

USER SATISFACTION WITH INFORMAL SPACE EFFICIENCY IN SELECTED OFFICE BUILDINGS IN LOKOJA KOGI STATE NIGERIA

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End users participation in the design of informal spaces in office building is not always included as most of the decisions are made by the professionals and the management. Suitability of users need is the main expectation of any spatial design. Office environment is evolving with changing nature of working condition and the growth in technology. Hence the use of informal spaces in office environment to strike a balance between work time and leisure becomes necessary. Despite this development, informal spaces have been observed to be relegated to the background in office building provision. The problem therefore is that users of these spaces are finding it increasingly difficult to perform their duties conveniently due to the degree of adaptation they could adjust to within the building. The aim of this research is to examine the user's satisfaction with the efficiency of informal spaces in office buildings. The research adopted the mixed method with the use of structured questionnaire and observations schedule. The data was analysed using descriptive statistics tool on SPSS-21 software and the results transferred to tables and charts using Microsoft Excel-2010. The results show the dissatisfaction of the users of informal spaces in office building. It also revealed that informal space efficiency will improve user satisfaction with office buildings. The paper concluded that to achieve informal space efficiency in offices there is need to reorganize and increase the sizes of these spaces coupled with proper spatial differentiation.

Keyword: efficiency, informal space, office building, satisfaction, user

INTRODUCTION

Informal spaces link up the homogenous, staged, controlled, 'official' public spaces and private spaces of the office buildings. They are referred to in various discourses from the realms of architecture, planning, design and urban theory as 'terrain vagues' (De Sola Morales, 1995). However, they are overlooked, and are often relegated as no specific office function is attributed to it, (Doron 2000). These spaces lie outside the zones of official use and occupation, existing somewhere between the commercial, recreational and sometimes circulation zones of the office building. By definition, such spaces are non-prescriptive (Doron, 2000). The time spent in the office by gainfully employed person ranked second to home (Schweizer et al., 2007; Leech, Nelson, Burnet, Aaron, & Razenne, 2002). An average of eight hours is spent daily in office environment by workers. Adedeji and Fadamiro (2012) posited that workers comfort level (visual comfort, spatial arrangement, security and overall workstation comfort) is affected by both the internal and external work place setting. As such it can be tiring if there is no provision for spaces in office buildings that allows for some rest and cool off at some point during working hour and especially during break period.

The management of some establishment usually seeks to provide spaces within the office environment. Therefore ensuring the efficiency of these informal spaces provided for the users is of paramount importance. This can be achieved through a design process that allows for information regarding them be collated and used in the design parameters. The need for efficiency of informal office space is very important because its effectiveness on workers' productivity cannot be over emphasised.

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Informal Office Space Provision

In line with the Property Framework (2014) individual establishments are responsible for their own accommodation arrangements. Therefore, it is important that the management (especially) the end users participate fully in the design process. If the management are not fully engaged but property officers delegated solely to handle the task, substantial innovation highly and efficient informal space is more difficult and less likely to occur. Figure 1 adapted from the UK Resource Management guide (2014) illustrates the responsibilities of respective sectors at each level of an organisation in the design process. Stakeholder engagement across the organisation is vital in delivering best-fit accommodation solutions that addresses user needs and ensure user buy-in to the cultural change process.

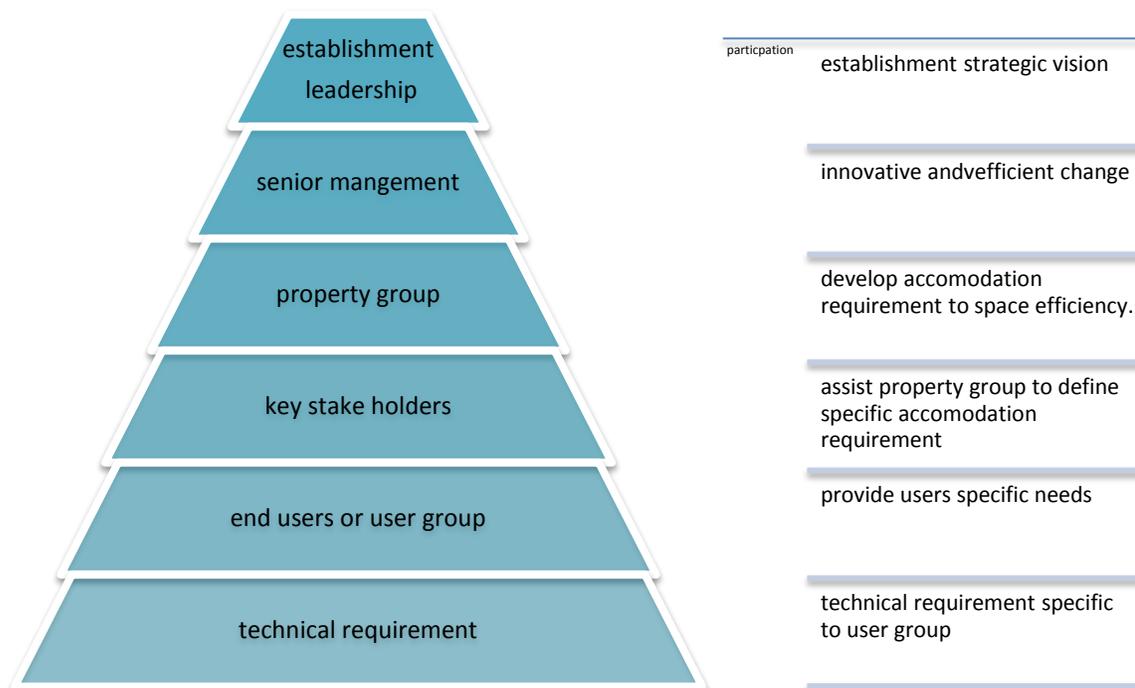


Figure 1: Responsibilities at each level of an organisation in informal space provision
Source: Resources Management Guide (2014)

It is worthy of note that this illustration is generic and does not represent any particular organisation structure. The stakeholder engagement process must give users the opportunity to participate in and have a real effect on decisions about the new workplace and its culture. Workplace design must take into account what, where and when work is undertaken. For the best design and management outcomes the design process should be interactive between the senior management of the agency, designers, project managers and the users. In addition, there must be ongoing mechanisms to track emerging user issues and usage patterns and to develop and maintain operating protocols.

Overview of Efficiency for Informal Space in Office Building

Informal spaces in office building need to be efficient and able to adapt to the growth, movement and changes in operations and technology. Efficient informal spaces also need to respond to both the needs of the individual and the employers, adjusting to when, where and how tasks are performed. Efficiency of informal space is needed in office environment to increase productivity thereby improving competitive advantage of an establishment (Naseem, Sheikh, & Malik, 2011 and Newsham, Brand, Donnelly, Veitch, J., Aries, & Charles, 2009).

Efficiency of informal spaces in office buildings depends largely on its level of flexibility (Gilbert (1996), Nawawi & Khalil (2008)). Flexibility is not only facilitated by the physical space for example through setup of offices, fixtures and fittings but also where and how an individual may work on a task-by-task basis. Individual's physical location will depend on concentration/collaboration needs; what team members need to be consulted and in the wider sense, on work/life balance considerations.

In Nigeria, the type of informal spaces provided in office environment is largely dependent on the nature of the office building and the demand for office space. This is because even part of the informal spaces may be reorganised to create an office space when the need arises. This practice was found to be very common in public office buildings. Table 1 obtained from a preliminary study shows the nature of the type of office and the specific informal spaces

provided among them and Table 2 shows the population per square metre of each of these spaces.

Table 1: Nature of Offices and the Informal Spaces Provided in Them

Types of office	Number Informal spaces available									
	Café	lounge	Waiting area	Restaurant/dining	Outdoor spaces	forum	courtyard	Recreation centre	garden	total
Public	5	3	5	3	5	3	4	1	2	31
Private	4	3	5	2	3	0	0	0	2	19
total	9	6	10	5	8	3	4	1	4	50

Source: Author's field work, 2017

Table 2: Population per square metre of the Informal Spaces

Types of office	Population of the spaces									
	Café	lounge	Waiting area	Restaurant/dining	Outdoor spaces	forum	courtyard	Recreation centre	garden	total
Public	15	9	12	20	53	17	20	25	15	186
Private	10	6	10	18	23	0	0	0	8	75
total	25	15	22	38	76	17	20	25	23	261

Source: Author's field work, 2017

Space efficiency can be achieved through flexibility in design. Three important considerations in efficient space design according to Space Management Group (2006) are:

1. The quantity of space, generally calculated in terms of floor area though occasionally volume may also be relevant
2. The number of users, potential and actual
3. The amount of time the space is used.

There is no one-size fits all approach efficient informal office space installations as each application should be tailored to reflect the business model and activities of the establishment.

The many elements for consideration in delivering typical office solution can be classified under the following areas.

1. The physical solution – the fitout, furniture and configuration of the whole space.
2. The virtual solution – the technology supporting communication and mobility in the workplace.
3. The organisational and management solution and the workplace culture they underpin.

As the beneficiaries of an efficient informal space in office building, it is very important to seek the user's perception. The current level of informal spaces in office building cannot be said to be efficient due to the overall treatment of the space as mere extra space in the building. They are often treated with reckless abandonment. It would therefore be important to seek ways of ensuring that the current spaces are efficient enough to meet demand of the office users so that workers' productivity can be increased through its usage. This provides the base for evaluating the perception of efficiency in offices as this would assist in ensuring that key issues are tackled at the design stage by the people involved in office buildings in Nigeria in general and Lokoja, in particular.

METHODOLOGY

The method adopted for this research is post occupancy evaluation method (POE). Here, user's opinion is sought on the situation under study. POE has been adopted generally as a means of obtaining user's perception of built environment (Adedeji & Fadamiro 2012). According to Zimmerman and Martin (2001), with POE specific aspect of detailed planning and design has been tested. Their impact on building users was also investigated with respect to several parameters such as: health and safety, security, indoor environment quality and functions.

Lokoja in Kogi State in Nigeria was selected for the study on the basis of the wide spread of public and private office buildings in the area. The study was conducted on both private and

public office buildings (see table 3). This enabled the researcher to obtain data from both side and also to be able to establish comparative analysis on this trend in both public and private office setting. A questionnaire was developed and administered to the users of these informal spaces. The respondents were drawn from 10 office buildings (five each for both public and private office buildings) out of a population of 25 office complexes (15 for public and 10 for private) in Ilokoja, Kogi State. A total of 55 questionnaires were returned from the 100 copies administered. This gives a return rate of 55%. The breakdown of the return showed 20 returned questionnaires from the 50 administered to the private offices given a return rate of 40% and 35 returned from the 50 administered to the public offices giving a return rate of 70%. Selection of respondent was done based on the population of office buildings under study at the time of administering the questionnaire. This gives a true representation of the perceptions of the users of the informal space. Data was collated, sorted out based on the buildings studied. It was coded and analysed for descriptive statistics using SPSS version (21) with the output further presented in tables and charts. Likert scale was used in the rating of user's perception with the view of establishing a finite decision upon which the recommendations of the research was based.

Table 3: Office buildings studied

Name of office buildings	
Public office buildings	Private office buildings
Kogi state secretariat complex	News agency of Nigeria (NAN) complex
Lokoja local government secretariat	Tec engineering office complex
Kogi state civil service commission	Equity plaza office complex
Industrial training fund office complex	Gtbank lokoja, kogi state.
Firs kogi state office complex	Salem university senate building

Source: author's field work, 2017.

RESULT AND DISCUSSION

From the result it is clear that users' perception of informal spaces in office building varies widely in terms of individual assessment. The combination of all the individual assessment gave an average perception of the measurement. The first part discusses the likert scale of measurement with the subsequent part offering discussions on the selected specific cases.

The Likert Scale of Measurement of Informal Spaces in Office Building

Choice of the perception of the user was measured on a weighted scoring 1 – 4

The rating for this scoring are:

Very dissatisfied	1
Dissatisfied	2
Satisfied	3
Very satisfied	4

Table 4 shows that measurement scale of satisfied and dissatisfied have the highest number of respondents. The number of respondents in each section is multiplied by the weighted score allocated to it. The calculation for this is shown in Table 4 and the total score across the rows are added up and presented as the total at the end of the table.

Table 4: Respondents' Responses on Perception Efficiency of Informal Office Spaces Measured.

Variable measured	Very dissatisfied (X1)	Dissatisfied (X2)	Satisfied (X3)	Very satisfied (X4)	total	mean	interpretation
Sizes of the spaces	11	42	51	24	128	2.33	dissatisfied
Types of openings in spaces	8	54	39	8	109	2.18	dissatisfied
The geometry of the spaces	4	32	42	64	142	2.84	satisfied
Daylighting in the spaces	10	48	51	16	125	2.27	dissatisfied
Height of ceiling	9	48	63	4	124	2.25	dissatisfied
Furniture arrangement	8	46	69	4	127	2.31	dissatisfied
Furniture hierarchy	4	58	48	16	126	2.38	dissatisfied
Wall finishes	5	50	51	12	118	2.36	dissatisfied
Floor finishes	7	46	66	8	127	2.35	dissatisfied
Integration level	9	52	57	4	122	2.22	dissatisfied

Calculation of the result obtained based on Likert scale is interpreted thus:

1.0	-	1.49	Very Dissatisfied
1.5	-	2.49	Dissatisfied
2.5	-	3.49	Satisfied
>		3.5	Very Satisfied

The majority of the users were dissatisfied with all the variables of measurement for informal spaces provision except geometry of the spaces; variables like sizes of spaces; type of opening; daylighting in the spaces; wall and floor finishes; furniture arrangement and hierarchy did not meet with the users' satisfaction. Also of concern is the level of integration of the users which was found to be low based on the study. This is due to the fact that a well fitted and furnished informal space will always be efficient irrespective of the geometry of the space. Most informal spaces simply require a large space and convenience to maximise efficiency. On comparing both public and private office complexes, similar trend repeated itself. However while general dissatisfaction is felt on both public and private office complexes, the level of efficiency of informal spaces available generally differs. Therefore, there is need to examine the relationship in the efficiency of informal spaces in office buildings between selected variables in both the public and private office buildings.

Efficiency of Informal Space Rating Based in Office Building

Cost of infrastructural provision establishment is very exorbitant. Therefore, the tendency to maximise resources usually leads to informal spaces in office building being neglected when it comes to allocation of resources. Hence it is not uncommon to see the space allocation to informal spaces being either too small or not well equipped to maximise its use in most of the office complexes. Some level of disparity exists between the percentage of the users who are satisfied with the informal provision and those who are dissatisfied. Figure 2 shows high level of dissatisfaction with the users of the informal spaces in private office buildings was due to the small space available for them that ranged between 12 m² to 20 m² this affected the arrangement possibilities within the space.

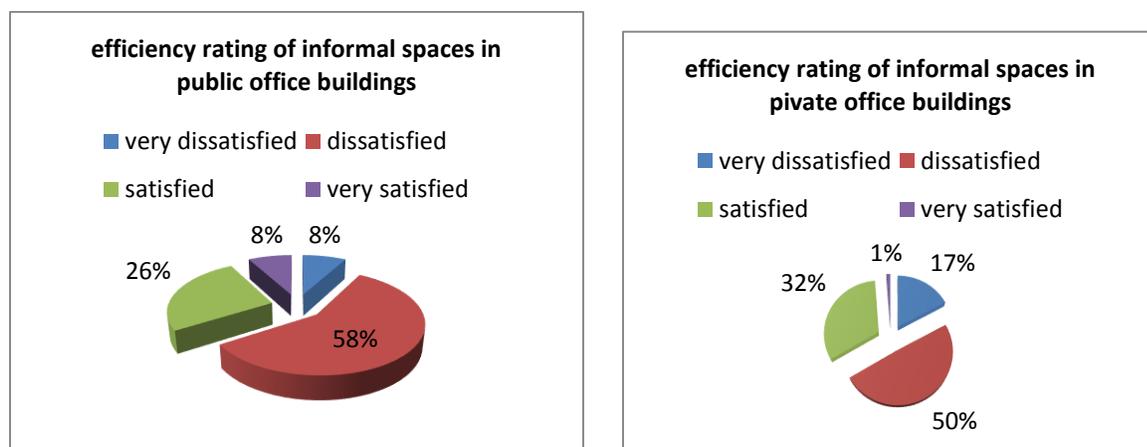


Figure 2: Users' satisfaction rating of informal spaces in office building
Source: Author's field work, 2017

There were cases where day lighting provisions to the spaces were insufficient for visibility let alone for maximum comfort. This accounted for some of the level of users' dissatisfaction on informal spaces in private office complexes. Figure 2 further revealed that efficiency is not just the requirement of those in public offices but also in private offices.

Efficiency of informal space rating based on the user group

There are two major user groups in informal spaces in office buildings. They are usually the staff (administrative staff and the program staff) of the office complexes. The difference between these user group lies in there office functions and task designation. The administrative staff that handles the management aspect of the whole office setup tends be more rigorous when compared to the programme staff. This also varies from establishment to establishment. In figure 3 it can be observed that the percentage of users that were dissatisfied with the informal office spaces is slightly higher in the administrative staff category. This can be understood because majority of the administrative staff interviewed found the available informal spaces to be inadequate. They also complained of inadequate space for relaxation and day lighting in the spaces. In the case of the program staff, their lack

of satisfaction has to do with the arrangement of furniture and the furniture hierarchy they are restricted to due to the lack of flexibility in the informal spaces provided. The administrative staff also complained level of integration of the informal spaces with the official working areas

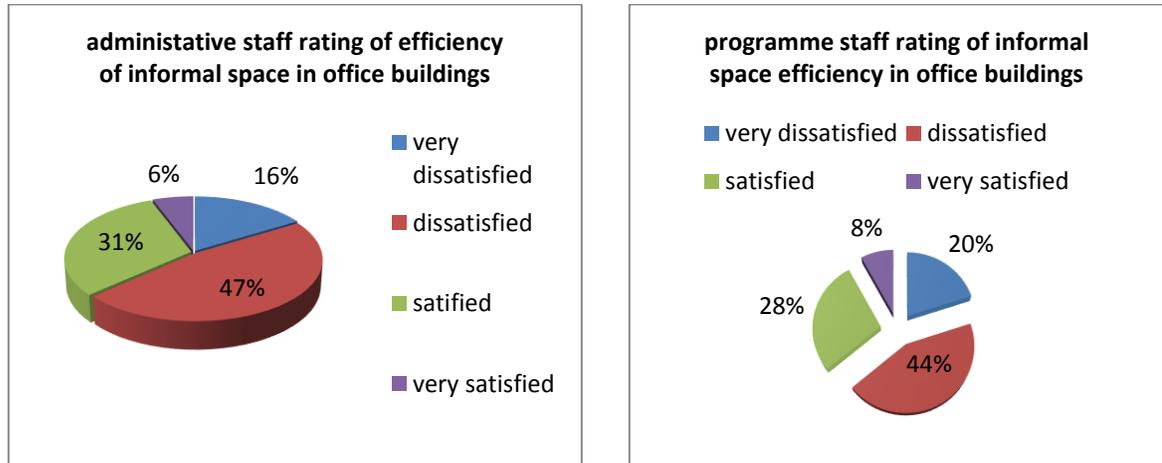


Figure 3: Users’ satisfaction rating of informal spaces in office building based on user group
Source: Author’s field work, 2017

Perception of level of integration rating of the informal spaces with official working area.

The major concern with most of the office complexes visited was the level of integration of the informal spaces provided with the official working areas (administrative and programme working areas). Many users complained that the informal spaces were not well lit to accommodate informal working condition. This is due to the sizes of the openings which inhibits the day lighting in the spaces. There is significant increase in the percentage of dissatisfaction among the users in the level of integration of the informal spaces in the office complexes as shown if figure 4. In the case of those that were dissatisfied in integration with the administrative working area, there major concern was the lack of flexibility in the special configuration. In an attempt towards achieving significant amount of integration, many users usually seek to reconfigure the spaces to suit their immediate need.

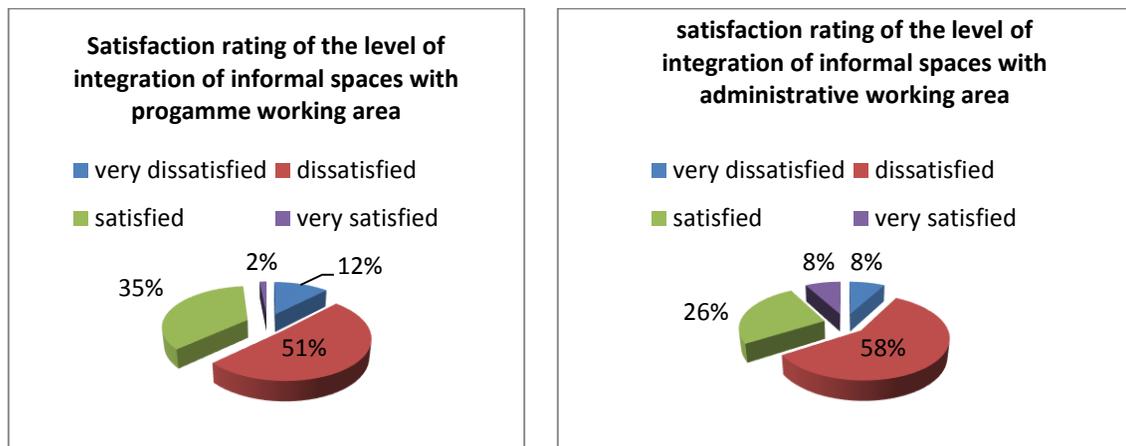


Figure 4: Users’ satisfaction rating of level of integration of informal spaces in office building with official working spaces.
Source: Author’s field work, 2017

CONCLUSION AND RECOMMENDATION

The management of these establishments should include user’s perception in the provision of informal spaces in office buildings. It is also important that this spaces so provided are efficient. Requirements for informal space efficiency should form the core of the design process. The good option is for management to begin to examine how they could make the current available informal spaces efficient enough to allow for acceptance by the current occupiers such that they would be satisfied with the spaces hence reducing the demand for newer spaces on the account of dissatisfaction of the current one. Principles of informal space efficiency should be considered by property Architects so that such that this spaces scan can fit into the current trend of working environment. In conclusion, poor level of satisfaction of users leads to poor productivity. It is therefore recommended that users/occupants should be allowed to make inputs in design of office spaces and the arrangement of the existing offices.

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