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THE IMPACT OF THE BUILT ENVIRONMENT ON PUBLIC LIBRARY REGENERATION IN NIGERIA

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ABSTRACT

The need to achieve effective literacy, numeracy and technological advancement in line with the current demands of globalization has established the public library as a veritable tool and instrument worldwide. However, many public libraries in developing countries like Nigeria are uninviting, unwelcoming, lack visitors and are greatly underutilized. This is in spite of numerous resources and services they provide/offer. Various scholarly literatures and discussions have focused primarily on the resources and services offered by public libraries but very few studies have examined the profound effect of the built environment on occupants/users of public libraries. Using the Simeon Adebo Public Library, Abeokuta as a case study, the paper explores the influence of the physical environment of public library in the users' satisfaction process. It concludes that reception to public libraries may require the creation of a conducive physical environment with the right ambient necessary to generate positive behavioural response from visitors/users.

Keywords: Physical Environment, Users/Occupants, Public Library, Ambience, Resource & Services.

Introduction

Public libraries make an important contribution to developing literacy and sustainable national development. Because of its relevance, much debate and scholarly literature have centred on the present and the future of the public library in the life of its users. The global digital revolution and other alternative sources of information have created great and understandable uncertainty about its future. In spite of the numerous resources and services offered by public libraries, it is faced with lack of visitors and it is the least preferred place to go for leisure time (Ismail & Chi, 2018). Some researchers have attributed this to the general mind-set that the library is simply a place to borrow books, stay and study diligently to pass examinations, therefore, visitors must be silent in behaving and show serious restraints. Some also agreed that users' perspectives are not integrated into the building designs and as much there is lack of sense of place or attachment. That many public libraries are greatly underutilized and existing seating often go unused have exacerbated concerns that the library was not fulfilling its mission (Gotsch & Holliday, 2007).

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The issue of what physical environment different categories of public library users perceive as friendly and inviting is important as it might improve the public reception and increase or draw more people into the library and retain those that entered to stay longer. Gotsch & Holliday (2007) established that designers of educational spaces have always instinctively known that the built environment has a profound effect on its occupants. According to Pigozzi (2005), illiteracy is most prevalent in developing countries. South Asia, Arab and sub-Sahara African countries are regions with the highest illiteracy rates at about 40 to 50 percent. East Asia and Latin America have illiteracy rates in the region of 10 to 15 percent while developing countries have values of a few percent.

According to Eno et al., (2010); Edem et al., (2011), Nigeria, one of the countries in sub–Saharan Africa has illiteracy rate of 25.6 percent adult males and 40 percent adult females. The country's illiteracy rate for males between 15 to 20 years is 9.3 percent for males while that of female in the same age is13.5 percent. Literacy is a good indicator of educational achievement and a better indicator of national development. In Nigeria where the literacy level is low and reading culture is generally poor, the reasons for the underutilization and apathy towards the public libraries may not be far-fetched. This may probably be attributable to the less attractive, lack of adequate facilities and the less comfortable environment of the public library buildings. Therefore, it is evident that if the quality of the physical environment of public libraries are adequate and able to meet the need of public library users, more people will be able to come and make use of the numerous resources and services put in place by the government. It is expected that there would be a corresponding improvement in the reading culture and low literacy level amongst Nigerians. This study explored the effect of physical environment on users of public library. It used the case study approach relying on the Simeon Adebo Public Library in Abeokuta, Ogun State.

Literature Review

The Public Library

The growing complexities of human needs coupled with advancement in technology have contributed to constant changes in what library users request from the public library. To meet these needs and remain in business, it is important for public library operators to understand the different aspects of public library development, management and operations that can make significant contributions to achieving improved satisfaction of end-users of public library services. The review of existing literatures revealed that most of the existing studies on satisfaction with public libraries have focused primarily on satisfaction with the resources and services offered by public libraries and only very few studies have examined the importance of the physical environment and their contribution to the satisfaction of library users.

Physical Environment and Human Behaviour

The physical environment is multidimensional and thus presents significant challenges for measurement. Although, peoples' environments, and of

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their perceptions of their environment, the most objective assessments are likely to include observation of the actual features of the environments. Prominence in the study of environmental psychology, environmental design and building evaluation, research evidences have shown that the quality of the physical environment of public library is as important to the users as the resources and services it offers. Numerous studies in the field of environmental psychology have also established how the shape and architecture of the building may have impacts on the personality of the inhabitants. Some of these impacts may spur physical and mental reactions in human beings (Javdani et al, 2015; Khaleghimoghaddam & Bala, 2018).

Buil et al, (2017) have also linked negative behavioural tendencies such as aggression and violence to unfavourable spatial conditions. As such, Mahmoud (2018) established that architects and planners have the responsibility of creating buildings and urban fabrics that can communicate with its users and can be communicated by users. Low quality and inappropriate physical environments of buildings such as coldness, heat, noise, poor lighting, darkness, furniture, colour of space and building materials may have negative effects on users. According to Javdani, et al (2015) evidences have shown that inappropriate architecture and lack of attention to welfare facilities in space and structure of public libraries led to reduce the public reception to these places. Shill & Tonner (2003) also conducted research on the physical improvement of academic libraries during the period from 1995 to 2002 and pointed out the impacts of such improvement on the increased usage of libraries.

According to Ismail & Chi (2018), the public library is a place for everyone where all the people are welcomed to access the community resources. As such, the design of the place should satisfy the needs of all its users through comprehensive space planning. This is done by integrating users' perspective into the building design. This will evoke a sense of attachment of the users into the place through their attitude and perception towards the building.

The formulation of appropriate library design philosophy and strategies is important to creating a friendly and inviting spaces. It is then important to integrate users' perspective into the building design. In order to fulfil its mission of universal literacy, the public library design/spaces need to be investigated and new approaches embraced. This is to make the public library become popular among the people. Researchers have considered the radical idea of designing library spaces around users' activities rather than library service functions. They even went further to compare library environment, particularly academic library environment to museum environment. They wanted to know what museum do environmentally to entice visitors to stay and learn with the intent of duplicating such environmental characteristics in libraries (Gotch & Holliday, 2007).

The aim of this study is to investigate the impact physical environment may play in the promotion of usage of public library in

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Nigeria. This particular study provides an avenue to measure the degree to which the built environment of public library buildings is successful in terms of users' environmental satisfaction. This section leads us to some theories and concept that are relevant to this study.

Place Attachment

Place attachment is defined as a process in which people and groups form bonds with places. It is conceptualized as a multi-dimensional phenomenon involving period, place and psychological process of attachment. Amole (2014) described place attachment as the bond which people have with their physical environment. According to her, various authors have conceptualized place attachment in a variety of ways, namely place dependence and place identity.

Place dependence, also called functional attachment refers to how important a setting is in facilitating a person's goals and activities. Place identity, on the other hand, refers to the symbolic importance of a place in terms of emotions and relationship which give meaning and purpose to living. Several studies have linked place attachment to the concept of satisfaction, especially when there is a positive bond with that place. According to Sivalioglu & Berkoz (2016), the interest in the relation between people and place is growing day by day. An examination of the emotional responses and relations of people with places especially in terms of interaction is becoming very significant. Factors such as emotional bonds, affiliation, behavioural commitment, satisfaction and belonging towards a specific place needs to be measured and evaluated.

The term satisfaction has become an important term to measure the quality of users' experience of a place. In their study of public library as a social interactive space, (Ismail & Chi, 2018) believed that the blurring function of the library and the poor maintenance of the library could be some of the reasons why the general public turns away from it. Also, the public library could not satisfy its users in terms of social interaction.

User's Satisfaction

A complex reciprocal relationship exists between users and the built environment. The built environment exists to support the activities of users it shelters. This relationship is referred to as the environment-behaviour relationship. This approach centres on using the feedback from users to measure the performance of a building. Vischer (2008) established that user satisfaction is a meaningful and measurable behavioural response to features of the physical environment. As such, user satisfaction then becomes an outcome measure. Though, she pointed out that little efforts have so far been expended to understand exactly what users are reporting when they rate themselves satisfied (or not) with the built space they occupy, nor the influences of other non-space factors on the satisfaction that is being reported. Whatever the case may be, according to Vischer, (2008), the framework argues that the users' experience of the built environment is central.

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This theory is very relevant to the built environment of a public library and any other built environment i.e. housing, healthcare etc. due to its generalization. A user centred theory of the built environment that is focused on the users' experience incorporates the interactive effects of both how occupants are affected and how they act on and respond to the environment. Relying on carefully designed tools (questionnaires and observations) for gathering and analysing reliable user feedback, valid data are collected and analysed to bring out useful results.

With the paradigm shift of focus of the industry from output based to outcome-based facility performance evaluation, user satisfaction is considered as one of the best means to evaluate outcome of any built facility (Gopikrishnan & Topkar, 2014). There are different approaches to gauge user satisfaction depending on the facility being assessed. User satisfaction is a measure of difference between the actual and expected performance of the facility in meeting the needs and expectations from users' point of view (Ibem et al, 2013). In order to assess user satisfaction, the primary requirement is to exactly identify the attributes that a user looks for in any built facility. These attributes shall vary depending upon the type of facility like buildings, roads etc. In case of buildings, the indicators can cover the technical, functional and behavioural aspects of the buildings. The building may be perceived by the same people differently at different times or differently by differently people at the same time. Also, the expectations vary among different individuals, groups and communities. (Kim et al., 2005)

Research Method

This study employed a case study approach, gathering data on the Simeon Adebo Public Library, Abeokuta. The objective is to derive context-dependent knowledge and information relevant to suggestions to improve the existing public libraries in Nigeria and to make proposals on new ones. Relevant data were obtained through structured questionnaires interviews and observations between the months of August and September, 2019. Questionnaires were designed for evaluation of the facility using attribute descriptor that were able to elicit objective user response during the user satisfaction survey. According to Gopikrishnan, S. & Vinay Topkor (2014), such questionnaires is likely to elicit more objective response from users. The objective of the research is to explore the influence of physical environment on user satisfaction process within the public library. Accidental sampling method was adopted as a technique for sample selection. In this instance, the most readily available respondents were selected. Out of 400 questionnaires, a total of 327 were received giving a response rate of 81.75%. Data obtained were analysed.

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Findings and Analysis

What follows are tables and charts elucidating findings and analysis from the research

Table 1: Respondents by Age

Age Range	Number of Respondents	% of Respondents
(0 – 30)	199	60.85
(31 – 50)	112	34.25
(50 – Above)	16	4.90
Total	**327**	**100**

Table 2: Respondents by Education Level

Education Level	Number of Respondents	% of Respondents
Primary	19	5.81
Secondary	174	53.21
Tertiary	118	36.08
Others	7	2.14
Total	**327**	**100**

Table 3: Respondents by Gender Distribution

Gender Distribution	Number of Respondents	% of Respondents
Male	186	56.90
Female	141	43.10
Total	**327**	**100**

Table 4: Respondents by Employment Status

Employment Status	Number of Respondents	% of Respondents
Government Employed	39	11.92
Self Employed	69	21.10
Unemployed	186	56.88
Retired	33	10.09
Total	**327**	**100**

Table 5: Respondents by Marital Status

Marital Status	Number of Respondents	% of Respondents
Single	242	74.00
Married	26	7.95
Separated	49	14.98
Widow	10	3.06
Total	**327**	**100**

Table 6: Respondents by Dis-ability / Ability Status

Dis-Ability / Ability	Number of Respondents	% of Respondents
Disabilities	13	3.97
Non-disabilities	314	96.02
Total	**327**	**100**

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Table 7: Respondents by Dis-ability / Ability Status

Patronage Level	Number of Respondents	% of Respondents
First Timer	38	11.62
(0 – 12) Months	171	52.29
1 years and above	118	36.09
Total	**327**	**100**

Table 8: Respondents by Dis-ability / Ability Status

Library Visitation	Number of Respondents	% of Respondents
Morning	235	71.87
Afternoon	92	28.13
Evening	0	0.00
Total	**327**	**100**

Table 9: Respondents by Dis-ability / Ability Status

Purpose of Visit	Number of Respondents	% of Respondents
Study	183	55.96
Borrow Books	59	18.04
Socialize	16	4.90
Internet	39	11.92
Recreation	29	8.86
Total	**327**	**100**

Table 10: Analysis of Research Questions

S/N	Questions	SA	A	SD	D	U	Remark
1	Physical environment of the library	59	78	92	89	9	Disagree
	is very good	18.04%	23.85%	28.13%	27.21%	2.75	
2	Air Quality is satisfactory	141	128	36	20	2	Agree
		43.12%	39.14%	11.01	6.12%	0.61%	
3	Illumination and lightings are	124	147	43	13	-	Agree
	Impressive	37.92%	44.95%	13.15%	3.98%	0%	
4	Acoustics (Noise) level is reduced	95	62	82	65	23	Agree
		29.05%	18.96%	25.08%	19.88%	7.03%	
5	Amenities / Utilities are adequate	26	26	101	160	14	Disagree
		7.95%	7.95%	30.89%	48.93%	4.28%	
6	General Ambience (painting,	56	49	111	101	10	Disagree
	artworks, flowers) are very good	17.13%	14.98%	33.94%	30.89%	3.06%	
7	There is visual comfort (No	134	118	36	33	6	Agree
	obstruction)	40.98%	36.09%	11.01%	10.09%	1.83%	
8	Maintenance of the library is very	33	36	137	75	46	Disagree
	Prompt	10.09%	11.01%	41.90%	22.94%	14.07%	
9	Thermal Comfort satisfaction level	95	69	75	72	16	Agree
	is good	29.05%	21.10%	22.94%	22.02%	4.90%	
10	Library service satisfaction is	43	39	124	101	20	Disagree
	Excellent	13.15%	11.93%	37.92%	30.89%	6.11%	

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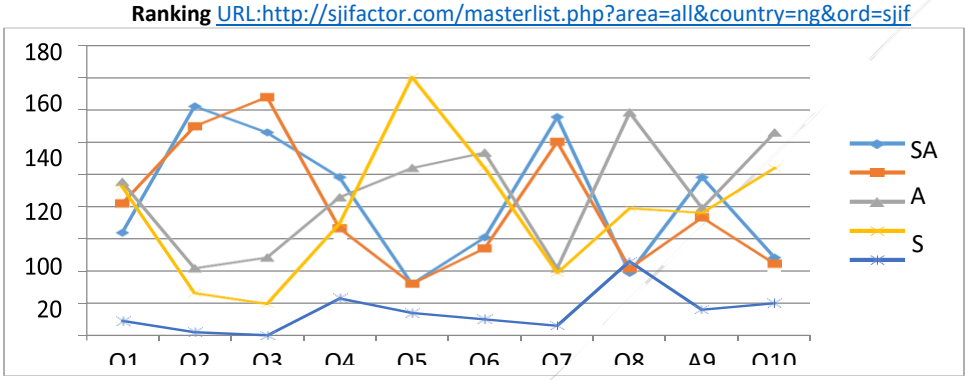


Chart 1: Analysis Using Line Chart

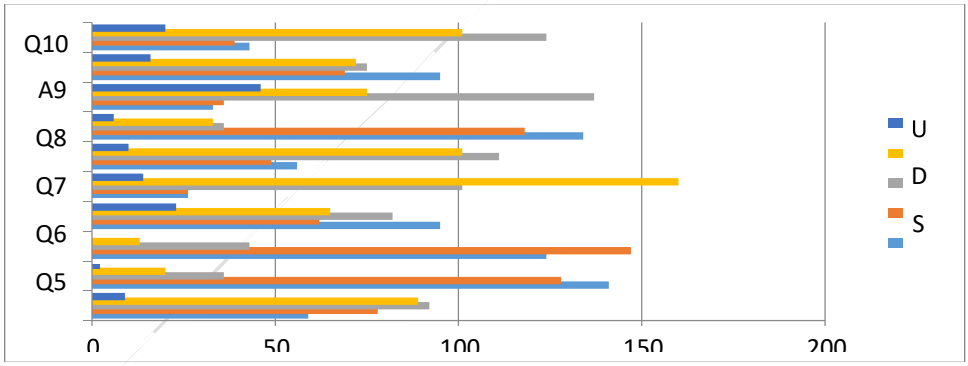


Chart 2: Analysis Using Bar Chart

Results and Discussions

Findings showed a strong reciprocal relationship between the physical environment and public library users' attitude and perception i.e., the outer environment, internal spaces and the furniture and equipment. With regards to the demographic details of respondents, findings showed 186 respondents at 56.88% were males while 141 respondents representing 43.11% were females. With regards to age of respondents, 199 respondents representing 60.85% were aged between 0-30 years, while 111 respondents representing 33.94% were aged between 31-50 years and 17 respondents representing 5.19% were aged 50 years and above. The results showed that more young adults and teenagers patronise public library than adults. As such, the challenge is to continue to gain more of them into the physical library in order to address the problems of illiteracy in Nigeria. Sufar et al (2012) established that the library needs to become "cool" and comfortable so that teenagers could consider it as a good place for meeting and hanging out together. Young people prefer comfortable workplaces and more freedom to move around and explore the space.

With regards to patronage level to the public library, findings revealed that 154 respondents representing 47.09% visit the library very often, 105 respondents

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representing 19.87% visit seldom. Findings about period of visitation showed that 236 respondents representing 72.17% prefer to visit in the morning while 91 respondents representing 27.82% prefer afternoon visits. This may be attributed to the thermal condition in the morning period being cool and comfortable. With regards to the purpose of visitation, 183 respondents representing 55.96% come to study, 59 respondents representing 18.04% come to borrow books, 16 respondents representing 4.8% come to socialize, 39 respondents representing 11.92% come to utilize internet services while 30 respondents representing 9.17% come to relax within the public library environment. Attempt should be made to make the public library more dynamic by putting in place different zones and places to gather or be alone for different categories of visitors with different needs.

181 respondents representing 55.35% agreed that the physical environment of public libraries actually need improvement. Even though, 99 respondents representing 2.7% were undecided. Previous studies undertaken by Shill and Tonner (2003) showed increased usage of libraries when physical environments were made. For the analysis of air quality, 209 respondents representing 82.26% agreed that the air quality within the public library is satisfactory while 56 respondents representing 17.12% disagreed. This situation may be attributable to the number and size of openings within the library building which encouraged aeration within the spaces. Proper ventilation will help to eliminate unpleasant odour equally.

With regards to illumination and lighting, findings showed that 271 respondents representing 82.87% were not impressive enough while 56 respondents representing 17.12% disagreed. Sufar et al (2012), lighting can control how the library looks and feels. Adequate natural lighting is needed for optimum task performance. While encouraging natural lighting, windows need to be carefully aligned to minimize solar gain and glare. In selecting reading surfaces, it is good to avoid colours or backgrounds that are either too light or to dark. The selection of lighting is usually based on a standard comfortable lux and luminance.

With regards to noise level within the public library, 157 respondents representing 48.01% agreed that it is satisfactory while 147 respondents representing 44.95% is not satisfactory, and 7.04% representing 23 respondents were undecided. That both opinions were very close may be attributed to the closeness of the facility to the major road in spite of a few trees planted within the compound of the library which may act as buffer. Potential sources of noise within the public library may be footsteps, equipment operations, people talking to each other, vehicular movement etc.

The quality and type of building materials, finishes for the floor, walls and ceilings should meet with the required standards and specifications. This may assist to insulate against unwanted noise. With regards to the general interior ambience, findings showed that 105 respondents,

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representing 32.11% agreed that the general ambience is good. 212 respondents, representing 64.83% disagreed that the ambience was good. 10 respondents representing 3.05% were undecided. Interior ambience is a function of selection of lightings, furniture, materials and finishes of public libraries. All these determine the influence of users' expectation, needs and behaviour. Findings regarding visual comfort within the public library showed 252 respondents, representing 77.06% agreed that the library spaces offered visual comfort to users. Good quality sensation of sight is a function of the perception of the environment that strongly determines spatial behaviour. Non-obstructive space may be a function of the shape and architecture of the internal layout of the library spaces.

With regards to maintenance of the public library, 212 respondents, representing 64.83% agreed that the level of maintenance is very poor while 69 respondents, i.e. 21.10% disagreed with this. Only 14.06% representing 46 respondents were undecided. A worn out and unattractive environment may probably be uninviting and unwelcoming to visitors in the library. Sights of broken furniture and equipment sends signal of poor maintenance of the facility. Poor maintenance also reflects in the inadequacy and total absence of amenities/utilities within the public library in Nigeria. The rusty approach must change to a new modern place of meeting people and using information in groups. New shapes, colours and concept are employed in newest projects and interior solutions in different libraries all around the world (Sufar et al, 2012). With regards to thermal comfort satisfaction within the public library, 164 respondents, i.e. 50.15% agreed that it was satisfactory, while 147 respondents representing 44.95% disagreed. 16 respondents representing 4.89% were undecided.

The thermal condition within the library environment is a major determinant of public reception. If the thermal condition is unacceptable to users and they feel uncomfortable, they may not be willing to stay longer even if they come at all. Especially during the mid-day period. Public libraries may need to rely on fans and air conditioners (mechanical ventilation) to improve the thermal comfort of the library spaces. This may be a challenge in the face of epileptic power supply and non-availability of alternative source of energy i.e. renewable within the library environment.

Conclusion

Public libraries in Nigeria are faced with multiple challenges, among several factors which include inadequate funding, dwindling image, reputation and patronage, quality service delivery etc. However, in spite of the enormous resources and services provided by the public libraries, studies have shown that the physical environment or services cape has a vital role to play in improving its service delivery. It is clear that improvement in the physical environment of public library may improve patronage by the visitors. The ultimate is to achieve users' expectations, desires, needs and experience through a physical and environmental setting that appropriately influences the users in its totality.

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