



# Post-occupancy evaluation of postgraduate hostel facilities

Postgraduate  
hostel facilities

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Yewande Adewunmi, Modupe Omirin and Funlola Famuyiwa  
*Department of Estate Management, University of Lagos, Lagos, Nigeria, and*  
Oluranti Farinloye  
*Department of Building, University of Lagos, Lagos, Nigeria*

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## Abstract

**Purpose** – This paper seeks to adopt an investigative approach to post-occupancy evaluation using major technical and functional criteria of performance on the facilities of a postgraduate hostel at the campus of the University of Lagos, Akoka, Yaba, Lagos, Nigeria.

**Design/methodology/approach** – Data collection was based on a survey through self-administered questionnaires in which users of the building were asked to report on their perceptions and experience of the facility. The user satisfaction survey was developed based on the students' feedback on their experience with 29 identified performance criteria obtained from a review of the literature and an interview with a member of the university's hall management committee. Data at the organizational level were collected by personal interviews with the facilities manager and co-ordinator of hostels of the university.

**Findings** – The user satisfaction survey identified areas of deficiency, particularly in maintenance, and facilitated the assessment of the overall performance of the building.

**Originality/value** – This study demonstrates how universities in Nigeria can assess the management of hostel facilities by hostel administrators and facilities managers. Apart from the results of the user satisfaction survey being useful as evidence to access funds for the improvement of student hostel facilities, the feedback will be helpful in the design and management of new hostel facilities.

**Keywords** Buildings, Performance measurement, Universities, Nigeria

**Paper type** Research paper

## Introduction

The importance of post-occupancy evaluation (POE) has greatly increased in recent years, although it is a more typical activity in the USA and some European countries than it is in most developing countries. This phenomenon in third world countries can be attributed largely to the reactive maintenance "syndrome". POE as defined by Baird (2001) is "a generic term for various general programs, procedures and specific techniques for the assessment of existing buildings and facilities". POE assesses how well buildings match users' needs and identifies ways to improve building design, performance and fitness for purpose. It involves the systematic evaluation of opinion about buildings in use, from the viewpoint of the people who use them. Post-occupancy evaluation (POE) is nothing new in itself. It was first introduced over 40 years ago. What is new, however, is the way in which the POE is beginning to be viewed as a business management tool by today's occupiers and as a crucial building appraisal system for property owners, managers and designers (Kauntze, 2008).

The major determinants of the type and depth of POE are the uses to which the information is to be put and the resources available (Preiser *et al.*, 1988). POE is



recognized within the facilities management sector as a technique employed to aid benchmarking of the quality of services ranging from maintenance and cleaning to the provision of office furnishings (Wauters, 2005). Wauters (2005) confirms the value of “user satisfaction surveys” as a herald to service-level benchmarking and successive recommendations for improving facilities services.

In Nigeria, facilities management practice is relatively new and was first used in the 1980s by Chevron and Mobil as part of the relocation activities of both multinational companies. Today many organizations have realized that managing assets within traditional organizational structures is unsatisfactory. Thus there is increasing demand for an integrated approach to management (Odieta, 1998; Sani, 1998).

The physical environment of universities should be catered for, since academic productivity to large extent depends on the available facilities and supporting services. The state of the physical assets of higher institutions is an indicator of strategic facilities management (Kortze and Nkado, 2003). Successful implementation of facilities management in Nigerian universities will influence strategic planning, development and policy decision-making, and will improve their efficiency (Housley, 1997; Asiabaka, 2008).

In Nigeria, there is improper maintenance of the services and infrastructure of hostel accommodation. Students have been reported to fall sick in such buildings due to poor sanitary conditions. Sometimes there are threats to security of life and property owing to failure to screen room allots adequately to prevent criminals entering undergraduate hostels. Some of the hostels are also overcrowded. In some instances students are the one’s accommodating “squatters” and “floaters”, thus overstretching the facilities available. Also it has been observed that the revenue generated is not sufficient to manage such hostels and still make a profit, since the hostels are not managed on a commercial basis as they are viewed more as social rather economic goods that should be managed sustainably (Tijani, 2007).

This paper reports a post-occupancy evaluation of the main technical and functional criteria of performance of a postgraduate hostel in University of Lagos, one of the public universities in Nigeria. Little research has been done on POE in Nigeria, especially with reference to hostels for postgraduate students. This is so despite the fact that many public institutions now adopt FM and student hostels are particularly problematic and often a cause for unrest. The study evaluated the performance of a new postgraduate hostel building as a step towards enhancing functionality and environmental friendliness.

The paper is structured in the following manner. The present section has introduced the paper and defined the research problem. In the second section, the literature is reviewed with respect to the post-occupancy evaluation of university buildings, highlighting in particular:

- postgraduate hostel facilities in Nigeria;
- post-occupancy evaluation of university buildings;
- performance indicators for hostel facilities in Nigeria;
- problems constraining the use of POE in Nigeria; and
- types of POE.

In the third section the research method used and results of the questionnaire survey are discussed. The results of the survey are presented to identify aspects of the

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building that require improvement. After this, further recommendations on the operationalization of POEs under similar circumstances are made.

### **Literature review: postgraduate hostel facilities in Nigeria**

There is a scarcity of literature on hostel accommodation for students in universities in Nigeria, and it is known that not much attention has been given to the problem of management of these facilities in the past, in spite of its enormity and sensitivity of this issue (Ubong, 2007). This could be as a result of the behavior of people who show indifference and adapt to the general poor performance of social services.

Ubong (2007) observed that hostels in universities in Nigeria are in short supply. Demand far outstrips supply resulting in occupant overcrowding, collapsing facilities and the illegal sale of bed spaces by students to fellow students. The government seems not to be capable of increasing the stock of hostels and cannot fund the maintenance of existing ones. Any attempt to increase charges for bed spaces by government or the institutions so as to raise adequate funds to maintain the hostels meets stiff opposition from students. The best way out of the embarrassing situation in the opinion of the Federal Government, as directed by the Federal Ministry of Education in 2004, is to hand over the hostels to private managers who will maintain them and charge appropriate fees to those who accept their offer. Government can thus concentrate on other aspects of education funding that cannot be privatized (such as staff salaries, research by lecturers, and the provision of teaching/learning facilities and materials). However, certain issues were raised for clarification by stakeholders regarding the outsourcing of hostel management to private estate agents in Nigerian universities. Among the issues raised are the following:

- What happens to indigent students from communities outside that in which the institution is based, who are unable to live with members of their family?
- Do private operators permit “attachments” by those that have paid and who wish to assist a less privileged colleague?
- Where students decide to seek accommodation in cheaper locations that are far away from the institution, how do they commute to and from school and how does that affect their performance?
- Are hostels on campus sold to private operators? If so, how are such transactions handled legally?
- Is there a possibility of joint ownership of hostels – including those off campus – by private developers and universities when the government is totally against any direct involvement of the institutions in the management of hostels?
- Who manages the social problems that are often found in hostels – cultism, keeping of hostel rules such as duration of stay of visitors of the opposite sex, fighting, and others? In essence, who manages and enforces sanctions associated with the code of conduct of students in halls of residence?
- Does the government control charges?
- Are the institutions allowed to ensure that a minimum level of services such as sanitation, electricity, water supply, and security are provided to students?
- Are the institutions expected to earn fees from the managers, and how is that determined?

- Generally, where does the power or authority of the institution and the managers begin and where does it end?
- Is there allowance for local conditions to take care of the peculiarities of each institution and each locality?
- Is there need for legislation on the matter so that issues and relationships can be streamlined and made fairly uniform?

The above-mentioned issues are tackled in the third section of this paper (in the interview with the coordinator of hostels) to ascertain the view of the University of Lagos management on the success of outsourcing of maintenance of hostel facilities.

*Post-occupancy evaluation of university buildings*

Globally, many POE studies have been conducted, with a large number of benefits gained. Previous studies on POEs on university buildings in general have shown that POEs should be an integral part of any construction or remodeling project (Horgen and Sheridan, 1996). Studies in the Western world have also shown that performance criteria usually evaluated in a building include:

- information technology (IT);
- modern architecture;
- openness of building;
- privacy;
- environmental conditions;
- functional spaces;
- temperature;
- communication and social interaction;
- building condition; and
- services (Horgen and Sheridan, 1996; Amarantunga and Baldry, 1999; Gabr and Al-Sallal, 2003; van der Voordt and van der Klooster, 2008).

However, earlier studies by Wood and Worthing (1996) and Amaratunga and Baldry (1999) showed that POE at that time had a long way to go in the UK before it could be promoted as an integral management procedure. This is due to a lack of benchmark standards for the measurement of quality and the implementation of organizational change. This appears to be the state of affairs in Nigeria now.

Studies specifically on student hostel buildings in Saudi Arabia include that carried out by Hassanain (2007) using an indicative assessment of the existing indoor environmental qualities (i.e. thermal, acoustic, visual comfort and indoor air quality) at the campus of King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia. Past maintenance work orders for the building evaluated in this study were analyzed to identify frequent and major areas of complaint and discomfort for the occupants. A user satisfaction survey was developed to obtain the students' qualitative feedback on their experience with the designed indoor environment. The study found that the student residents were satisfied with the five main performance categories identified (see also Hassanain, 2008).

A similar and more generalized study in Nigeria by Amole (2009) on students' housing satisfaction in South-Western Nigeria revealed that the morphological configuration of the student hostel influenced satisfaction. Students were mainly satisfied with the social qualities of the residences. Tijani (2007) examined the effectiveness of facilities management on undergraduate hostels at the University of Lagos, Akoka, Lagos, Nigeria. A user satisfaction survey by Tijani (2007) showed that the facilities were overcrowded with more than the required number of students, while areas of major discomfort included the electricity supply and the sanitary conditions of conveniences. However, students were satisfied with security, and response to complaints. In another study, of an office building in Covenant University, Adewunmi *et al.* (2009) conducted an investigative POE study and showed that the building's users were satisfied with most of the performance criteria identified. The members of staff were satisfied with all the listed elements, while students were not satisfied with telephones, temperature, informal meeting spaces and archiving and storage facilities. Amole (2009) focused more on physical attributes and conducted a more generalized study; as a result the peculiarities of the performance of each case hostel facilities are blurred. Tijani (2007) focused only on infrastructure services, while Adewunmi *et al.* (2009) examined office buildings.

In summary, the review of POE studies presented in this paper shows that little research has been done on this, especially in Nigeria with reference to the experience of new postgraduate student housing and how POE can be used by Nigerian university administrations. Lots of POE studies are needed in Nigeria.

#### *Performance indicators for hostel facilities in Nigeria*

Toilet facilities have been recognized in Nigerian hostels as a key consideration by estate managers and users (see Tijani, 2007; Ojogwu and Alutu, 2009). It was the only facility examined by Ojogwu and Alutu (2009), while Tijani (2007) focused more on the provision of infrastructure services within hostels in the University of Lagos. Few studies have been conducted on POEs, and where they have been carried out in practice, POEs are done informally or with the use of only a few performance indicators. However, a more generalized and robust study on student housing satisfaction was carried out by Amole (2009). In this study 12 student hostel performance factors were used and include:

- (1) bedroom social and place qualities;
- (2) hostel design;
- (3) social densities in the hostel;
- (4) storage and room furnishing;
- (5) floor levels;
- (6) hostel maintenance;
- (7) conveniences;
- (8) hostel facilities;
- (9) laundry;
- (10) balcony;
- (11) hostel management; and
- (12) location.

Evidence of POE studies on hostel accommodation in other parts of the globe or in other settings and cultures showed that the use of performance criteria for assessment of hostel facilities is more robust and focused. Hassanain (2007) examined the use of indoor environmental qualities, which include thermal, acoustic, visual comfort and indoor air quality of a student housing facility in Saudi Arabia. Another study on a student housing facility in Saudi Arabia by Hassanain (2008) examined the use of five technical performance requirements, including:

- (1) thermal comfort;
- (2) acoustic comfort;
- (3) visual comfort;
- (4) indoor air quality; and
- (5) fire safety.

Five functional requirements include:

- (1) interior and exterior finish systems;
- (2) room layout and furniture quality;
- (3) support services;
- (4) efficiency of circulation; and
- (5) proximity to other facilities on campus.

#### *Problems constraining the use of POE in Nigeria*

Most management companies in Nigeria adopt the reactive approach to maintenance. This accounts for why many buildings are in poor state of management. This approach is not customer-focused, while many users and occupiers of these buildings, especially the public ones, are not satisfied. Also, there is lack of orientation for facilities managers, architects, building consultants and clients on the benefits of adopting POEs. A study of the use of POE in banking facilities by Agagu (2006) showed that there is lack of orientation of FM providers on the difference between traditional property maintenance and user-focused facility maintenance. Also, there is a lack of orientation of users on the importance of their cooperation and feedback during the evaluation process.

In addition, many facilities managers are not involved in building projects right from the conception stage. Although they are professionals who are familiar with the need for contact with users, they are unable to contribute to the design of such buildings. Thus, suggestions to ensure that clients and users get the best from their buildings are lacking.

Further, there is inadequate enforcement of regulations needed to ensure that building conditions are improved. Also, a lot of managers, especially in the public sector, do not have access to sufficient funds to manage the buildings under their portfolio.

#### *Types of post-occupancy evaluation*

There may be three levels of POE process. The level undertaken depends on the availability of finance, time, manpower and the required outcome. The general approach to each level involves planning the process, conducting the study and interpretation of the results. The three levels as identified by Preiser (2001) and

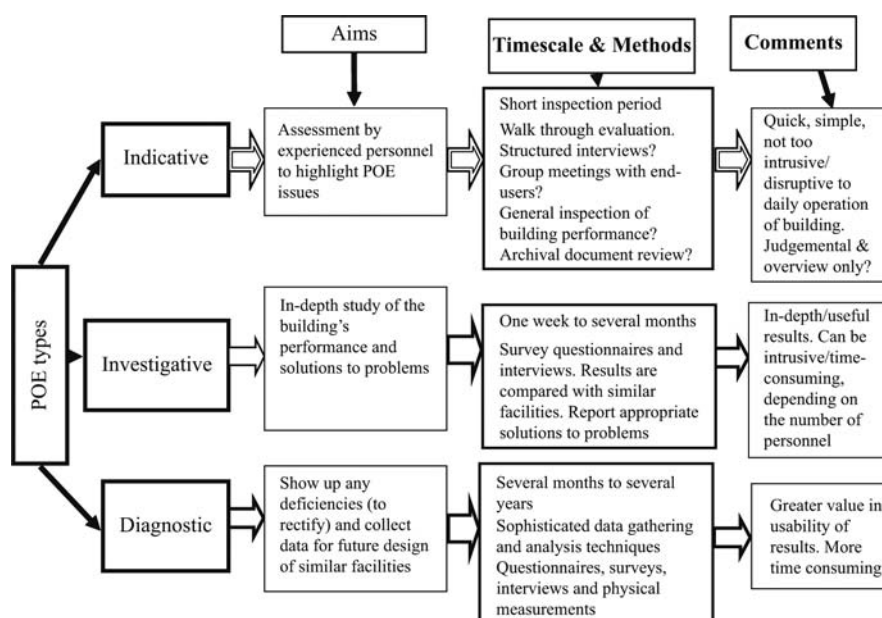
Langston and Ding (2001; cited in Turpin-Brooks and Viccars, 2006), are summarized in Figure 1.

Leaman (2003, p. 2) cites Bruhns as identifying over 150 techniques available worldwide, with 50 methods available in the UK. There are various methods of data collection, such as questionnaires, individual and group interviews, behavioral mapping, technical assessment tools and mathematical models. Sound instruments such as the Real Estate Norm, Serviceability Tools and Methods and other scaling techniques are used worldwide to measure functional aspects such as usefulness, accessibility, health, safety, and flexibility (van der Voordt, 1999; cited in Nenonen *et al.*, 2008). Previous Nigerian studies have shown that the indicative and investigative methods are commonly adopted (Agagu, 2006; Tijani, 2007; Amole, 2009; Adewunmi *et al.*, 2009). These methods are not as complex and time-consuming as the diagnostic method; hence, Nigerian facilities managers who usually adopt the reactive approach to maintenance will easily understand these techniques and find them cost-effective.

### Research methods

The study was conducted in the stages outlined below.

First, a literature review was conducted on performance indicators for hostel facilities. These indicators need to be adaptable within the context of a Nigerian university. Although some common variables were extracted from literature, they were summarized and simplified for adaptability after vetting by a member of the University hostel management committee, a hall mistress, who happens to be one of the authors of this paper. They are highlighted in Table I. Also, these variables are further expatiated using an interview survey.



**Figure 1.**  
Types of POE

**Source:** Adapted from Turpin-Brooks and Viccars (2006)



No.	Performance criteria	Students' responses (percent)					Mean
		SS	S	N	D	SD	
1	Level of cleanliness	48	52	–	–	–	4.48
2	Adequacy of natural lighting	37	59	4	–	–	4.33
3	Control of artificial lighting	19	44	13	24	–	3.57
4	Adequacy of lighting levels in the corridors	54	46	–	–	–	4.54
5	Overall perception of lighting quality	17	79	4	–	–	4.13
6	Room temperature during the dry season	9	17	35	39	–	2.96
7	Room temperature during the rainy season	22	66	12	–	–	4.10
8	Overall perception of temperature in building	–	74	15	11	–	3.63
9	Air quality within building	9	33	37	21	–	3.31
10	Air quality in the corridors	43	11	37	9	–	3.87
11	Control of natural ventilation	11	70	19	–	–	3.93
12	Overall perception of indoor air quality	7	61	22	10	–	3.67
13	Noise from outside the building	13	7	15	24	41	2.28
14	Overall perception of noise in the building	13	30	24	30	3	3.19
15	Overall comfort level in building	37	22	24	17	–	3.80
16	Furniture arrangement	9	35	32	15	9	3.20
17	Amount of space in rooms	24	72	4	–	–	4.20
18	Common room space	–	11	24	48	17	2.30
19	Conversation privacy in room	9	61	4	17	9	3.44
20	Visual privacy in room	35	43	22	–	–	4.13
21	Conveniences	11	54	22	13	–	3.63
22	Cooking facilities	11	13	19	30	27	2.50
23	Interior design of rooms	4	4	46	20	26	2.39
24	Telephone system	24	26	20	30	–	2.44
25	Overall satisfaction	7	60	20	13	–	3.48
26	Car parking	13	67	20	–	–	3.93
27	Fire safety	26	37	24	13	–	3.76
28	Security level	17	43	20	20	–	3.56
29	Internet facilities	22	17	15	46	–	2.15

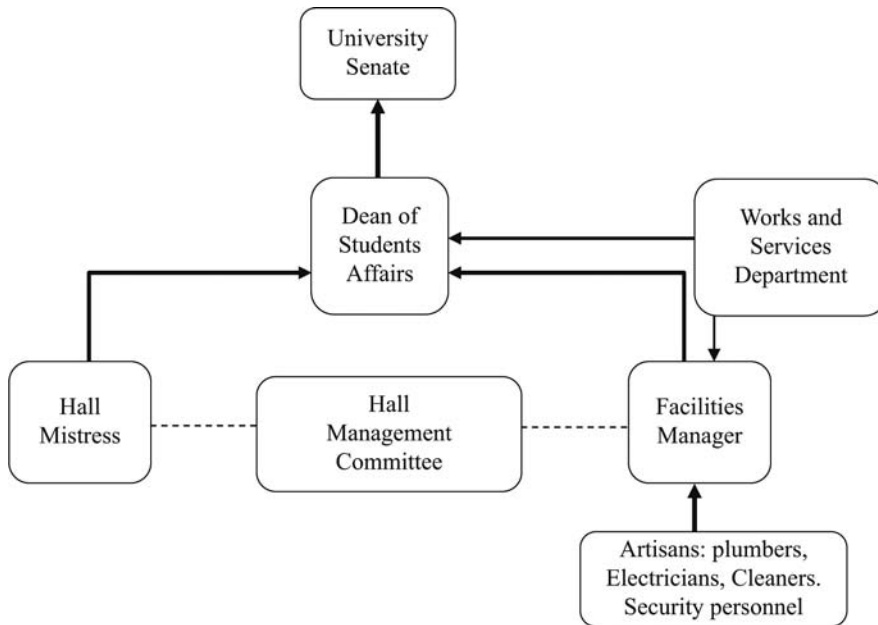
**Table I.**  
Result of survey of  
occupants' levels of  
satisfaction with hostel  
facilities

**Notes:** Coding and scale used for rating are represented as follows: SS = strongly satisfied, 5; S = satisfied, 4; N = neutral, 1; D = dissatisfied, 3; SD = strongly dissatisfied, 2

Second, an investigative approach to POE which provides an in-depth study of the building's performance and solutions to problems was used to measure building occupants' experience of their living environment. Also, questionnaires were sent to gather individual-level data through the responses of building users. Analysis of the study data was done with the SPSS statistical package. POE deals with analysis of individual buildings, which can then be benchmarked when reliable and thorough approaches are used to collect data. Case studies ensure that POEs provide a greater depth of qualitative and quantitative data and a contextual background to the environment of building users (see Yin, 1994; Amaratunga and Baldry, 1999; Turpin-Brooks and Viccars, 2006).

Finally, additional data was also collected using a scheduled interview to obtain data at the organizational level from the hostel facilities manager (Cross Key Properties Limited) and the coordinator of hostels of the university, a representative of the Director of Works and Services Department of the university, a well informed employee of the Works and Services department who reports directly to the Director of the Works and Services Department (see Figure 2).





**Figure 2.**  
Organizational chart of the  
Erastus Akingbola hostel

*Case study: Erastus Akingbola Postgraduate Hall, University of Lagos, Lagos, Nigeria*  
The case study is a student housing facility for postgraduate students within the University of Lagos, Akoka, Lagos, Nigeria, known as the Erastus Akingbola Postgraduate Hall (see Plates 1-3) . The building was selected because it is the only hostel facility in the campus not designed or constructed by the University; hence its distinctiveness from other student hostels within the campus. It was donated to the



**Plate 1.**  
Side view of Erastus  
Akingbola Postgraduate  
Hall

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**Plate 2.**  
A typical room

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**Plate 3.**  
Corridor (upper floor)

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University by Intercontinental Bank plc as part of its corporate responsibility activities. It is purpose-built, and a four-story building measuring approximately 548 m<sup>2</sup> per floor, or a gross floor area of 2,192 m<sup>2</sup>, with 58 rooms. Other spaces include an office, a common room and a canteen and general kitchenettes. The new building houses male students on three floors and female students on the ground and third floors. Students here are relatively older and more experienced than undergraduates. It is therefore assumed that they will be better users of the facilities than undergraduate students. Apart from this, the facility is not overcrowded like many of the undergraduate hostels, and most of the occupants are doctoral students. The hostel is relatively new, having been completed in 2006, and it is one of the two postgraduate hostels found within the University.

### *Research questions*

The research questions were formulated in consultation with the member of the Hall Management Committee:

- How do users experience the managed hostel facility and what are the issues involved in the maintenance of the facility?
- Does the hostel environment meet the objectives planned in advance, and what is the role of the university in the operation of the hostel?
- What lessons can be learnt from the experience gained so far?
- How can the results of this study be incorporated in the planning for subsequent hostel facilities and improve the management of postgraduate hostels?

### *Research findings*

The user satisfaction survey instrument is a simple 29-question questionnaire completed by occupants who were randomly selected in the building. The questions asked are shown in Table I. The questions are based on aspects of thermal comfort (temperature), acoustic comfort (noise level), visual comfort (lighting level) and indoor air quality elements. These also relate to the functional, technical and behavioral performance of a building. The measures used in the analysis were adopted from the factors pointed out in the literature and in an interview with a member of the university's hostel management committee (a hall mistress). The elements in the study are in line with findings on the measurement of POE (Amaratunga and Baldry, 1999; Turpin-Brooks and Viccars, 2006; Hassanain, 2007; Tijani, 2007; van der Voordt and van der Klooster, 2008; Amole, 2009).

A total of 60 questionnaires were sent out and 54 questionnaires were retrieved fully filled by occupants early in 2009. The sample frame of student user within the hostel is 70, as found in the current accommodation list for the hostel. This represents a response rate of 90 percent. In the questionnaire, which was based on a five-point Likert scale, the respondents were asked to rate the levels of satisfaction with various aspects of the building and the immediate environment.

*Expectations of users.* It is important to examine occupants' satisfaction with the physical environment. Table I summarizes the frequency counts and mean scores of some of the users' perceptions of the facility. The mean scores for each criterion range from 4.54 to 2.15. The mean response for each of the performance criteria was calculated using the SPSS package.

To be able to quantify the degree of satisfaction for each criterion of performance, the authors used the following criteria based on a graduated scale of 1-5:

- if the mean response is less than or equal to 1.49, then the respondents are “neutral”;
- if the mean response is between 1.50 and 2.49, then the respondents are “strongly dissatisfied”;
- if the mean response is between 2.50 and 3.49, then the respondents are “dissatisfied”;
- if the mean response is between 3.50 and 4.49, then the respondents are “satisfied”; and
- if the mean response is between 4.50 and 5, then the respondents are “strongly satisfied” (see Hassanain, 2007).

The results shows satisfaction with cleanliness, lighting, temperature in the building, comfort level, natural ventilation, visual privacy, amount of space, conveniences, car parking, fire safety, security and air quality.

These results were not totally different from the outcomes of previous studies on students’ hostel facilities. Hassanain (2007), in a study on student housing facilities conducted in the UAE, found that students were satisfied with all the performance categories identified (see also Hassanain, 2008). A similar study in Nigeria on student undergraduate hostels within the same university campus, the University of Lagos, on a different population (i.e. undergraduate hostels) using a user satisfaction survey showed that students were satisfied with security and the response to complaints. The facilities were overcrowded, with more than the required number of students, while areas of major discomfort included the electricity supply and sanitary conditions of conveniences, but students were satisfied with security and the response to complaints (Tijani, 2007). The divergence in findings may be attributed to the fact that hostel management within the UAE, a more developed country than Nigeria, will be better managed than one in a public institution in Nigeria owing to the availability of better trained managers and infrastructure.

The results in Table I demonstrate that there is satisfaction among occupants, since most of the respondents are not strongly dissatisfied with the services provided within the building. This is evidenced in Table I by the spaces marked “strongly dissatisfied” being blank.

The aspects of the hostel environment viewed to provide the most satisfaction to occupants were:

- lighting level in corridors (4.54 mean score; 54 percent strongly satisfied and 46 percent satisfied);
- level of cleanliness (4.48 mean score; 48 percent strongly satisfied and 52 percent satisfied);
- natural lighting (4.33 mean score; 37 percent strongly satisfied and 59 percent satisfied);
- amount of space in rooms (4.20 mean score; 24 percent strongly satisfied and 72 percent satisfied);

- visual privacy (4.13 mean score; 35 percent strongly satisfied and 43 percent satisfied); and
- room temperature during rainy season (4.10 mean score; 22 percent strongly satisfied and 66 percent satisfied).

The facilities manager confirmed that the building is always kept clean by the cleaners. Lighting is adequately provided through the presence of wide windows as well as artificial fluorescent lights.

There was dissatisfaction from students about:

- internet facilities (2.15 mean score; 22 percent strongly satisfied and 17 percent satisfied);
- noise from outside the building (2.28 mean score; 13 percent strongly satisfied and 7 percent satisfied);
- common room space (2.30 mean score; 11 percent satisfied);
- interior design of the rooms (2.39 mean score; 4 percent strongly satisfied and 4 percent satisfied);
- the telephone system (2.44 mean score; 24 percent strongly satisfied and 26 percent satisfied);
- cooking facilities (2.50 mean score; 11 percent strongly satisfied and 13 percent satisfied); and
- room temperature during the dry season (2.96 mean score; 9 percent strongly satisfied and 17 percent satisfied).

*Feedback from users' floor meeting.* A gathering that focused on specific user apprehensions was organized on the ground floor of the building. This session was facilitated by the authors using features of the building. Questions were asked based on the criteria highlighted in Table I. Questions asked include:

- What do you think about cleaning, room temperature, overall noise level?
- What do you think about internet connectivity?
- What of room furnishing, security, car parking, cooking facilities and common room area?
- Is the hostel facility located strategically?
- Are you willing to pay more for use of this facility if most or all the services are functional?

This technique generated unstructured remarks and personal preferences, comments about cleaning such as:

Cleaning in this building is for common areas, what about our individual rooms.

The problem with the conveniences is mainly plumbing, the tap for the basin leaks, one has to wait for the plumber most times and pay personally for his service.

Lighting is OK; one has to pay personally to change faulty fluorescent bulbs in the case of damage.

The internet service rarely works, wireless connection is preferable, connection to personal rooms will help academic work.

Other concerns include that of room temperature when the weather is hot because most of the rooms are fitted only with only one ceiling fan, which are not as efficient as air-conditioning. In terms of cooking facilities it seems that the problem is that of distance from students' rooms for the females. The male users are happy with the cooking arrangements. Respondents are not pleased with access to communication facilities as the telephone intercom facility is found only in the hostel office. There are hardly designated phone intercoms for students in the building. Student respondents were also not very happy with the common room because of a lack of space and the arrangement furniture there. There was also much complaint about noise levels outside the building. The location of the building is close to a motor park and an open space used sometimes for trade fairs and shows; this constitutes a serious disturbance to the inhabitants of the hostel. In addition, it was observed that there is no ramp or entrance for physically challenged students. This should have been considered in the design of the building and should be taken care of. There is no functional fire exit. There is only one functional staircase within the building; the other staircase is blocked. An enquiry with the hostel management showed that this exit had been blocked during the daytime for security reasons. It was found that students who are not occupants of the hostel were using this exit to avoid the security check at the other exit. However, this exit is open at night. Also, a complaint from users in terms of fire safety was that fire extinguishers and smoke alarms were not present.

However, users were satisfied with ventilation, furniture arrangement, electrical fittings, the location of the hostel in terms of its proximity to academic, sporting and health facilities, car parking, security, and interior and exterior wall finishings. All of them, however, preferred the use of sliding windows instead of the glazed Louvre blades used for the windows. One said: "all the doors should be changed to better quality doors with good locks". Finally, they are willing to pay more for provision of functional services within the building.

*Interview results with hostel facilities manager.* Table II shows the questions of the guided interview administered to the facilities manager of the Erastus Akingbola Postgraduate hostel to examine the issues involved in the management of the hostel.

The interview with the hostel facilities manager showed that hostel management is now under the control of facilities managers, who serve as contractors to the university. The operations of the facilities manager is checked by the Hall Management Committee, made up of the Hall Mistress and the Facilities Manager, who report to the Director of Students' Affairs of the university. The Director of Works also reports

Table II.

Questions asked on issues involved in the management of Erastus Akingbola Postgraduate Hostel

No.	Questions asked
1	What is the management structure of the hostel
2	the maintenance strategy is reactive, yes or no
3	How are students complaints documented
4	How do you prepare your budget
5	What are the major problems faced in the management of the hostel
6	Are you familiar with the use of POE
7	How many students were allocated rooms within the building this academic session?



directly to the Dean of Student's Affairs on hostel accommodation issues. The Facilities Manager also communicates with the Works and Services Department in case there is any university obligation for the hostel that needs to be made, or major repairs to be carried out such as on sewage, electricity and water supply.

The maintenance strategy adopted is usually reactive. Complaints are lodged in writing in the complaint register, and are responded to through the Facilities Manager's office. The students' complaints are responded to by artisans employed by the Facilities Manager; they fix or replace faulty materials. Funds for maintenance are generated internally by the FM contractor company through hostel fees paid annually by students. In addition to the funds generated through hostel fees, cost of repair or replacement is sometimes borne by the student lodging a complaint, especially when they are informed that funds are no longer available for repairs. A maintenance budget is prepared and considered by the Facilities Manager and the Hall Management Committee. The Facilities Manager complained that the funds available are grossly inadequate. This is because the hostel fees are split into two: while the first part is paid into the University's account, the other part is disbursed into the management account and is used for maintenance and other operating expenses of the Facilities Manager. Most of the services supplied within the building are provided by artisans employed directly by the Facilities Manager.

The findings indicate that maintenance is not user-focused and that hostel managers are not familiar with the use and benefits of POE. The most common complaint concerns the erratic supply of electricity on campus recently. There is no alternative supply of electricity provided within the premises to curb this.

*Interview with the University's Coordinator of Hostels.* Table III shows the questions of the guided interview administered to the Coordinator of Hostels for the University of Lagos to examine the objectives of the university hostel accommodation and the role of school management in the operation of the hostel facility.

No.	Questions asked
1	What are the core objectives of the university hostel accommodation
2	Who is the owner of the hostels located within the university campus and what are the university's obligations in the operation of the hostel
3	What are the organizational, financial and physical problems encountered in the operation of the hostel
4	Who manages the problems mostly found in the hostels
5	How does the university ensure that minimum standards are provided by facilities managers to students
6	Does the university earn fees from managers and how is this ascertained
7	What are the measures taken to enforce hostel rules
8	Is POE part of the university maintenance strategy
9	If yes, how is it conducted
10	Did the university have an input in the hostel design
11	What informed the type of building material used for the building
12	Is the hostel appropriately located on a planned site for hostels as contained in the University's master plan
13	What were the major adjustments to the new facility as a result of previous experiences in the operation of other hostels within the university

**Table III.**  
Questions asked on  
objectives of the  
university hostel  
accommodation and the  
role of school  
management in the  
operation of Erastus  
Akingbola Postgraduate  
Hostel



The interview with the University' Coordinator of Hostels revealed that the University of Lagos management has no specific core objectives relevant to old and new hostel facilities.

This study would thus help to guide the University management as regards policy formulation and focus on the institution's core and supporting objectives, in particular postgraduate hostel facilities. The University owns all the hostels within the campus, including the subject hostel, although it was donated by Intercontinental Bank plc. However, the University is responsible for major repairs, and the supply of electricity and water to the building. The problems encountered in the management of the hostel include:

- *organizational* – from bureaucratic delays in carrying out obligations; and
- *financial* – the unwillingness of students to pay for quality services.

In other countries where there are better services, users are willing to pay for the provision of such services. Also, physical challenges usually stem from usage. Quite a number of students accommodate extra students called "squatters", who have not been allocated spaces within the hostel, thus leading to overstretching of facilities provided. The university is responsible for managing problems within hostels, especially hostel rules. The rules are enforced by the Directorate of Students' Affairs (see Figure 2), which reports to the University Senate. The University ensures that standards are ensured in the provision of services by hostel facilities managers through routine inspection of the building and the yearly submission of a report. According to the report the building had a good performance. It was confirmed that the institution earns fees from the hostels. POEs are actually part of the school maintenance strategy, although it lacks the use of robust techniques and relies on inspection of facilities and interviews with hostel building users. The University had an input into the design of the hostel, while materials used for the finishing especially were chosen with cost as the major consideration. Another consideration in the design of the building was toilet and bathroom facilities. Other hostel facilities have insufficient toilet facilities, and thus the new facility was designed with an en suite toilet and bathroom for convenience and to maintain the cleanliness of the facility. The building is located on a postgraduate hostel site as contained in the school's Master Plan.

*Comparison with other data.* Although the results of the POE presented in this paper is limited to the sample building, it has been able to identify specific performance of a new hostel facility. In order to benchmark a building's performance ratings list of best practice criteria Buys and Nkado (2006) identified that a tertiary institution could do one of the following:

- compare its own performance against the performance of all other institutions; or
- compare its own performance against the best practice ratings of all other institutions; or
- compare its own performance against the best practice ratings of similar institutions.

A more generalized and comparable study by Amole (2009) on undergraduate and postgraduate student housing in South-Western Nigeria examined students'

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residential satisfaction and factors that predicted their satisfaction. Most of the other hostel facilities were characterized by short and long corridors, end-located service core sanitary facilities and cooking facilities and an average of six persons in a room.

Evaluation of this study showed that in the other hostel facilities students highly appreciated the social and place qualities of the bedrooms, especially studying and privacy in the bedroom. Design of the hall ranked second, while the social densities in the hall in terms of the number of people living within the hostel ranked third. Furniture arrangement and storage in the rooms ranked fourth. However, variables that appeared to be less significant to the users include the location of the hall ranked lowest (twelfth), then hostel rules ranked eleventh. Maintenance of the hall ranked sixth, kitchenette and conveniences ranked eighth, and laundry and balcony ranked ninth and tenth, respectively.

The study indicated that a long corridor, found in the case study, is also found in other older buildings. The experiences of users at the Erastus Akingbola hall can be useful for other new postgraduate hostels in other locations in Nigeria. The main difference between the case study and other hostels is also in the form or location of sanitary facilities. Here, a toilet and a bathroom are shared between two rooms. This has improved the sanitary conditions of the conveniences within the hostel.

The new hostel facility shows satisfaction with maintenance, design, social and place qualities, bathrooms, and facilities in the hall.

### **Conclusion and suggestions**

An investigative assessment of the Erastus Akingbola Postgraduate Hall, University of Lagos, Lagos, Nigeria was carried out on a representative sample of users of the building. The study has determined the degree of satisfaction obtained for 29 identified performance criteria. The extent of satisfaction was based on a questionnaire in which occupants of the buildings were asked to provide feedback on the physical living environment by marking their degree of satisfaction on 29 performance elements. The findings were further supplemented with an interview with users, the hostel facilities manager and the University's coordinator of hostels. The results shows satisfaction with cleanliness, lighting, temperature in the building, comfort level, natural ventilation, visual privacy, amount of space, conveniences, car parking, fire safety, security and air quality. The result of the interview with the coordinator of hostels shows that hostel rules need to be effectively enforced by the Director of Student Affairs' office, since certain rules such as the presence of illegal occupants or "squatters" can eventually lead to an overstretch of facilities.

The feedback will be helpful in the design and management of new hostel facilities. The study also showed that subsequent designs should improve the quality of fittings such as ceiling fans, windows and doors, supply telephone intercom facilities, and improve internet provision by extending provision to individual rooms. Also, the noise level from outside the hall should be reduced by moving the car park and stopping the open space outside being used for entertainment and commercial purposes to improve the quality of the learning environment. The Facilities Manager should ensure that fire extinguishers are installed, that the second exit is always kept open, and that service provision such as cleaning is extended to individual rooms. Also, the subsequent design of a new facility should provide for disabled students.

The result of the interview with the University's Coordinator of Hostels shows that there is need to make of robust techniques in the conduct of POEs within the University since simpler techniques are currently used. The study showed that although cost has been a major consideration in the design of the new hostel management facility, users prefer quality services and building fitting and for the postgraduate facility, they have shown willingness to pay for enhanced services as compared to undergraduate students. Also the results of the user survey can serve as evidence to access funds for the improvement of student hostel facilities.

This study demonstrates how a POE can be conducted within the context of a postgraduate hostel in Nigeria and assesses the management of hostel facilities by hostel administrators and facilities managers. Also there is need for the University to formulate core objectives for hostel accommodation, as this will guide the University's management as regards policy formulation, focus on the institution's core, and supporting objectives – in particular postgraduate hostel facilities.

POEs should be taught in built environment and facilities management courses and must be part of the curriculum of universities. Graduates familiar with POE studies are more likely to use them in practice compared to those unfamiliar with POE studies. Some facilities managers in the study campus are unaware of what POE is all about. Also, university authorities should be educated on the benefits of conducting POE studies so as to ensure their participation in the POE process. Periodic evaluation of public buildings can be a requirement by law to ensure that bureaucratic procedures involved in management are reduced or eliminated. However, there is an important connection between regulation and education as people may not respond to regulations if they are not familiar with the benefits.

Although the results of the POE presented in this paper are limited to the subject building investigated, the structure of the user satisfaction survey could be used to benchmark a similar building's performance especially a new facility, against other buildings.

Areas of future study could include POE studies on commercial office facilities, shopping centers and other facilities within Nigeria.

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**Corresponding author**

Yewande Adewunmi can be contacted at: [yewande\\_adewunmi@yahoo.com](mailto:yewande_adewunmi@yahoo.com)