
EVALUATION OF FACILITIES IN SELECTED UNIVERSITIES' UNDERGRADUATE STUDENT HOSTELS IN OSUN STATE TOWARDS DESIGNING FOR ODUDUWA UNIVERSITY, IPETUMODU, NIGERIA

O.O Odunjo and E.R Adegboye

Department of Architecture, Ladoke Akintola University of
Technology, Ogbomosho, Oyo State
Oodunjo@lautech.edu.ng,
adegboyere@gmail.com
08034154340, 08160875974

ABSTRACT

The provision of adequate and functional undergraduate student hostel facilities is essential for supporting students' comfort, safety, academic activities, and overall well-being. However, increasing student population, overcrowding, inadequate support facilities, poor utility services, and varying levels of infrastructure quality continue to affect the effectiveness of university hostels in Nigeria. Therefore, this study evaluated facilities in undergraduate student hostels in selected universities in Osun State, Nigeria, with a view to generating design recommendations for a student-centred undergraduate hostel at Oduduwa University, Ipetumodu. The study adopted a mixed-method research approach using questionnaire survey, direct observation, and case study analysis. A total of 354 questionnaires were administered to undergraduate students in selected hostels across four universities in Osun State, comprising Obafemi Awolowo University, Osun State University, Adeleke University, and Fountain University. Data collected covered respondents' background characteristics, physical condition of hostel buildings, availability of indoor and outdoor facilities, accommodation challenges, and users' satisfaction with existing hostel facilities. Descriptive statistics, including frequency counts, percentages, weighted values, and mean weighted values, were employed in analysing the data. The findings revealed that overcrowding remains a significant concern, with 60.4% of respondents occupying rooms with five persons and above. In terms of physical condition, long-span aluminium roofing sheets (62.7%), tiled floors (67.2%), and painted wall finishes (85.9%) were the predominant materials. Common rooms (74.0%) and toilets (72.3%) were the most available indoor facilities, while kitchen (44.1%), laundry (45.8%), and visitor waiting areas (37.9%) were less available. Inadequate water supply (52.8%) emerged as the most significant challenge, followed by epileptic power supply (40.7%) and inadequate room space (34.5%). The findings further revealed varying levels of satisfaction, with basic communal and sanitary facilities generally receiving more favourable responses than technological, recreational, and complementary facilities. The study concludes that existing undergraduate hostels in Osun State require improvements in facility provision, environmental quality, utility services, space standards, and user-centred planning. The findings provide evidence-based design considerations for the proposed undergraduate hostel at Oduduwa University, Ipetumodu.

Keywords: Undergraduate Hostels, Hostel Facilities, Students' Satisfaction, Student Accommodation, University Hostels, Osun State, Oduduwa University.

I. INTRODUCTION

Student accommodation is an important component of the university environment because it provides the residential setting in which students rest, study, socialize, and undertake activities that support their academic and personal development. Student hostels therefore function not only as places of residence but also as social and intellectual communities that contribute to students' sense of belonging, security, and overall university experience [1]. The quality of hostel accommodation can consequently influence students' academic activities, well-being, and satisfaction with university life [2].

The increasing enrolment of students in Nigerian universities has placed considerable pressure on existing student accommodation. Many institutions continue to experience inadequate hostel capacity, overcrowding, poor maintenance, and insufficient supporting facilities. These conditions can result in reduced privacy, discomfort, poor environmental quality, and declining student satisfaction [3], [4]. The shortage of accommodation is further compounded by outdated infrastructure and inadequate institutional investment in hostel development [5], [6].

Modern university hostels are expected to provide more than sleeping spaces. Essential facilities such as bedrooms, toilets, bathrooms, kitchens, and study areas are complemented by laundry facilities, common rooms, recreational spaces, internet services, and other support facilities that enhance students' convenience and academic productivity [7], [8]. The availability, quality, accessibility, and management of these facilities are important determinants of residential satisfaction. Poorly maintained or overcrowded facilities may result in dissatisfaction even where such facilities are physically available [1], [4].

In addition to physical facilities, reliable utilities and supportive services are essential to a functional hostel environment. Water supply, electricity, security, waste management, sanitation, and maintenance services directly influence students' comfort and residential experience [4], [7]. Research in Nigerian universities has therefore emphasized the need for student-centred hostel planning that considers not only the quantity of accommodation provided but also the quality, functionality, safety, and environmental performance of the facilities [8], [9].

Osun State provides a suitable context for examining these issues because universities within the state operate under different ownership and management structures, resulting in variations in hostel provision and facility quality. This study selected Obafemi Awolowo University, Osun State University, Adeleke University, and Fountain University for detailed assessment of their undergraduate student hostels. The assessment focused on the physical condition of hostel buildings, availability of indoor and outdoor facilities, challenges experienced by occupants, and users' satisfaction with existing hostel facilities.

Oduduwa University, Ipetumodu, is an emerging private university where the increasing demand for student accommodation creates a need for adequate and well-planned residential facilities. The university has a student population of over 10,000, while available hostel accommodation is reported to serve only about 1,500 students [10]. This accommodation gap emphasizes the need for evidence-based planning and design of additional student hostels.

Therefore, this study evaluated facilities in selected undergraduate student hostels in Osun State with a view to generating design considerations for undergraduate student accommodation at Oduduwa University, Ipetumodu. The study examined the physical condition of existing hostels, available facilities, challenges experienced by hostel occupants,

and their level of satisfaction with hostel facilities. The findings are intended to provide evidence-based guidance for developing a functional, comfortable, safe, and student-centred hostel environment at Oduduwa University.

Study Area

The study was conducted in Osun State, Southwestern Nigeria. Osun State comprises universities of federal, state, and private ownership, with variations in their location, student population, management structure, and provision of undergraduate student accommodation. The state has fourteen universities identified through field survey and the National Universities Commission (NUC) list, comprising three federal, one state, and ten private universities. For the purpose of this study, attention was given to universities with purpose-built undergraduate student hostels, since these provide existing residential facilities that can be physically assessed and compared. The selected institutions were Obafemi Awolowo University, Ile-Ife; Osun State University, Osogbo; Adeleke University, Ede; and Fountain University, Osogbo.

These institutions represent federal, state, and private university ownership within the study area. The selected hostels comprised Angola Hall and Moremi Hall at Obafemi Awolowo University; Atoja Hall at Osun State University; Princess Esther Hall at Adeleke University; and Sambisa, NASFAT 1, and Jubrila Ayinla Hostels at Fountain University. The selected hostels provided a combined student population of 3,050, from which 354 undergraduate students were sampled for the study.

The study area was considered appropriate because the selected universities provide different institutional and hostel conditions, thereby allowing comparative evaluation of physical conditions, facility provision, challenges, and students' satisfaction. The findings from these existing hostels provide the basis for developing design considerations for the proposed undergraduate student hostel at Oduduwa University, Ipetumodu.

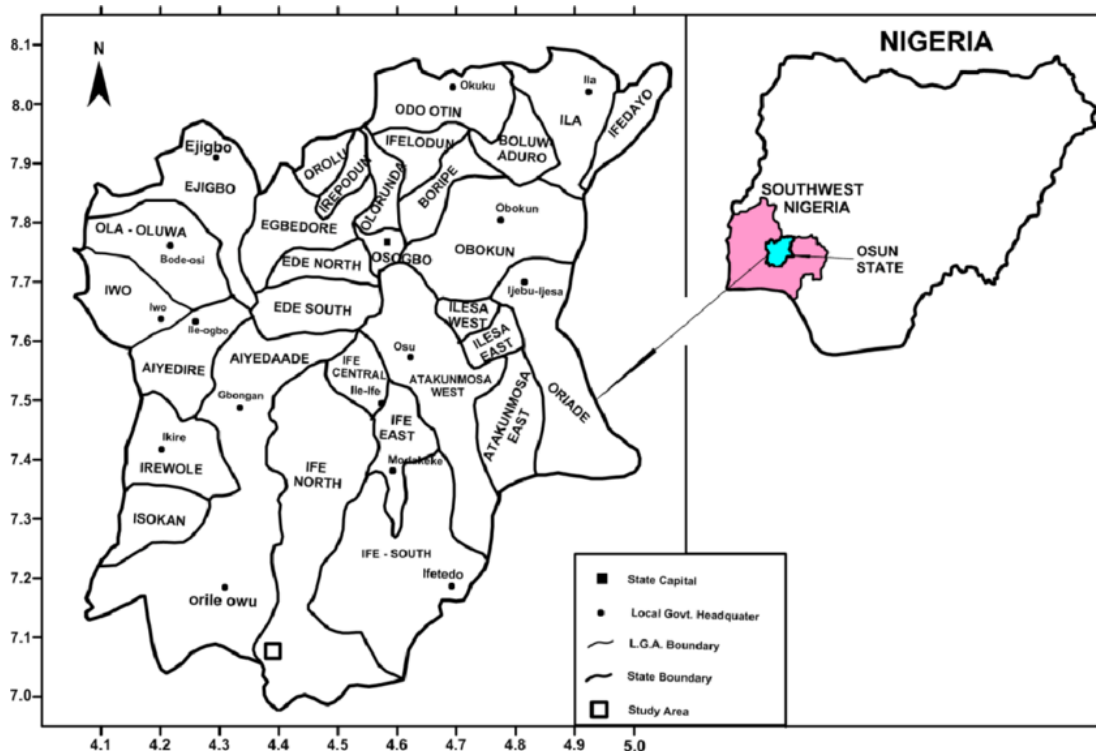


Figure 1: Map of Osun state

II. RESEARCH METHODOLOGY

Research Design

The study was exploratory and descriptive in nature; hence, it adopted both quantitative and qualitative research techniques. A mixed-method approach was employed to facilitate the assessment of hostel facilities and students' experiences across selected universities in Osun State. The case study approach was also adopted to provide an in-depth assessment of the selected hostel environments. Questionnaires were used as the major quantitative instrument because of their suitability for collecting information from a relatively large number of respondents [11].

Table 1: Universities in Osun State

S/N	Name	Ownership	Local government
1.	Obafemi Awolowo University,	Federal	Ife
2.	Federal University of Agriculture and Development Studies	Federal	Iragbiji
3.	Federal University of Health Science	Federal	Ila Orangun
4.	Adeleke University	Private	Ede
5.	Redeemer's University	Private	Ede
6.	Osun State University	state	Osogbo, Ikire, Okuku, ifetedo, ipetu-Ijesa, Ejigbo
7.	Bowen University	Private	Iwo
8.	Fountain University	Private	Osogbo
9.	Joseph Ayo Babalola	Private	Ikeji-Arakeji
10.	Kings University	Private	Ode-Omu
11.	Oduduwa University	Private	Ipetumodu
12.	Minaret University	Private	Ikirun
13.	Westland University	Private	Iwo

Source: National Universities Commission (2026).

Sources of Data

Both primary and secondary data were used. Primary data were obtained from undergraduate students through questionnaires, direct observation, and case study assessment. The data

covered students' background characteristics, physical condition of hostel buildings, available facilities, challenges experienced by students, and satisfaction with hostel facilities. Secondary data were obtained from relevant books, journals, published studies, and other academic materials.

Sampling Frame

The sampling frame comprised universities in Osun State, Nigeria, with emphasis on institutions providing purpose-built undergraduate student hostels. The identification process was carried out through field survey and consultation of the National Universities Commission (NUC) list. The study first identified the universities operating within the state and subsequently narrowed the frame to universities with purpose-built undergraduate hostels.

Following the identification of universities in the state, attention was restricted to institutions with purpose-built undergraduate hostels. The field survey identified nine universities within this category, comprising seven private universities, one state university, and one federal university.

Table 2: Universities with Purpose-Built Hostels in Osun State

S/N	University	Name of Hostel	Gender in Hostel
1.	Obafemi Awolowo University	Angola Hall, Awolowo Hall, EFT Hall, Fajuyi Hall, Akintola Hall, Alumni Hall, Moremi Hall, Mozambique Hall	Male/Female
2	Adeleke University, Ede	Senator Raji Ayoola Hall, Sir Dr. Adewale Adeeyo Hall, Chief (Dr.) Modupe Sanni Adeleke Hall, Princess Esther Hall	Male/Female
3.	Redeemer's University, Ede	Prophet Moses, Queen Esther	Male/Female
4	Osun State University, Osogbo	Atoja Hall, Wellspring, Uniosun Hostel, Amorite	Male/Female
5.	Fountain University, Osogbo	FK Lawal 1 & 2, Sambisa, Yusuf Ali, NASFAT 1–4, Adegunwa, Jubrila Ayinla	Male/Female
6.	King University	Male Hall, Female Hall	Male/Female

Source: Author's Compilation (2026)

The universities with purpose-built hostels were subsequently stratified according to ownership. Obafemi Awolowo University and Osun State University were purposively selected, while 25% of the private universities with purpose-built hostels were selected using

random sampling. This resulted in four universities: Obafemi Awolowo University, Osun State University, Adeleke University, and Fountain University for detailed assessment

Method of Data Collection

Multistage sampling technique was adopted for the study. The technique involves dividing a study population into groups and subgroups and selecting samples based on their locational characteristics [12], [13]. The first stage involved the identification of universities in Osun State, followed by the identification of universities with purpose-built undergraduate hostels. The selected universities were stratified according to ownership, after which four universities were selected for the study.

At the second stage, the hostels used for the study in the selected universities were identified and random sampling technique was employed to select 25% of the hostels in the universities with multiple male and female hostels. This is premised on the fact that the selected hostels exhibit the characteristics of the hostels in each university and this is considered adequate for the assessment of the situation under study. Furthermore, in the sixth stage, the sample size was chosen using Slovin formula:

$$n = \frac{N}{(1 + NE^2)}$$

Where: n = Sample size

N= Population size

Thus a set of 354 questionnaires was randomly administered to the undergraduate students and shall be harvested on the spot. The research objective log frame is shown in Table 3

Table 3: Population of the Selected Users of Auditorium Buildings in Kwara State

S/N	Name of the University	Population of Student	Sampling size 11.6%
1.	Obafemi Awolowo University, Ile-Ife	960	112
2.	Osun State University	312	36
3.	Adeleke University	1062	123
4.	Fountain University	716	83
	TOTAL	3050	354

Source: Author's Field Survey (2026)

Data Analysis

Descriptive statistics were employed to analyze the data collected from the field. Descriptive statistics such as frequency counts, percentages and mean were employed to analyze the background of students, physical condition of the undergraduate hostels, facilities available, challenges as well as student satisfaction with facilities

III. Results and Discussion

(i) Socio-Economic Characteristics of the Respondents and Their Influence on Accommodation Demands

Table 4 presents the socio-economic characteristics of respondents across the selected University: Obefemi Awolowo University, Osun State University, Adeleke University, Fountain University. A total of 354 respondents participated in the study.

Table 4: Socio-Demographic Characteristics of the Respondents

S/No	Variable	Frequency (N)	Percentage (%)
1	Gender		
i.	Male	130	36.7
ii.	Female	224	63.3
	Total	354	100.0
2	Age (Years)		
i.	<18	93	26.0
ii.	18-21	181	50.7
iii.	22-25	60	16.8
iv.	>25	20	5.6
	Total	354	100.0
3	Level of Study		
i.	100	162	45.3
ii.	200	62	17.3
iii.	300	63	17.6
iv.	400	34	9.5
v.	500	33	9.2
	Total	354	100.0
4	Duration of Stay in Hostel		
i.	Less than 1 year	172	48.0
ii.	1- 2 year	60	16.8
iii.	3 - 4 year	74	20.7
iv.	Above 4	48	13.4
	Total	354	100.0
5	Occupancy Status		
i.	Legal occupant	324	91.5
ii.	Squatter	18	5.1
iii.	Visitor	12	3.4
	Total	354	100.0
5	Number of Person in Room		
i.	1- 2	14	4.0
ii.	3- 4	126	35.6
iii.	5-above	214	60.5
	Total	354	100.0

Source: Author's Field Survey (2026)

The gender distribution among respondents shows that 224 respondents (63.3%) were female, while 130 respondents (36.7%) were male. This indicates that female respondents constituted a larger proportion of the sample. The inclusion of both male and female respondents provides diverse perspectives on hostel accommodation experiences.

The age distribution shows that **181 respondents (50.7%)** were within the 18–21 years

category, **93 respondents (26.0%)** were below 18 years, **60 respondents (16.8%)** were within the 22–25 years category, while **20 respondents (5.6%)** were above 25 years. The majority of the respondents were therefore within the 18–21 years age group, representing the typical undergraduate population in Nigerian universities.

With respect to level of study, 162 respondents (45.3%) were in 100 level, 62 respondents (17.3%) were in 200 level, 63 respondents (17.8%) were in 300 level, 34 respondents (9.6%) were in 400 level, while 33 respondents (9.3%) were in 500 level. The highest proportion of respondents were therefore 100-level students, accounting for nearly half of the respondents.

The occupancy status shows that 324 respondents (91.5%) were legal occupants, 18 respondents (5.1%) were squatters, while 12 respondents (3.4%) were visitors. The majority of respondents were therefore legal occupants and direct users of the hostel facilities.

The analysis of the number of persons per room shows that 14 respondents (4.0%) lived in rooms occupied by 1–2 persons, 126 respondents (35.6%) lived in rooms occupied by 3–4 persons, while 214 respondents (60.5%) lived in rooms occupied by 5 persons and above. The majority of respondents therefore lived in rooms occupied by five persons and above, indicating a high level of room congestion in the hostel facilities across the selected universities. This suggests that overcrowding remains a major issue in undergraduate hostel accommodation in universities within Osun State.

Rooms designed for fewer occupants but occupied by a larger number of students often experience faster deterioration of furniture, sanitary facilities and building finishes. Overcrowding also contributes to increased noise levels, poor academic concentration and health risks associated with poor indoor air quality and sanitation challenges. The implication for the proposed hostel design at Oduduwa University, Ipetumodu is that adequate room space standards must be maintained and excessive room occupancy should be avoided.

(ii) Evaluation of Physical Condition of Existing Undergraduate Hostels

Table 5 presents respondents' perceptions of the physical condition of the existing undergraduate hostel the selected university.

Table 5: Evaluation of Physical Condition of Hostel of Respondents

S/No	Variable	Frequency (N)	Percentage (%)
1	Wall material		
i.	Sandcrete block	188	53.1
ii.	Brick	135	38.1
iii	Other	31	8.8
	Total	354	100.0
2	Roof material		
i.	Long span aluminum	222	62.7
ii.	Gerald roof	91	25.7
iii.	Other	41	11.6
	Total	354	100.0
3	Floor material		
i.	Terrazzo	42	11.9
ii.	Tiled	238	67.2
iii.	Screed	50	14.1
iv.	Other	24	6.8
	Total	354	100.0
4	Ceiling material		
i.	Asbestos	243	68.6
ii.	POP	40	11.3
iii.	PVS	33	9.3
iv.	Other	38	10.7

	Total	354	100.0
5	Wall finishes		
i.	Painted	304	85.9
ii.	Tiled	21	5.9
iii.	screed	14	3.9
iv	Other	15	4.2
	Total	354	100.0

Source: Author's Field Survey (2026)

The physical condition of the existing hostel buildings was assessed based on the building components and materials used. The result shows that 188 respondents (53.1%) indicated that their hostels were constructed with sandcrete blocks, while 135 respondents (38.1%) reported the use of brick wall construction. Also, 31 respondents (8.8%) identified other wall materials. Thus, sandcrete block was the most commonly used wall material in the selected university hostels.

For roof materials, 222 respondents (62.7%) indicated that long-span aluminium roofing sheets were used in their hostels, while 91 respondents (25.7%) reported Gerard roof sheets. Also, 41 respondents (11.6%) indicated other roofing materials. The dominance of long-span aluminium roofing suggests that it is the most commonly used roofing material among the selected hostels.

The assessment of the physical condition of the building components recorded MWV values of 2.36 for walls, 2.53 for floors, 2.63 for roofs and 2.72 for ceilings. The findings suggest that while existing hostel facilities possess a reasonable structural foundation, there is a clear need for improvement in critical areas that directly affect indoor environmental quality, especially ceilings and roofs.

Overall, the results indicate the need for improvement in the physical condition of the existing hostel buildings, particularly in areas relating to roofs and ceilings. Addressing these areas through the use of modern, durable materials and effective maintenance strategies will enhance the functionality and sustainability of hostel buildings.

(iii) Analyses the Facilities Available in the Hostels

Table 6. Indoor Facilities Available in Hostels

	Facility	Frequency	Percentage (%)
1.	Common Room	262	74.0
2	Reading Area	182	51.4
3	Toilets	256	72.3
4	Bathroom	224	63.3
5	Laundry	162	45.8
6	Kitchen	156	44.1
7	Visitor Waiting Area	134	37.9
8	Tuck Shop	176	49.7
9	Others	22	6.2

Source: Author's Field Survey (2026)

Table 7: Outdoor Facilities in Hostels

S/No	Variable	Frequency (N)	Percentage (%)
i	Parking Space	192	54.2
ii	Outdoor Games	132	37.3
iii	Drainage	187	52.8
iv.	ATM	94	26.6
vi	Landscape Elements	65	18.4
vii	Sit-out	148	41.8
viii	Others	16	4.5

Source: Author's Field Survey (2026)

The availability of hostel facilities was assessed in terms of indoor, sanitary and outdoor facilities. The findings show that security facilities were reported by 295 respondents (83.3%), while Internet/Wi-Fi facilities were reported by 203 respondents (57.3%). However, 151 respondents (42.7%) indicated that Internet/Wi-Fi facilities were not available.

Kitchen facilities were less available. Only 69 respondents (19.5%) indicated that kitchen facilities were provided within their rooms, while 285 respondents (80.5%) indicated that they did not have kitchen facilities within their rooms. The findings therefore show that kitchen facilities are one of the inadequate components of hostel infrastructure in the study area.

The outdoor facilities also recorded varying levels of provision. Parking spaces were available to 192 respondents (54.2%), while drainage facilities were available to 187 respondents (52.8%). Outdoor games were reported by 132 respondents (37.3%), ATM facilities by 94 respondents (26.6%), landscape elements by 65 respondents (18.4%), and sit-out spaces by 148 respondents (41.8%). Other outdoor facilities accounted for 16 respondents (4.5%).

The findings show that parking space and drainage facilities are the most available outdoor facilities, while landscape elements and other outdoor features are the least available. The overall findings indicate that outdoor facilities in the hostel environment are moderately provided but largely inadequate in terms of diversity and quality.

The inadequate provision of recreational and landscape facilities suggests that hostel design in the study area is primarily utilitarian, with little emphasis on students' social and psychological needs. The limited availability of outdoor facilities may contribute to increased stress levels, reduced physical activity and lower overall satisfaction among students

(iv) Challenges Associated with Hostel Facilities

Table 8. Challenges Associated with Hostel Facilities

S/No	Variable	Frequency (N)	Percentage (%)
i	Lack of Security	66	18.6
ii	Inadequate Water Supply	187	52.8
iii	Epileptic Power Supply	144	40.7
iv.	Poor Ventilation and Lighting	105	29.7
vi	Inadequate Space	122	34.5
vii	Lack of Parking Space	40	11.3
viii	Others	7	2.0

Source: Author's Field Survey (2026)

The findings reveal that students experience several challenges within the hostel environment. The most significant challenge identified was inadequate water supply, reported by 187 respondents (52.8%). This was followed by epileptic power supply, reported by 144 respondents (40.7%).

Furthermore, 122 respondents (34.5%) reported inadequate space, while 105 respondents (29.7%) identified poor ventilation and lighting. Lack of security was reported by 66 respondents (18.6%), while lack of parking space was reported by 40 respondents (11.3%). Other challenges accounted for 7 respondents (2.0%).

The most significant challenge identified is inadequate water supply, reported by 187 respondents representing 52.8%. The second major challenge is epileptic power supply, reported by 144 respondents (40.7%). Another notable challenge is inadequate space, reported by 122 respondents (34.5%). Additionally, poor natural ventilation and lighting were reported by 105 respondents (29.7%).

The issue of lack of security, reported by 66 respondents (18.6%), highlights concerns about safety within the hostel environment. Lastly, lack of parking space (11.3%) and other minor challenges (2.0%) were reported by a smaller proportion of respondents.

The overall findings indicate that the major challenges in the hostel environment are related to basic infrastructure and essential services, particularly water supply, electricity and space provision. The prominence of water and power-related challenges suggests that hostel facilities are heavily dependent on unreliable public infrastructure, while the issues of overcrowding and poor ventilation indicate deficiencies in architectural design and space planning.

(v) Students' Satisfaction with Existing Hostel Facilities

The level of satisfaction of respondents with hostel facilities was assessed using a five-point Likert scale ranging from Very Satisfied (1), Satisfied (2), Indifferent (3), Not Satisfied (4), and Not Satisfied at All (5). The analysis was computed using Total Weighted Value (TWV), Mean Weighted Value (MWV), and Adjusted Weighted Value (AWV). Lower MWV values indicate higher levels of satisfaction, while higher MWV values indicate lower levels of satisfaction.

Table 9: Level of Satisfaction of Users with Hostel Facilities by the Respondents

S/N	Variables	VS (1)	S (2)	I (3)	NS (4)	NSA (5)	TWV	MWV	AWV
1	Common Room	124	113	48	33	36	806	2.28	161.88
2	Reading Area	82	118	58	48	48	924	2.61	185.31
3	Toilet	85	100	67	62	40	934	2.64	187.44
4	Bathroom	84	106	58	60	46	880	2.49	176.79
5	Laundry	69	71	64	52	98	913	2.58	183.18
6	Kitchen	64	106	79	53	52	985	2.78	197.38
7	Visitor Waiting Room	69	94	103	47	41	959	2.71	192.41
8	Water Supply	64	105	73	66	46	987	2.79	198.09
9	Power Supply	93	104	53	64	40	916	2.59	183.89
10	Security	91	104	84	51	24	875	2.47	175.37
11	Internet/Wi-Fi	58	77	84	60	81	1109	3.31	222.25
12	ATM	60	77	78	67	72	1076	3.04	215.84
13	Parking Space	96	99	82	41	36	884	2.50	177.50
14	Outdoor Games	84	83	80	46	61	979	2.77	196.67
15	Drainage	83	105	78	47	41	920	2.60	184.60
16	Landscape Element	90	85	67	52	60	969	2.74	194.54
17	Sit-out	88	86	79	60	71	1092	3.08	218.68

Source: Author's Field Survey (2026)

The result indicates that the Common Room recorded a TWV of 806, MWV of 2.28 and AWP of 161.88, making it the facility with the highest level of satisfaction among respondents. Security facilities recorded an MWV of 2.47, while Bathroom facilities recorded 2.49. Parking Spaces recorded 2.50, Laundry Facilities 2.58, Power Supply 2.59, Drainage Systems 2.60, Reading Areas 2.61, and Toilet Facilities 2.64.

The findings further reveal that Kitchen Facilities recorded an MWV of 2.78, Water Supply 2.79, and Outdoor Games 2.77, indicating relatively lower levels of satisfaction among respondents.

The Kitchen and ATM facilities recorded the highest TWV of 1051 respectively, with corresponding MWV values of 2.97 and AWP values of 210.87. Internet/Wi-Fi facilities recorded a TWV of 1041, MWV of 2.94, and AWP of 208.74, indicating poor user satisfaction. Outdoor Games and Laundry facilities also recorded relatively high TWV values of 994 and 986 respectively.

On the other hand, Bathroom facilities recorded the lowest TWV of 697, with MWV and AWP values of 1.97 and 139.87 respectively, indicating the highest level of satisfaction among respondents. Similarly, Sit-out spaces and Common Rooms also recorded relatively lower TWV values, indicating moderate satisfaction levels among students.

The findings generally reveal that students are more satisfied with basic sanitary and communal facilities than with support and technological facilities. This suggests that hostel designs in the study area prioritize fundamental living requirements while paying less attention to complementary facilities that enhance comfort, recreation and academic support. The implication of these findings is that future hostel design for Oduduwa University, Ipetumodu should improve support facilities such as kitchens, internet services, laundry areas and recreational spaces, while sustaining the functionality of basic facilities such as bathrooms and common rooms.

(vi) Implications for Proposed Hostel Design at Oduduwa University, Ipetumodu

The findings from the study provide important implications for the proposed undergraduate hostel design at Oduduwa University, Ipetumodu. The high proportion of respondents occupying rooms with five persons and above (214 respondents; 60.5%) indicates the need for appropriate room occupancy and adequate spatial provision in the proposed hostel. The design will therefore provide sufficient personal space and avoid excessive room congestion.

The physical-condition findings, particularly the MWV values of 2.36 for walls, 2.53 for floors, 2.63 for roofs and 2.72 for ceilings, indicate the need to give adequate attention to the selection of building materials and the durability of building components. The proposed hostel will therefore incorporate appropriate materials and maintenance considerations from the design stage.

The findings on facilities also have direct implications for the proposed hostel. Kitchen facilities were available within rooms to only 69 respondents (19.5%), while 285 respondents (80.5%) indicated that they did not have kitchen facilities within their rooms. This indicates the need for properly planned kitchen facilities in the proposed hostel. Similarly, Internet/Wi-Fi facilities were unavailable to 151 respondents (42.7%), showing the need to provide adequate digital infrastructure for students.

The major challenges identified by respondents also provide important design considerations. Inadequate water supply was reported by 187 respondents (52.8%), while 144 respondents (40.7%) identified epileptic power supply. Inadequate space was reported by 122 respondents (34.5%), while 105 respondents (29.7%) identified poor ventilation and lighting. These findings indicate the need for reliable water and power systems, adequate space, proper ventilation and sufficient natural and artificial lighting in the proposed hostel.

The outdoor-facility findings further indicate that only 148 respondents (41.8%) reported sit-out spaces, 132 respondents (37.3%) reported outdoor games, and 65 respondents (18.4%) reported landscape elements. The proposed hostel will therefore incorporate adequate outdoor spaces, recreational facilities and landscaping to improve the quality of the hostel environment.

The satisfaction findings also provide direction for the proposed design. While facilities such as the Common Room recorded an MWV of 2.28, Internet/Wi-Fi recorded 2.94, Kitchen Facilities 2.97, ATM facilities 2.97, and other facilities recorded varying levels of satisfaction. These results indicate areas where greater attention is required in the proposed hostel.

Overall, the findings suggest that the proposed undergraduate hostel at Oduduwa University, Ipetumodu should respond to space requirements, physical building conditions, facility provision, infrastructure challenges and students' satisfaction. The design will therefore provide a functional and comfortable residential environment that addresses the deficiencies identified in the existing hostels.

IV. CONCLUSION

The study revealed that existing undergraduate hostels experience challenges relating to overcrowding, physical building conditions, inadequate facilities, unreliable water and power supply, and poor ventilation and lighting. The findings therefore indicate the need for improved space provision, functional facilities, reliable infrastructure, and better environmental conditions in the proposed undergraduate hostel at Oduduwa University,

Ipetumodu.

Recommendation

The study recommends that Oduduwa University prioritize adequate room spaces, durable building materials, functional kitchen and sanitary facilities, reliable water and power supply, effective ventilation and lighting, and appropriate recreational and outdoor facilities in the proposed hostel design. These provisions are expected to reduce overcrowding, improve students' comfort and satisfaction, and provide a more functional and conducive residential environment.

Reference

- [1] Adedeji, Y. M. D., & Fadamiro, J. A. (2019). Provision and management of students' housing in Nigerian universities: Challenges and prospects. *Journal of Building and Housing*, 5(2), 23–39.
- [2] Akinluyi, M. L. (2015). Students' satisfaction with hostel accommodation in selected Nigerian universities. *International Journal of Social Sciences*, 7(1), 120–132.
- [3] Akinluyi, M. L. (2021). Students' satisfaction and physical quality of hostel accommodation in selected Nigerian universities. *International Journal of Housing Studies*, 8(1), 61–79.
- [4] Adebayo, A. M., & Olatunde, A. F. (2020). Student housing and health outcomes in Nigerian universities. *Journal of Environmental Studies*, 15(2), 123–135.
- [5] Adebayo, S., & Peace, O. (2024). Obsolescence and maintenance challenges in Nigerian university hostels. *Nigerian Journal of Environmental Design and Management*, 15(1), 45–63.
- [6] Adebayo, T., & Peace, O. (2024). Residential quality and satisfaction in Nigerian university hostels: Evaluating design and management challenges. *International Journal of Housing and Built Environment*, 21(1), 33–49.
- [7] Adebayo, A. A., Ogunleye, T. O., & Salami, K. A. (2023). Assessment of ceiling materials and indoor environmental quality in university hostels in Southwestern Nigeria. *Journal of Environmental Design and Management*, 15(2), 88–102.
- [8] Olanrewaju, S. A., Bello, M. O., & Hassan, R. A. (2020). Building materials selection and thermal performance of university hostels in Nigeria. *Journal of Building Performance*, 12(1), 15–29.
- [9] Oyetunji, A. K. (2018). Post-occupancy evaluation of student housing facilities in selected Nigerian universities. *Journal of Environmental Design*, 6(1), 55–68.
- [10] Adetunji, S. A. (2022). Private universities and community development: The case of Oduduwa University, Ipetumodu. *African Educational Review*, 13(1), 88–102.
- [11] Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). Thousand Oaks: SAGE Publications.
- [12] Okanlawon, K. (2018). Sampling techniques in urban studies. *West African Journal of Applied Research*, 22(1), 40–55.
- [13] Oladimeji, T. (2023). Multi-stage sampling for urban research. *Nigerian Journal of Social and Economic Research*, 25(2), 115–130.