

# ASSESSMENT OF DESIGN PROFESSIONALS' PERCEPTION OF ENVIRONMENTAL AESTHETICS OF RECREATIONAL OPEN SPACES IN ABEOKUTA NIGERIA.

BY

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#### Abstract

There are some perceptual features which could explicitly relate an object to aesthetic forms of response, which can be objectively assessed. From this perspective, it has been observed that objects have something special within their properties. The structural and physical characteristic features like the visual aesthetic condition of a recreational site will require conscientious and deliberate assessment for exterior furnishing which is lacking in most recreational open spaces. This paper unveils a statistically dependent assessment using both descriptive and Mann-Whitney -U test analysis to determine the design professionals' perception of environmental aesthetics in recreational open spaces in Abeokuta. The design professionals were more critical of the scarcity of street furniture in the ROS which is indicative of their perception of the item as a composite element for environmental aesthetics in the study area. There is a differential response and sensitivity between the African and western perception of environmental aesthetics. Various interrelationships exist among the variables of Visual aesthetics quality which has been investigated through design professionals' respondents, the outcome can enhance environmental aesthetics of recreational open spaces (ROS) for effective patronage. It is recommended that owners and managers of Recreation open spaces should provide adequate street furniture to create convenience for site visitors and enhance the aesthetics of the outdoor environment. The furniture should be selected and set up based on an analysis of the site's current and desired patterns of use, in order to serve its desired purpose.

Keywords: Aesthetics, Design professionals, Environmental, Open Space, Recreation

#### Introduction

Zuska (2009) noted that aesthetic judgment always refers to a specific object and requires active participation of the mind. Although landscape aesthetics and assessment of landscape scenery should be a basic component of any comprehensive approach to landscape (Vorel, 2006, Ewald, 2001), the processing of aesthetic information is based on cognitive structures which are capable of solving perceptually and semantically demanding tasks, such as the interpretation of multi-level symbolism. Rees (2001) pointed out that successful realisation of such complex mental activities requires high concentration and awareness and efficient working memory processing.

Wascher, (2005) argued that identifying character is, to a large extent, built upon human perception and therefore landscape character assessment can be questioned with regards to its scientific rigour and hence its role as an analytical tool for landscape planning. It is believed that such an approach can make a valuable contribution to the development and application of landscape characterisation of capturing landscape visual character using indicators. Landscape indicators provide possibilities for a more objective basis for identifying landscape character through dividing the totality of visual perception of the physical landscape into quantifiable characteristics.

#### Aim and Objectives of the Study

The aim of this research is to assess design professionals' perception of environmental aesthetics with the view of enhancing the patronage of Recreational open spaces in Abeokuta Nigeria. The specific objective is to enumerate design professionals' perception of aesthetic quality of ROS;

#### Hypothesis

There is no significant difference between design professionals' perception and environmental aesthetics quality of ROS in the study area

# 7 Scope of the Study

The scope of this study is limited to the examination of some existing natural and artificial landscapes accessible to members of the public and they constituted the research samples. The group for this study is the cognitive professionals like architects, town planners, of the ROS situated within the two local government areas of Abeokuta, (North and South). Factors that express the physical and environmental characteristics of the sites such as facilities distribution, texture, natural appearance, land structure, within the site constituted the body of variables in this work. Perception of recreational landscape features that stimulate environmental aesthetics in the recreational open spaces and the emotional evocations stirred up in these two main categories of observers Architects and Town planners are central and sorted out in this work. Throughout the context of this study, these two terms (beauty and aesthetics) mean the same thing and is used interchangeably where most suitable,

#### 1.8 Study Area

Abeokuta the study area, is located in Ogun state of Nigeria. It comprises of two local governments namely: Abeokuta North and Abeokuta South as shown in figure 1.1. Ogun state is bound by Lagos State to the South, Oyo and Osun states to the North, Ondo State to the east and Abeokuta lies Southwest of the Federal Republic of Nigeria, and is 100 kilometers from Lagos, 70 kilometers away from Ibadan, the largest city in Black Africa. It occupies an area of 100 square kilometres with an estimated population of about 593,100. (NPC, 2007). The area lies within the rain forest belt of the tropics, between latitude  $070^{0}$  51' and  $070^{0}$  20' N and longitude  $030^{0}$  171 and  $030^{0}$  27' E. (Onakomaiya, 2000). The altitude ranges from 120 to 180 metres above sea level. The dominant feature of the area is the Ogun River which flows from North to south draining the city through a number of rivers such as Rivers Ona-Ibu in the southeast, the Osun in the east, Yewa in the west and Ewekoro and Adiyan in the south-west (Oyegoke, & Sojobi, 2012).

Abeokuta enjoys a tropical climate with distinct wet and dry seasons, and the rainfall ranges from 1016mm to 1270mm (NEAFR, 2002, NiMet, 2016). It is underlain by both the crystalline basement rocks and the Cretaceous Sedimentary formation (Oyegoke, & Sojobi, 2012). Seven of the twelve recreational open spaces are located in the South while the remaining five are in the North of Abeokuta. The name, Abeokuta, literally means 'under the rock' in Yoruba language, which shows the symbolic role of a monumental rock (Olumo Rock) that provided refuge for the early settlers in the heart of the town. Abeokuta is situated in the middle of and surrounded by a rocky terrain, known as the Olumo Rock, and has mud walls of 18 miles long.

#### **Literature Review**

According to Lothian (1999), the major advantage of expert-based assessment is its practical efficiency. The expert-based approach is less time-consuming and less expensive. According to Daniel (2001), the weakness of the expert-based approach is the low resolution of different levels. The result of an expert-based analysis is a distribution of landscape areas into three groups with different aesthetic qualities. A substantial part of landscape is very often categorized as landscape of medium quality. Expert-based assessment is deeply dependent on the professional knowledge of the assessor. This invariably according to Daniel (2001) produce different assessments, and there is insufficient assurance of reliability This is considered to be a further disadvantage of the approach. Even a renowned assessor is of no advantage if the assumptions underlying the aesthetic values are incorrect (Lothain, 1999).

#### Design Professionals and management of Recreational open space (ROS)

Professional design and management of public spaces is associated with encouraging physical activity. Tahir and Roe, (2006) opined that there is a need to have beautiful and visually satisfying landscapes. Also, Ward (2013) supported that it is pertinent to create attractive streets, parks and outdoor spaces provision to attract patronage and increase physical activity level

David (2001) observed that an open space analysis focuses on officially designated existing or planned public open spaces that are available to the architectural designs. Quite often it is a reflection of the psychological mind frame of the architect in propagating a concept or philosophy upheld by a movement or an inspiration peculiar to the designer. This practice is predominant in architecture and the artistic field where the architect designs to convey his thoughts and philosophical ethos. However, with the advent of the age of inquisition and scientific corroborative research, cities being a large mass of concentration of people, the intuitive approach in city evolution by the architect or architect and his team alone will not appropriately suffice. Popow (2000), explained that Architecture, as a symbolic and intentional endeavour seems to reflect the psychology of its designers regardless of time, culture and perhaps even species. Space, form, and light are elements that are often incorporated either purposefully or unconsciously for aesthetic or practical reasons but more pointedly give creatures meaning, purpose and stability amidst an ever-changing physical universe of seeming chaos.

The fulfillment of giving meaningful purpose to the occupants of a place, location or city is the missing element which a historical image application can pacify. Social and societal stability can largely be achieved by an interplay of architecture of mass inclusion, integration and participation. In many countries, planning systems and decisions often protect the interests of the rich, or are limited to beautification and decoration of urban spaces.

Also, in most developing countries like Nigeria, planning systems and processes are still largely based on colonial laws, designed to support spatial segregation and population control. They fail to reflect the need and priorities of urban residents in terms of taste and architectural style in the African context. Modernism which is highly western in social content is void of the needed admixture of the Nigerian and African historical colouration. Also, certain postmodern models lack definitions of traditional architecture and modern architectural combinations that originally emanate from user's perspective.

Open space most often comes under pressure for development in growing neighbourhoods and also at risk of being either undervalued or underprovided in planning of new subdivisions. Nevertheless, in many cases a calculated assessment will ascertain the need to re-orientate or rationalise already existing open space to correct past planning mistakes and again to tackle access and maintenance related issues. An open space network should promote a more active lifestyle by proposing and providing a range of safe and aesthetically pleasing spaces that are spatially distributed within a neighbourhood and are accessible and satisfy the sporting and recreational needs of the neighbourhood.

Budruk and Manning (2003) suggested that Public open space should endeavor to provide for multiple users. Introduce to all citizens the cultural life of the city by using both major and the neighborhood cultural institutions, and providing exhibitions of art and performances of music, drama, and the dance in neighbourhoods. The strategies could further include, improving the environment in which leisure time is spent by conserving, and making available and accessible the ecology of the area and helping to create an improved aesthetic environment in which leisure hours can be enjoyed.

A well-designed recreation program makes city more vibrant and attractive. Hence attracting the commercial undertakes is an important goal to reinvigorate the economy in the city. The relationship between the quality of recreation program and the recreational environment are reciprocal in a recreation context. According to Pigram and Jenkins (1999), the relationship between utilisation and environmental impacts of outdoor recreation depends on three factors such as the qualifications and characteristics of the environment, recreational use, and management strategies.

Chan, Marafa, and Bosch, (2015) noted that these factors also affect the relationship between the resources and user's experiences. Recreation and management is a big business. For instance, by way of landscaping and the provision of facilities, a sporting oval can be designed to provide for children, sportspeople, and walkers. Giles-

Corti (2005) observed that .with the increasing low rates of participation by adults, and especially children; in field based sports there has been a drift in allocating a big proportion of local open space to playing field; rather provision of open space for informal recreational use closely to where people live, to blend with public access is more predominant.

By collating theoretical knowledge of place with experimental work in affect and cognition, it is argued that mental image in the theory of place is comprised of affective and cognitive associations with physical settings and activities in those settings. This description of place-making along with descriptions of placelessness, insideness, outsideness, identity, sense of place, essence of place, have been articulated for research to improve knowledge on the theory of place. This knowledge would then inform methodologies for "the maintenance and manipulation of existing places and the creation of new places" (Relph, 1976).

#### Design Professionals' Objective Assessment Approach

Design Professionals' assessment is founded on the objective approach to aesthetic landscape qualities. The incorporation of design professionals in the ROS assessment is to define landscape scenery qualities and attributes. Attributes of landscape scenery are characterised using variables that define their shape, linearity, structure and colour. These attributes are subsequently connected with properties such as variety, unity, uniqueness and distinctness (Daniel, 2001). Jessel (2006) claims that methods for registering visual qualities are partly based on a description of landscape attributes (various types of vegetation and attributes of landscape structure) and are also based on landscape characteristics (the typical order of attributes in landscape scenery, their shape and proportion).

The aim of landscape analysis is to establish a set of dominant point attributes, line attributes and spatial attributes and an understanding of their structures (mutual functional, spatial, ecological, social or other connections) (Vorel, 2006). It is also necessary to recognize the morphology of terrain, vegetation and attributes of civilisation related to the settlement and agricultural use of landscape. Vorel (2003) pointed out the need to pay attention to two visually perceived groups of landscape-spatial properties: Structure of landscape attributes: the pattern and dominancy of natural or artificial components is the essence of landscape type. On the basis of these attributes. landscape can be characterised as recreational, agricultural, woodland or lakeland. Configuration of natural attributes: the structure and different meanings of natural attributes, their relation with landscape and its proportions, unity or disunity (conflict), are mirrored in the landscape image.

Another important property of landscape is its spatial composition. Vorel (2006) points out that the final assessment of the aesthetic quality of landscape may be influenced by the shape and delimitation of spaces. At the same time, the relation between spatial depth and terrain mass (or space) is also important. A spatial scale related to the human scale has the same effect. Vorel (2006) assumes a positive influence of unambiguously and understandably delimited spaces with vivid horizons or dominant features. In terms of orientation, the possibility to distinguish different spaces and their vividness is one of the key factors that format landscape character.

Vorel (2006) and Jessel (2006) noted that the overall character of landscape cannot be defined only with the use of individual indicators. Vorel, (2006) stressed that in monotonous landscape, observation is mentally tiring or

leads to a discomfort, while in unique memorable landscape observation results in interest, understanding and comfort. The dominant attribute in landscape may be an unusual terrain formation, a lake, the silhouette of a city or a castle. Other features may be, for example, the spatial formation of attributes that underline or create dominant landscape features, vivid features of symmetry, asymmetry, gradation, rhythm, contrast or unity.

These technical attributes can only be explained by the design professionals though the visitors may perceive all of it but have no concrete way of expression. Jessel, (2006) acknowledged that deep-rooted aesthetic values may have different meanings for different persons or groups. The question is, whether expert-based assessment can be compared in validity with generally stated aesthetic preferences. Lothian (1999) suggested adjustments to precise expert-based assessment: changing quality-determining criteria in accordance with general preferences; obtaining representative preferences through consulting a sample of at least 30 persons with no professional background.

# **Study Area**

The orthogenetic city of Abeokuta, capital of Ogun state Nigeria as shown in Figure 1.0, is the study area which comprises of two local governments namely: Abeokuta North and Abeokuta. south located in south western part of Nigeria as shown in figure 2.0. It occupies an area of 100 square kilometres with an estimated population of about 593,100. (NPC, 2007). The area lies within the rain forest belt of the tropics, between latitude 070<sup>0</sup> 51' and 070<sup>0</sup> 20' N and longitude 030<sup>0</sup> 171 and 030<sup>0</sup> 27' E. (Onakomaiya, 2000). The altitude ranges from 120 to 180 metres above sea level. The dominant feature of the area is the Ogun River which flows from north to south draining the city through a number of rivers such as Ona-Ibu River in the southeast, the Osun in the east, Yewa in the west and Ewekoro and Adiyan Rivers in the south-west (Oyegoke, & Sojobi, 2012).

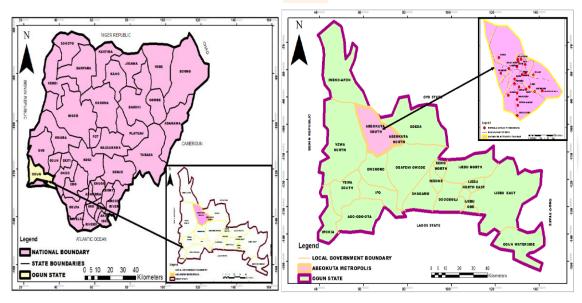


Figure1: Map of Nigeria showing Ogun StateFigure2.0: Map of Ogun State showing Abeokutaof theFederation of NigeriaSource: Adapted from Google Earth. (2023)Source: Adapted from GoogleEarth. (2023)

Abeokuta lies Southwest of the Federal Republic of Nigeria, and is 100 kilometers from Lagos, the commercial nerve of Lagos, to the north, and to the south some 70 kilometers away from the city of Ibadan, the largest city in Black Africa.

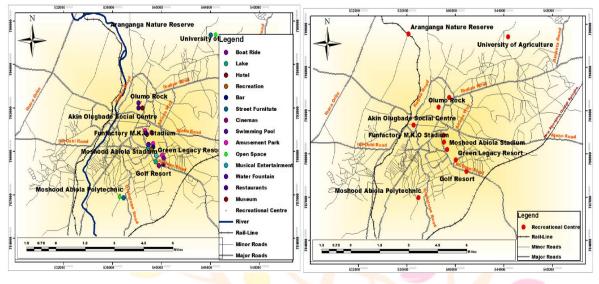


Figure 3: Map of Abeokuta showing (ROS) source: Adapted from Google Earth. (2023)

Figure 4 Classification of Recreational Centres in Abeokuta (Public and Private ROS) Source: Adapted from Google Earth. (2023)

# **Research Methodology**

Research methodology as defined by Creswell (2012) is a process of identifying problem and mechanism for data collection on Variables which are investigated with a view to proffering solutions. Kothari (2009) described Research Methodology as the concept of conducting research or a study. This is also referred to as the conceptual structure within which research or study is conducted (Kothari, 2009). It provides baa a sic procedure for data collection, measurement, and analysis to solve research problem(s). Asika (1991), simply noted it as, the structuring of investigation to identify variables and their relationships.

This section provides the framework for carrying out the research work. It includes the research design, research population, sampling frame, sampling technique, sample size, data collection instruments, the procedure of data collection, methods of data analysis, and scale of measurement of variables.

# Research Design.

The aim of the study is achieved with the use of structured questionnaire, field survey to gather quantitative and qualitative data from respondents. Landscape elements aesthetic features questionnaire was given to respondents for assessment.

# **Research Population**

Parahoo (1997), defined research population as the total number of units from which data can be collected, such as individuals, artefacts, events or organizations. The population for this study was from three major groups. First group comprises Leisure seekers, tourists' sports participants and spectators at the research site. Selected by simple random sampling and by every third contact covering the two local government areas of Abeokuta North and

South (these are called zones for the purpose of this study). The second target population for this study are mainly the design professionals such as architects and town planners, contacted through the Nigeria institute of Architects (NIA) and Nigeria institute of Town Planners (NITP) respectively, who are in public and private practice within the study area. The third research population group was limited to staff and managers of recreational sites.

#### **Sampling frame**

The sampling frame is a list of elements from which a sample is selected. The sampling frame is done through the probability method of census sampling for used and justified research into the relationship between ROS and satisfaction with environmental aesthetics. There are a total of twelve (12) ROS sites in Abeokuta as shown in Table1.0. The data was obtained from an internet online source Nine of these sites are Government owned while the remaining three belong to private organisations.

# **Enumeration Area**

There are a total of twelve (12) ROS enumeration areas in the study as shown in Table 1.0. The data were obtained from internet online source and personal site visits. Nine of these sites are Government owned while the remaining three belong to private organisations.

#### Table 1.0 Enumeration Area

S/N	List of ROS	Locational Address	Geographical
			Location
1	Olumo Rock -	O <mark>gun state</mark> min. of	Abeokuta
	Olumo	cultur <mark>e and to</mark> urism, oke	South
		-mosan <mark>,</mark>	
2	Moshood Abiola	Kuto, Abeokuta, Ogun	Abeokuta
	Stadium	State, Nigeria	South.
3	Funfactory	Moshood Abiola	Abeokuta
		Stadium,Kuto	South.
		Abeokuta,, Nig <mark>eria</mark>	
4	Emrald	22 Former Savanah	Abeokuta
	Amusement Park	Bank Premises, Quarry	South.
		Road, Ibara, Abeokuta	

5	University	of	Abeokuta-Ibadan road	Abeokuta	
	Agriculture		in the North Eastern end	North.	
			of the city, 15 km from		
			Abeokuta City Centre		

6	Green legacy	Olusegun Obasanjo	Abeokuta
	resort	Presidential Library	South
		Complex, NNPC Bus	
		Stop, Oke Mosan	
7	<b>Golf Resort</b>	located at Golf Resort	Abeokuta
		Drive, Off IBB Drive,	South.
		Oke Mosan, Abeokuta,	
		Ogun	
8	Centenary hall		Abeokuta
			North.
9	A <mark>kin</mark> Olugbade		Abeokuta
	social centre		North.
10	Arakanga nature		Abeokuta
	reserve		North.
11	Cultural and Arts	3,Ibar <mark>a, R</mark> oundabout,	Abeokuta
	Centre	Abeok <mark>uta;</mark>	North.
12	M.K.O A	The Ojere campus	Abeokuta
	University	Abeokuta	South

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# **Data Collection Instrument**

The primary data was collected through the use of Questionnaire instrument prepared in English language. Personal interviews were as well conducted to extract the necessary information from owners of recreational sites and design professionals within the research area to obtain necessary historical facts for the research.

The secondary data like census population and the number of recreational sites in Abeokuta were obtained from the internet as well as published and unpublished sources from the Federal and State ministries of Environment, Housing and Urban Development, Youths, Sports and Culture.

#### **Procedure for Data collection.**

The primary data was collected through the use of questionnaire which was administered by researcher and with the help of research assistants who were adequately enlightened to carry out the assignment. The interview was self-conducted on the staff of the ROS and four design professionals. Other personal visits were made for first-hand information. A pilot study was conducted to test the strength and the weakness of the questionnaire and also the survey techniques (Kothari, 2004), The questionnaires was distributed and collected through the research assistants, data analyst and personal contacts with the stakeholders.

# Method of Data Analysis

Questions relating to the objectives of the study were designed to cover ROS in the study area. The study analysed variables using analytical and descriptive methods. The relationships between the 2 major variables that were vital to this study includes ROS and design professionals' perception of Environmental Aesthetics. Following the quantitative data collection in the first phase, the data analysis from the field survey was analysed.

#### **Reliability Test**

The reliability test is measured using Cronbach's Alpha coefficient (Cronbach, (1951) and Hulin (2001)) which means that no external factors can have a direct influence on the variable. The reliability test was conducted on the research questionnaires for this study and data obtained through the survey and the result of the reliability analysis is shown in Table 3.7. Reliability coefficients test always range between 0 and 1.

It was shown that the reliability analysis for all the objectives was inadequatefor "analyse design professional's perception of the aesthetic quality of ROS" that has a Cronbach's alpha reliability coefficient of 0.663. This shows that the objective need to be revised as shown in Table 2.0. There were no changes in variables as at the time of obtaining the results after the objective was revised.

#### Table 2.0: Reliability Analysis

S/N	<b>Objectives</b>			Cronbach's	Remarks	Recommendation
				Alpha		
1	enumer <mark>ate</mark>	design	p <mark>rofe</mark> ssional's	0.663	Good	Revision Required
	perception	of aesthe	eti <mark>c q</mark> uality of			
	ROS					

# Design Professionals' perception of environmental aesthetic quality of ROS

The report shows that the trees and flowers positioning at the site of the ROS is ranked first among all other variables, and rated "good: by the highest frequency and percentage distribution of 12(44.4%); has the highest weighted mean value of  $3.4053 (\pm 1.0103$ STD) as shown on table 4.21. It implies that the trees and flowers are well positioned on the site. The second-ranked is the view of the ROS site rated "good" by 9 (32.3%) with the weight mean score (wms) of  $3.335 (\pm 1.129$ STD) This indicates that most of the ROS facilities like merry go round, street furniture can be seen clearly on site. Third-ranked variable is visual aesthetics condition of the site rated good by 9(32.8%) (3.326.wms,  $\pm 1.080$ STD), which implies that the aesthetic condition of the site in terms of visual

characteristics is good looking. The grass lawns at the site is fourth in ranking and rated good by 11(42.5%) with a (wms) of  $3.3061 (\pm 0.9795$ STD) which implies that the grasses at the lawns have good greenish appearance. The connecting walkways is rated fifth by 11 (37.6%) having a weight mean score (wms) of  $3.257 (\pm 1.0875$ STD) which is indicative that the site pavement is well arranged. The least of the variable is the street furniture ranked sixth by 9(32.8%) having a weight mean score of  $2.966 (\pm 1.027$ STD) and implies that visitors do not have where to seat at the site and other facilities like street light and disposal bins are not available.

Main and Greet (2010) noted that it is often difficult to understand fully how site design integrates the elements of furniture that are used for various designated purposes and create a sense of place. Such an understanding can open up creative possibilities for designers of outdoor areas and enable them to shape spaces that can succeed in achieving their aim over the long term. Street furnishings create the settings for resting, sitting and eating, and social encounters with others. According to Deakin, Mitchel, Nijkamp, and Vreker, (2007), Such settings may be of great importance to the elderly, those with limited mobility, and adults who have small children; but in addition to their functional aspect, items of urban furniture such as benches and tables in parks and squares can also be socially significant as they give these sites a comforting and appealing air and draw people together.

			Freque	ency Di	stributio	n and I	Percentage	Univaria	ate Analy	sis
			Distrib	oution						
Character	ristics	of	Poor	Fair	Good	Very	Excellent	WMS	Std.	Rank
ROS						Good			dev	
1 View of	ROS		4	7	9	5	3	3.335	1.129	2
			(13.7)	(26.6)	(32.3)	(16.4)	(11.0)			
2 Visual A	Aesthe <sup>-</sup>	tic	4	8	9	5	2	3.326	1.080	3
condition	of t	he	(12.9)	(29.0)	(32.8)	(17.2)	(8.1)			
site										
3 Street H	<mark>Furn</mark> itu	ire	5	9	9	4	1	2.966	1.027	6
(seats, ligh	nting)		(18.5)	(31.5)	(32.8)	(13.4)	(3.8)			
4. The co	nnecti	ng	4	7	11	4	3	3.257	1.0875	5
walkways				(25.4)	37.6	(14.0)	(9.4)			
5 The t	ree a	nd	(13.7)	5	12	4	3	3.4053	1.0103	1
flower pos	sitioni	ng	3	(18.3)	(44.4)	(17.5)	(10.8)			
at the site	is		(9.1)							
6 The gras	s lawn	at		6	11	5	2	3.3061	0.9795	4
the site is		3	(21.0)	(42.5)	(19.1)	(7.5)				
			(9.9)							

Table 3.0 Analysis on Design professionals' perception of Environmental Aesthetic Quality of ROS

#### Testing of Assumption (difference) on Design Professionals Perception

The perception of the design professionals was determined using Mann-Whitney U test which is used when the assumption of an independent sample t-test has failed. The main purpose of an independent sample t-test is to examine the difference in perception between users, managers and the design professionals on environmental aesthetic quality of the ROS in Abeokuta. There was an assumption that differences could exist between the perception of users and design professionals due to their respective non-cognitive and cognitive factors curled from the literature reviewed. The assumption of the parametric test named (t-test) was applied and tested before proceeding with the non-parametric test (Mann Whitney U test) as shown in Table 4.22

	Stakeholders	N	Mean Rank	Sum of Ranks
	Architect	17	15.88	270.00
Environ_ Aesthetics	Town planners	11	12.36	136.00
	Total	28		

# Table 4.0: Mean Ranks of the Design Professionals

# **Test of Hypothesis**

There is no significant difference between design professionals' and other stakeholders' perception and environmental aesthetic quality of ROS in the study area.

The null hypothesis is tested at P-value < 0.05 (5% level of significance), approximately 95% confidence interval. The result of the analysis shows that P-value (0.265) > 0.05 as shown on Table 4.23, which indicates that the null hypothesis was rejected at P-value < 0.05. This proves that there is significant difference in the perception of the design professionals (Architects and Town Planners) on environmental aesthetic quality of ROS as against other stakeholders (site visitors and managers). The rating of the aesthetics of the ROS, by the design professionals is slightly lower than that of the end users according to their weight mean score (wms) in a ratio of 3.326 to 3.294 respectively and however not considered very significant comparatively. The result further indicates that environmental aesthetic quality of ROS determines the perception of design professionals although this is limited to visual aesthetics being that their response was based on visual images only and could not determine the sound, smell and taste of the site

	<b>Environmental Aesthetics</b>	
Mann-Whitney U	70.000	
Wilcoxon W	136.000	
Z	-1.105	
Asymp. Sig. (2-tailed)	p-value (0.265)	

Table 5.0 Testing of Assumption (difference) on Design Professionals Perception	on

a. Grouping Variable: (Design Professionals: Architect and Town Planners)

#### FINDINGS AND RESULT

The physical characteristics of the ROS sites are embodiment of both the topography and the physical as well as perceptual elements found on them. All areas relating to scenic and visual elements require attention. Such attention is basically furniture placement replacement or replanting of the vegetation, trees, grasses and shrubs for soft landscape Withered and scattered trees can further reduce the aesthetic vista of ROS. Mineral resources available in the study area include trees for timber chalk, phosphate, high quality stones and gravels for ROS construction works. Like many other state capitals and major cities in Nigeria, Abeokuta has experienced steady growth since it came into existence in 1830. In 1839 Abeokuta became the seat of Egba United Government courtesy of the British Government (Adenekan 2000). Ever since, Abeokuta has been growing in leaps and bounds and its development monitored and documented in various forms such as, aerial photographs and topographic maps

In the case of hard landscape, most pedestrian routes and open surface areas are worn out or undulating. There seem to be a lack of understanding of the role seats can play to encourage larger patronage and use of recreational open spaces. Adequate seating provision can encourage more visits and create a sense of place as other factors are equally attended and remedied. Observations by Bill, Gail and Greet (2010) revealed that it is often difficult to understand fully how site design integrates the elements of furniture that are used for various designated purposes and create a sense of place. Such an understanding can open up creative possibilities for designers of outdoor areas and enable them to shape spaces that can succeed in achieving their aim over the long term.

# CONCLUSION AND RECOMMENDAYIONS

The design professionals' perception which was further assisted with the aid of photographs revealed that they were more selective of the sites. Most of them are physically well acquainted with the ROS namely: Olusegun Obasanjo Library, Golf Resort also known as Abeokuta sports club. The perception of the design professionals on the environmental aesthetic quality of the ROS hinged mostly on the lack of adequate facilities like street furniture, facility location and poor maintenance culture. The design professionals were selective of the ROS. Their aesthetic perception being more of infrastructural consciousness with the availability of trees, disposal bins and street furniture.

A few of the recreational open spaces were perceived to be pleasant. Gold resort centre, also known as Abeokuta Sport club, was said to be more aesthetically appealing than any of the ROS, possibly because it has lots of facilities like basketball, jogging gym, tennis, music, fitness trail and soccer pitch and so on. Some others like Arakanga nature reserve, Akin-olugbade social centre, also used for social activities were not appreciated.

Architects, Town planners, site managers should all be consulted and used to create aesthetic functional spaces by deploying their professional knowledge and experience to increase user satisfaction for leisure seekers.

There is need for managers of Recreation open spaces to provide adequate street furniture to create convenience for site visitors and enhance the aesthetics of the outdoor environment for effective patronage. The furniture should be selected and set up based on an analysis of the site's current and desired patterns of use, in order to achieve its desired purpose.

#### REFERENCE

Asika, N. (1991) Research Methodology in the Behavioral Sciences www.scirp.org > reference

> References Papers

Bill M, & Greet. G H, (2010). Site Furnishings: A Complete Guide to the Planning, Selection and Use of Landscape

Furniture and Amenities, John Wiley & Sons.

Creswell, J. W. (2003). Research design, qualitative, quantitative and mixed methods approach. (2nd edition). California, USA. Sage publication"

Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests.

Psychometrika, Vol. 16, 297 – 334.

- Daniel T.C. (2001) Aesthetic preferences and ecological sustainability. In: Sheppard SRJ, Harshaw *HW* (*eds*) Forest and landscapes: linking ecology, sustainability
- David, L, (2015) "Self-Perception Theory (Bem)," in *Learning Theories*, https://www.learning-theories.com/selfperception-theory-bem.html aesthetics. CABI Publishing, Oxon, pp 15–30
- Deakin M, Mitchell G, Nijkamp P, & Vreeker R, (2007). Sustainable Urban Development: Volume 2; The Environmental Assessment Methods, Routledge Press;
- Ewald, K. C., (2001). The neglect of aesthetic in landscape planning in Switzerland. Landscape and Urban Planning 54: 255-266.
- Giles-Corti, B.; Broomhall, M.H.; Knuiman, M.; Collins, C.; Douglas, K.; Ng, K.; Lange, A.; & Donovan, R.J (2005). Increasing walking: How important is distance to, attractiveness, and size of public open space? Am. J. Prev. Med., 28, 169–176.
- Jessel B., (2006). Elements, characteristics and character Information functions of landscapes in terms of indicators. Ecological Indicators 6: 153-167.
- Kothari, C.R. (2007) Research Methodology: Methods and Techniques. New Age International (P) Ltd., New Delhi Kothari, C.R. (2004). Research methodology, methods and techniques. New Delhi. Age Publishers.

Kothari, C.R. (2009). Research methodology: methods and technologies 2nd edition New Delhi Age Publishers.

- Lothian A., (1999). Landscape and the philosophy of aesthetics: is landscape duality inherent in the landscape or in the eye of beholder? Landscape and Urban Planning 44: 177-198.
- Onakomaiya, S.O, Oyesiku, K., Jegede, J. (2000). Ogun State in maps. Geography, Regional Planning Dept. Olabisi Onabanjo University, Ago Iwoye: Rex Chales Publication Ibadan. PP 184-187
- Oyegoke, S.O, & Sojobi, A.O (2012). Developing Appropriate Techniques to Alleviate the Ogun River Network Annual Flooding Problems, International Journal of Scientific & Engineering Research, Volume 3, Issue 2, February -2012 1 ISSN 2229-5518 IJSER © 2012 http://www.ijser.org.pp 1-7

Parahoo, K (1997) Nursing Research; Principles, Process and Issues. London, Macmillan Press

- Vorel, I., (2006), Estetické hodnoty krajiny a jejich identifikace v procesu hodnocení krajinného rázu. In Vorel (ed.) et al.: Krajinný ráz a východisk a jeho hodnocení. Nakladatelství Naděžda Skleničková, Praha, Czech Republic: 113-121.
- Vorel, I., Bukáček, R., Matějka, P., Culek, M., Sklenička, P., (2003). Metodický postup posouzení vlivu navrhované stavby, činnosti nebo změny využití území na krajinný ráz. Nakladatelství Naděžda Skleničková, Praha, Czech Republic
- Ward T, C. (2013). Activity, exercise and the planning and design of outdoor spaces". Journal of Environmental *Psychology.* 34: 79–96. doi:10.1016/j.jenvp.2013.01.003
- Wascher, D. M. (Ed.) (2005) European Landscape Character Areas: typologies, cartography and indicators for the assessment of sustainable landscapes. Final project report as deliverable from the EUs Accompanying Measure project European Landscape Character Assessment Initiative (ELCAI).

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