate hostel facilities. This study was conducted to assess the effect of availability and serviceability of hostel facilities on students' academic performance at the Federal University of Technology Minna, Gidan Kwano campus. The total population of students residing in the hostels as at 2018/2019 session was 1,930. Systematic and convenient random sampling technique were used in selecting 219 students as the sample size for the study. Online survey was employed in administering questionnaire to the sampled students. The study found that 66.9% of the hostel facilities are available and serviceable while 32.9% are unavailable and unserviceable. Although, result of the study revealed that facilities such as study room, sport centres, internet service, air condition and study chair/table are unavailable and unserviceable in the hostels, students have continued to have good performance. The result further showed that only 26% of sampled students were below third-class division, while 162 students are in the category of second-class lower and above. The study recommends that the institution should ensure that adequate student accommodation facilities are provided in serviceable condition to further enhance student learning and good performance.

Keywords: Academic Performance, Availability; Facilities; Hostel; Serviceability.

Introduction

Student accommodation is an important component of educational facilities in the higher institutions of learning world over. The study on student accommodation is of interest because it is one of the major factors influencing parents and students' choice of institutions (Price *et al.,* 2003). There is evidence that efficient and comfortable student accommodation plays a crucial role in influencing student academic interest, desirable educational outcomes, promoting security, responsible citizenship, intellectual stimulation, mutual composition and inspiration (Hassanain, 2008; Nimako and Bondinuba, 2013; Akindele, 2015; Owolabi, 2015; Zortovie, 2017; El-Hussain *et al*., 2018). Although there are reported cases of inadequate provision of student accommodation in Nigeria, government have been trying in recent time to provide accommodation for the ever-increasing student population in the universities. A demonstration of such government efforts led to the construction of standard hostel accommodation for the students in Federal University of Technology Minna, as part of "needs assessment" that was conducted in all Nigeria federal universities. In view of government efforts on student

accommodation, there is need to assess the current student accommodation to determining the serviceability of the available facilities (Hassanain, 2008; Amole, 2009; Khajehzadeh & Vale, 2016). Furthermore, an assessment of current supply of housing in the university will provide the necessary feedback for determining and improving the level of satisfaction that students derive from the accommodations (Preiser, 1989; Khajehzadeh & Vale, 2016).

Literature Review

Student accommodation has been defined by different scholars, for instance, Khozaei *et al.* (2010) stated that student accommodation is a hostel which is built within institution where students have access to the university recreational facilities. Akindele (2015) also defined Student accommodation-is a place where students reside-within or-outside the-campus or institution. Student accommodation in this study refers to the hostels and all supporting facilities that are provided for the students on campus to make living and learning convenient. Extant studies have shown that many institutions are not able to provide adequate student accommodation on their campuses (Ubong, 2007; Abdul, 2008; Nwite & Nwuche 2016). Hence, students seek accommodations outside the university campuses. Student accommodation found within the campus is referred to as on-campus accommodation or hostel while the accommodation found outside the campuses are known as off-campus accommodation or lodges.

The facilities necessary to support student learning and productivity vary from one school to the other. However, the common elements that constitute student accommodation include bed/mattresses, writing/reading chair and table, closet or wardrobe, study-room, recreational-space for outdoor and indoor sporting-activities, campus-shuttle-bus, lighting, mini markets, adequate water supply, garbage disposal, fire safety, Close Circuit Television (CCTV) cameras, adequate fencing, burglary-proof-windows, corner shops, public toilets and 24hours-security personnel (Curley, 2003; Hassanain, 2008; Abramson, 2009; Olujimi & Bello, 2009; Egwuom, 2010). Najib *et al.* (2011) provided additional list of student accommodation elements to include automated teller machine (ATM), car-park, mini market, bookshop, Wi-Fi, fitness-centre, cafeterias and air-conditions. However, Sawyerr and Yusof (2013) summarized student housing facilities under five categories, namely: accommodation-room, washroom, store, common and recreation room; and support services. This categorisation is adopted in this study.

Studies have shown that hostel-accommodation in-Nigeria are characterised by-inadequate number-of-bed spaces and limited-or poorly-maintained-facilities, resulting in poor academic performance on the part of the students, health problems and other social ills, rape, phone-snatching, murder, cult activities and robbery within the hostel (Agboke, 2014; Nwite & Nwuche, 2016). Additional effects of poor student accommodation are undue stress, health hazard and hostile social-life among the students (Aluko, 2010; Lekwot *et al.* 2013; Akindele, 2015). The inadequacy of student accommodation facilities is more pronounce among government owned institutions (Ajayi *et al.,* 2015; Akinpelu, 2015). Evidences of inadequate student accommodation puts the fundamental aim of the students in schools at risk. For instance, Hassanain (2008) affirmed that a well-planned hostel-facilities-promotes desirable-educational-outcomes-and help to-achieve-broader objectives in any institution. Ekejiuba (2015), asserted-that good hostels' facilities-influence positive academic studies while poor hostels' environment constitutes a restraint to the learning process. Ekejiuba (2015) further explained-that-hostels encourage more social interactions-and students should-be free from domestic interference and therefore attend to-their-studies-diligently.

In a study on indoor air quality and academic performance in Australia School of Business, Strafford (2015) found-that-good indoor air quality created with provision of good ventilation system can positively affect student academic performance. Ivwighreghweta and Igere (2014) conducted a study on the impact of internet service on academic performance of students in tertiary institutions in Nigeria. The study found that students' academic performance can be improved with availability of internet-service in the hostel. Oluwunmi *et al.* (2012) asserted that the lack-of facilities-such as study room, table-and internet service have negative affect on student-capacity-to learn-in-an-institutions' hostel. Furthermore, Ali *et al.* (2013) conducted a study on-student's-accommodation and students' academic performance in-Pakistan. The study found that the accommodation of students has significant-effect-on-their-academic-performance. Other studies were conducted to show the effect of choice of student accommodation and students' academic performance (Zortovie, 2017 and Adama *et al.,* 2017). Some researchers tend to relate satisfaction with hostel facilities and students' academic performance. The study of Mahad and Nor (2016), found that there is a relationship between satisfaction of students with hostel facilities and students' academic performance. It is against this background that this study investigates the availability and serviceability of hostel facilities on students' academic performance in the Federal University of Technology (FUT), Minna. Information from this kind of assessment can serve as bases for housing managers, designers and policy makers to make improvement decisions to the current and future construction of student accommodations.

Methodology

There are ten (10) units of students' accommodation with a total of 442 rooms on the campus of FUT Minna. Three (3) units of the hostels are occupied by the male students while seven (7) units are occupied by the female students. The hostels are named as Block A, B, C, D, E, F, G, Shehu Aliyu Hostel, New Boys Hostel and New Girls Hostel. Block C − G are enclosed in a fenced compound with one access gate. The number of bed spaces found in the rooms differs depending on the hostel. While the male hostels mostly consist rooms of 5 bed spaces, the female hostels consist of rooms of 2, 4 and 6 bed spaces respectively. The total number of bed spaces in the hostels is 1,930. Table 1 shows the hostels in Gidan Kwano campus and their capacity.

The population for the study is 1,930. Random sampling technique was employed in selecting sampled students from the male hostels. The male hostels consist of 238 rooms occupied by 1,046 students. One student was selected in a room after every two rooms. The sample size for the male hostel was 119 students. Researcher was unable to access the female blocks due to gender difference. Therefore, convenience random sampling technique was employed to sample students in the female hostels based on location and time of availability of the students. Convenience sampling, which is also known as availability sampling is a non-probability sampling method that used to sample populations whose members can only be conveniently available to participate in study (Saunders *et al*., 2012). Based on the preliminary observation by the researchers, female students' mostly leave and return back into the hostel within the morning hours and evening hours of the day. Hence, 4 hours was spent at the gate of each female hostels to administer the questionnaires. Two (2) hours was spent in the morning while another two (2) hours was spent in the evening at the gate of the female hostels to administer questionnaires. Pilot survey conducted indicated that it will take approximately 12 minutes to administer one questionnaire. Using these parameters, the sample size for the female hostels was 100 students. Hence, the sample size for the study was 219 students.

Table 1: Names and Capacity of Hostels

Name of hostel	Gender	No of rooms	Bed Space Per Room	No of bed spaces
Block A	Male	83	5	415
Block B	Male	83	5	415
Block C – G	Female	70	6	420
Shehu Aliyu Hostel	Female	62	4	248
New Boys Hostel	Male	72	4 and 2	216
New Girls Hostel	Female	72	4 and 2	216
Total		**442**		**1,930**

Table 2: Breakdown of Sample Size

Name of hostel	No of Student	Proportion %	Sample Size
Block A	415	21.5	47
Block B	415	21.5	47
Block C – G	420	21.8	47
Shehu Aliyu Hostel	248	12.8	25
New Boys Hostel	216	11.2	25
New Girls Hostel	216	11.2	28
Total	**1,930**	**100%**	**219**

Results and Discussion

Table 3 illustrates students' responses on availability of hostel facilities. It can be seen from the table that 73% of the students responded that study room is unavailable in the hostels. Study room is one important facility that should be provided in an ideal hostel in other to aid learning (Oluwunmi *et al.,* 2012). A well-equipped study room will afford the students comfortably space to read and carry out assignments with little or no disturbance from other hostel users. This result therefore implies that the absence of study rooms in the hostel could affect the ability of students to do heir assignment and effectively reverse their books, which could have implication for academic performance. Table 3 also provided that 92% of the students responded that bookshelves are unavailable in the hostels. Hence, students face difficult in proper arrangement of their textbooks and other learning materials. The table also revealed that 71% of the students responded that internet service (WiFi) is unavailable in the hostels. Students have limited source of accessing the internet in the hostels. This could also result to difficulty in carrying out assignment in the hostels and can affect students' academic performance. The study also revealed that air conditions are not adequately provided in the hostels. Only 26% of the respondents reported that air conditioners are available in their hostels. Although the availability of air conditions provides an indoor air quality which can influence students' academic performance positively (Strafford, 2015), the hostels are well ventilated through other sources as indicated by 100% response to space and ventilation facilities. The study showed that while the institution may not provide air conditioners to enhance the indoor air quality, other strategies (e. g ceiling fans, and cross ventilated windows) are adopted to ensure that the rooms are well ventilated. This is very important because a healthy indoor air quality influences positive academic performance. The study also revealed that study chair/table is not adequately provided in the hostel. The table showed that only 13% attested that study chair/table is provided in their rooms. Majority of the students make use of their bed to read and carry out assignments which can be discomforting.

Table 4 illustrates students' responses on serviceability of facilities provided in the hostel. It can be observed that although, 94% of the students responded that telecom service is available. However, only 68% of the student confirmed that telecom service is serviceable. This shows that 32% of the students have trouble in the usage of

telecom service. Telecom service is seen as one of the most important facilities needed in improving students' academic performance in an institution (Ivwighreghweta & Igere, 2014). This implies that the academic performance of 32% of the students could be negatively affected due to the unserviceability of telecom service in the hostels.

Table 5 illustrates the availability and serviceability of hostel facilities in the hostels. The study revealed a mean score of 32.9% of the facilities in the hostels are unavailable and unserviceable. These facilities include study room under accommodation room category, book shelves under storage facilities category and sport centres under recreation facilities category. Other unavailable and unserviceable facilities include internet service, air condition and study chair/table under support service category. Studies have shown that these unavailable and unserviceable facilities in the hostel can have negative effects on the academic experience and performance of the students (Strafford, 2015; Oluwunmi *et al.,* 2012; Ivwighreghweta & Igere, 2014).

Table 6 shows that over 55% of the students have difficulty in carrying out assignments in the hostels. This is as a result of unavailability of facilities that could aid students in specific departments. Architectural students in the hostel would require a chair and table in their rooms in other to comfortably carry out their assignment. As earlier shown in Table 3, study chair/table and internet service that could aid sourcing of online materials are not provided in the hostels. Hence, students face difficulties in carrying out assignments in the hostels. The study further evaluated students' performance in their academics against the backdrop of the availability and serviceability of facilities in the hostel accommodation

Figure 1 illustrates academic performance of hostel students using frequency and percentages. The Figure provided that 5% of the students have CGPA of below 1.50 which is pass division according to National Universities Commission grading system. 21% have a CGPA from 1.50 – 2.39 which implies they are on third class division. 43% have CGPA of 2.40 – 3.49 which implies they are on second class lower division. 23.7% have CGPA of 3.50 – 4.49 which means they have second class upper division. Only 7.3% have CGPA above 4.50 which implies that the students are on first class division.

Table 3: Availability of Hostel Facilities

Categories	Facilities	Availability	Unavailability
Accommodation room	Space/ventilation	219(100%)	0(0%)
	Study room	60(27%)	159(73%)
Sanitary facilities	Toilet	218(95.6%	1 (0.4%)
	Bathroom	219 (100%)	0 (0%)
Storage Facilities	Wardrobe	215 (98%)	4 (2%)
	Bookshelves	18 (8%)	201 (92%)
Common Areas/Recreation Facilities	Kitchen	217 (99%)	2 (1%)
	Sport Centre	70 (32%)	149 (68%)
Support Services	Electricity	219 (100%)	0 (0%)
	Water Supply	219 (100%)	0 (0%)
	Telecom Service	205 (94%)	14 (6%)
	Internet Service	64 (29%)	155 (71%)
	Air Condition	58 (26%)	161 (74%)
	Study Chair/Table	28 (13%)	191 (87%)
	Lighting	218 (99.6%)	1 (0.4%)

Table 4: Serviceability of the hostel facilities

Categories	Facilities	Serviceable	Unserviceable
Accommodation Room	Space/Ventilation	214 (98%)	5 (2%)
	Study Room	54 (25%)	165 (75%)
Sanitary Facilities	Toilet	187 (85%)	32 (15%)
	Bathroom	214 (98%)	5 (2%)
Storage Facilities	Wardrobe	203 (93%)	16 (7%)
	Bookshelves	13 (6%)	206 (94%)
Common Areas/Recreation Facilities	Kitchen	211 (96%)	8 (4%)
	Sport Centre	60 (27%)	159 (73%)
Support Services	Electricity	216 (99%)	3 (1%)
	Water Supply	215 (98%)	4 (2%)
	Telecom Service	148 (68%)	71 (32%)
	Internet Service	24 (11%)	195 (89%)
	Air Condition	58 (26%)	161 (74%)
	Study Chair/Table	15 (7%)	204 (93%)
	Lighting	204 (93%)	15 (7%)

Table 5: Availability and Serviceability of Hostel Facilities

Category	AV	UAV	SV	USV	Total AV,SV	Total UAV &USV	Mean AV & SV	Mean UAV & USV	Total
Accommodation room	12.7%	7.3%	12.3%	7.7%	25.0%	15.0%	12.5%	7.5%	20%
Sanitary facilities	19.6%	0.4%	18.3%	1.7%	37.9%	13.4%	19.0%	1.1%	20%
Storage facilities	10.6%	9.4%	9.9%	10.1%	20.5%	19.5%	10.3%	9.8%	20%
Common and recreational facilities	13.1%	6.9%	12.3%	6.7%	25.4%	13.6%	12.7%	6.8%	20%
Support services	13.2%	6.8%	11.5%	8.5%	24.7%	15.3%	12.4%	7.7%	20%
Total							66.9%	32.9%	100%

Where AV= Available; UAV = Unavailable; SV = Serviceable; USV = Unserviceable

Table 6: Difficulty in Doing Assignment in the Hostel

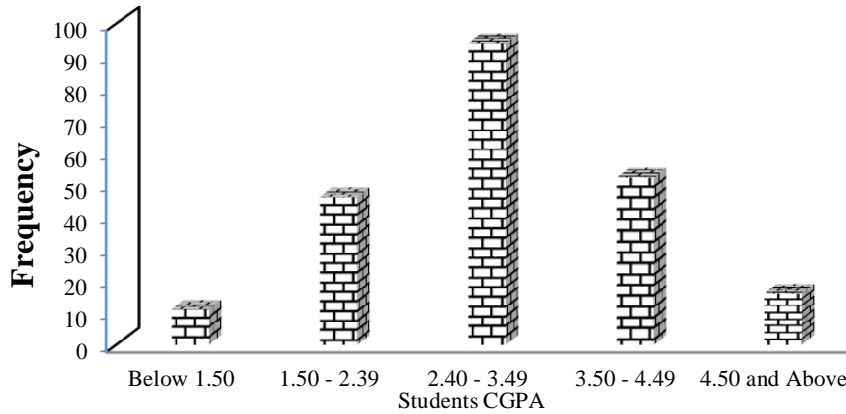| Response	Frequency	Percentage
Very Difficult	11	5.0
Difficult	110	50.4
Less Difficult	56	25.6
Not Difficult	42	19
Total	**219**	**100.0**

Figure 1: Students' Academic Performance

Figure 1 illustrates academic performance of hostel students using frequency and percentages. The Figure provided that 5% of the students have CGPA of below 1.50 which is pass division according to of $2.40 - 3.49$ which implies they are on second class lower division. 23.7% have CGPA of $3.50 - 4.49$ which means they have second class upper division. Only 7.3% have CGPA above 4.50 which implies that the students are on first class division.

The summation of students who are on third-class and below grade in Figure 1 is 57. Hence, a total of 57 students accounting for 26% are below third-class division, while 162 students are in the category of second-class lower and above. Although, several circumstances can be responsible for poor academic performance of students, unavailability and unserviceability of hostel facilities can be critical factor. Table 4 shows that facilities such as study room, sport centres, internet service, air condition and study chair/table are unavailable in the hostels. The impact of unavailability of these facilities have been observed on the students' academic performance. The study agrees with that of Ivwighreghweta and Igere (2014) and Strafford (2015) which affirmed that facilities such as internet services in the hostel help to enhance learning and improve student academic performance.

National Universities Commission grading system. 21% have a CGPA from $1.50 - 2.39$ which implies they are on third class division. 43% have CGPA

Conclusion and Recommendation

The study has revealed the facilities that could have affected students' academic performance while residing in the hostel are either not available or unserviceable. Basic facilities such as study room, sport centres, internet service, air condition and study chair/table which can enhance student academic performance are unavailable in the hostels. Surprisingly, students have continued to excel academically given the number of students that are on second-class lower and above categories. In order to further improve performance of students who reside in the hostels, the university management should provide adequate hostel facilities and ensure that they are in serviceable condition.

References

Abdul, G. S. (2008). Neighbourhood factors in private low-cost housing in malaysia. *Habitat International,* 32, 485-493.

Abramson, P. (2009). Downsizing residence halls: space and costs. Living on campus, 2009 College housing report, 12(5), 20-27.

Adama, U. J., Aghimien, D. O., & Fabunmi, C. O. (2017). Students' housing in private universities in Nigeria: Influencing factors and effect on

academic performance. *International journal of built environment and sustainability.* 5(1), 12-20.

Agboke, E. O. (2014). Management of students' hostel accommodation problems in federal polytechnics in south-east Nigeria. *Department of educational foundations - university of Nigeria, Nsukka.*

Ajayi, M., Nwosu, A. & Ajani, Y. (2015). Students' satisfaction with hostel facilities in Federal University of Technology, Akure, Nigeria. *European Scientific Journal,* 11(34), 402-415.

Akindele, A. L. (2015). Economic analysis of hostel accommodations in Nigeria tertiary institutions: a case study of federal university of agriculture, Abeokuta. The project at the *department of economics. Federal University of Agriculture, Abeokuta, Ogun state.*

Akinpelu, O. P. (2015). Students' assessment of hostel facilities in the Polytechnic Ibadan, Ibadan, Nigeria: Realities and Challenges. *Research on Humanities and Social Sciences*, 5(17), 74-81.

Ali, S., Haider, Z., Munir, F., Khan, H., & Ahmed, A. (2013). Factors contributing to the students' academic performance: A case study of Islamia University Sub-Campus. *American Journal of Educational Research*, 1(8), 283-289.

Aluko, O. E. (2010). The impact of urbanization on housing development: The Lagos Experience, Nigeria. *Ethiopian Journal of Environmental Studies and Management, 3(3).*

Amole, D. (2009). Residential satisfaction and levels of environment in students' residences, *Journal Environment and Behaviour*, 41(6), 1-14.

Curley, P. (2003). Residence halls: making campus a home. American School and University, 75(12), 245-256.

Egwuom, D. (2010). Socio-economic Implications of the Nonresidential Housing Policy on the Students of Evan Enwerem University. B.Sc Dissertation, Department of Urban and Regional Planning. Imo State University.

Ekejiuba, P. (2015). The running of hostels as auxiliary services in University of Benin: Implications for academic studies. *African Educational Research Journal*, 3(1), 51-54.

El-Hussain, M. A., Ileanwa, A. C. & Ayuba, P. (2018). Post-Occupancy evaluation of students hostel facilities in federal universities in North Central, Nigeria. *Architecture Research*, 8(4), 123-128 DOI: 10.5923/j.arch.20180804.02.

Hassanain, M. A. (2008). Performance Evaluation of Sustainable Student Housing Facilities, *Journal of facilities management,* (6)3, 212-225. DOI: 10.1108/14725960810885989

Ivwighreghweta, O. & Igere, M. A. (2014). Impact of the internet on academic performance of students in tertiary institutions in Nigeria. *Journal of Information and Knowledge Management.* 5(2), 54-55.

Khajehzadeh, I., & Vale, B. (2016). Shared student residential space: a post occupancy evaluation. Journal of Facilities Management, 14(2), 102-124.

Khozaei, F., Hassan, A.S. & Khozaei, Z. (2010). Undergraduate students' satisfaction with hostel and sense of attachment to place: a Case study of university sains Malaysia. *Journal of Engineering and Applied Science, 3,526-520.*

Lekwot, V. E., Kyon, C. B. & Aliba, V. N. (2013). Health implication of student in Nigeria tertiary institution: a case study of Kaduna state college of education, Gidan way. *Journal of Environmental Management and Safety.* 1(4), 15-17.

Mahad, K. D. & Nor, A. A. (2016). Satisfaction of Students and Academic Performance in Benadir University. *Journal of Education and Practice.* 7(24), 59-63.

Najib, N. U. M., Yusuf, N. and Osman, Z. (2011). Measuring satisfaction with student housing facilities. *American Journal of Engineering and Applied Sciences,* (4)1, 52-60.

Nimako, S. G. & Bondinuba, F. K. (2013). Relative importance of student accommodation quality in higher education. *Current Research Journal of Social Sciences,* 5(4), 134-142.

Nwite, O. & Nwuche, R. A. (2010). Evaluation of students' personnel Services in colleges of education in Nigeria. *British Journal of Education.* 4(7), 82-98.

Olujimi, J. A. B. & Bello, M. O. (2009), Effects of infrastructural facilities on the rental values of residential property. *Journal of Social Sciences*, 5(4), 332-341.

Oluwunmi, A. O., Akinjare, O. A. & Izobo-Martins, O. O. (2012). User's satisfaction with residential facilities in Nigerian private universities: a study of Covenant University. *Transnational Journal of Science and Technology.* December 2012 edition, 2(11).

Owolabi, B. O. (2015). The effects of students 'housing on academic performance at the University of Ibadan Nigerian. *International Journal of Scientific and Engineering Research*, 6(3), 1118 – 1132.
.

Price, I., Matzdorf, L. & Agahi, H. (2003). The impact of facilities on student choice of university. *International Journal of Educational Management,* 21(10), 212–222. doi:10.1108/02632770310493580.

Saunders, M., Lewis, P. & Thornhill, A. (2012). Research Methods for Business Students. 6th edition, Pearson Education Limited, London.

Sawyerr, P. T. & Yusof, N. (2013). Student satisfaction with hostel facilities in Nigerian polytechnics. *Journal of Facilities Management*, 11(4), 306–322. https://doi.org/10.1108/JFM-08-2012-0041.

Strafford, T. (2015). Indoor Air Quality and Academic Performance. *Journal of Environmental Economics and Management*. 70, 34-50.

Ubong, B. (2007). Hostel accommodation in tertiary educational institutions in Nigeria: To Be or Not to Be. Retrieved from www.basseyubong.com/HOSTEL%20ACCOMMODATION. Accessed on 21-11-2019