



AARCHES Conference, BAZE University, 5th – 7th June, 2024.

Book of Abstracts



Association of Architectural Educators In Nigeria!

AARCHES CONFERENCE 2024

THEME:

**SHAPING ARCHITECTURAL
EDUCATION FOR
PROFESSIONAL
EXCELLENCE**



AARCHES President Message



The President, ARCON, The Registrar, ARCON, The President, NIA, The Honorable Secretary General, NIA, Vice President, AARCHES, Secretary General, AARCHES, All Exco members, AARCHES, LOC members, Our keynote Speaker, The Lead paper speakers, All Professors here present, All members here present.

It is with great pleasure and sense of fulfilment that I welcome you all to this year's National Conference 2024. This conference is very significant, since the last conference which was held in 2019, attempts to hold others were faced with several challenges. First, in 2020, was the COVID-19, then were the ASUU strikes in 2021, 2022, and 2023. This conference is holding is holding at this time, when the NUC has introduced a new curriculum, CCMAS. It is also coming at a time when technology and artificial intelligence are making inroads into every aspect of human endeavours. We also need to prepare ourselves to also our share of the global market.

The theme for this year's national conference is, "Shaping Architectural Education for Professional Excellence" with four major sub-themes, which were carefully chosen to address some of the challenges that has been observed.

We believe that the Keynote, the Leader Papers, and other papers will contribute a long way.

I am delighted that the President and the Registrar of the Architect's Registration Council of Nigeria, Sir Arc. Oladipo Ajayi, and Arc. Umar Murnai, respectively are here, and also the National President and The Honourable Secretary General of the Nigerian Institute of Architects, Arc. Abimbola Ajayi and Arc. Chike Ibeanu respectively.

It is also my pleasure, to see the representatives from the National Universities Commission and National Board for Technical Education.

For quite some time, lecturers have received accusations from people in practice that we are producing unemployable graduates. I always wonder whether the curriculum we are using now has drastically changed from the one used to train them. Something must have gone wrong.

The training of architecture students takes a time of six years, four years for the BSc and two years for MSc, after which he is expected to go to practice the profession. The student is taught all the theories and principles required to acquaint self with the profession, with assumptions of and ideal situation, however, school cannot be able to teach the students practical office procedures, and this varies from



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firm to firm, and office to office, job sourcing, contract administration, etc, experience gained only through practice.

I want believe that there is a need for the regulatory body and the institute to take a closer look at the post graduation training of the architecture graduate before he/she launches into professional practice. There is a need for a structured internship and mentoring of the graduate as he prepares for professional practice



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AC-13-24

Perceptible Attributes of Landscape Components in Enhancing the Built Environment in Jos Metropolis, Plateau State.

Emmamoge Orewere^{1}, Beatrice Chapi Owoicho¹, Ruth Rakiya Martins¹, Henry Emusa¹, Alhassan Faiza Abdullahi², & Muhammed Murtala Bello³*

¹Department of Architecture, Faculty of Architecture, Bingham University Karu, Nasarawa State.

²Department of Architecture, College of Environmental Studies, Kaduna Polytechnic, Nigeria

³Department of Architecture, Faculty of Environmental Technology, Abubakar Tafawa Balewa University, Bauchi, Bauchi State.

orewre.emmamoge@binghamuni.edu.ng

Abstract

This study examined the perceptible attributes of landscape components used in enhancing the built environment among urban residents in Jos South Local Government Area of Plateau State, Nigeria. A multistage sampling technique was employed to select residents in the study area. The data collected for this study was obtained from both primary and secondary sources. A total of 188 questionnaires were distributed, and 150 were retrieved representing 79.78% used for final analysis. The retrieved questionnaire were analyzed and presented using descriptive statistics and weighted average index analysis. The study revealed that landscape components were available to residents and it have significant environmental impacts. The paper therefore recommends that long term plans of integrating landscape components from inception of design by relevant professionals and policy makers be encouraged as this promotes outdoor environmental beautification.

Keywords: Attributes, Built environment, Components, Landscape, Perception

**PERCEPTIBLE ATTRIBUTES OF LANDSCAPE COMPONENTS IN ENHANCING
THE BUILT ENVIRONMENT IN JOS METROPOLIS, PLATEAU STATE.**

***Emmamoge Orewere¹, Beatric Chapi Owoicho¹, Ruth Rakiya Martins¹, Henry Emusa¹,
Alhassan Faiza Abdullahi², and Muhammed Murtala Bello³**

¹Department of Architecture, Faculty of Architecture,
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³Department of Architecture, Faculty of Environmental Technology,
Abubakar Tafawa Balewa University, Bauchi, Bauchi State.

*Corresponding author e-mail: orewere.emmamoge@binghamuni.edu.ng

ABSTRACT

This study examined the perceptible attributes of landscape components used in enhancing the built environment among urban residents in Jos South Local Government Area of Plateau State, Nigeria. A multistage sampling technique was employed to select residents in the study area. The data collected for this study was obtained from both primary and secondary sources. A total of 188 questionnaires were distributed, and 150 were retrieved representing 79.78% used for final analysis. The retrieved questionnaire were analyzed and presented using descriptive statistics and weighted average index analysis. The study revealed that landscape components were available to residents and it have significant environmental impacts. The paper therefore recommends that long term plans of integrating landscape components from inception of design by relevant professionals and policy makers be encouraged as this promotes outdoor environmental beautification.

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INTRODUCTION

The built environment is the surrounding created out of the ingenuity of man for needs satisfaction and survival (Allu & Elimisiemon, 2017). It constitutes all buildings, man-made environments including blue and green spaces where human activities take place. Adegbie, (2016) and Sati, Uji & Popoola, (2016) reiterated that a high quality built environment consisting of buildings, access roads and public spaces cannot alone ensure that a town or city is an attractive and appealing place to live and work but that the landscape of green spaces contribute as much to the quality of the urban environment as good architecture. Due to this important role of the built environment sector, best practices within the sector are encouraged and rewarded in developed countries.

According to Ale & Ayeni, (2019) and Orewere, Mustapha, Ibrahim & Edom, (2022) landscaping is the process of shaping, modifying and creating an ordered outdoor scene for functional and supportive roles. Such functions include accent, softening, dust screening, framing, shading, enclosure, circulation control, noise control and surfacing. Indeed, the importance of landscaping of open spaces around buildings cannot be overemphasized. The American Society of Landscape Architects (ASLA, 2017) posited that the development of an aesthetically pleasing landscape is a prerequisite to a sustainable environment, thus achieving a good standard of environmental quality is affected by the level of facility provided, and policy and security measures. In essence, the physical environment contributes in no small measure to attitude of human and conversely today – to – day activities.

Similarly, landscape components (Figure 1) are basically divided into two major categories based on the application and the way they appear. They are *Soft landscape* which refers to the living or natural materials used in landscaping these include ground covers, bushes

and trees, plants, grass or ground cover, mulches, flower gardens are major soft landscaping components. They are collectively known as vegetation. The *Hard landscape* which refers to inanimate elements that relate with accessibility, of course change the natural surface to paved surfaces Example: sidewalks and driveways, walls and fences, pavers, rocks, decks and patios, gazebos, lighting, garden benches or other seating, edgings between plants and grass (A Handbook of Landscape, 2013; Orewere *et al.*, 2022). Another landscape component in the environment is *décor* used to enhance a garden, once the main features have been installed. Water features, statuary, tree hangers, pottery, lighting. Supporting Features include birdhouses, beehives, feeders, tree houses, trellises (Emechebe, Eze, Lembi & Akande, 2020).

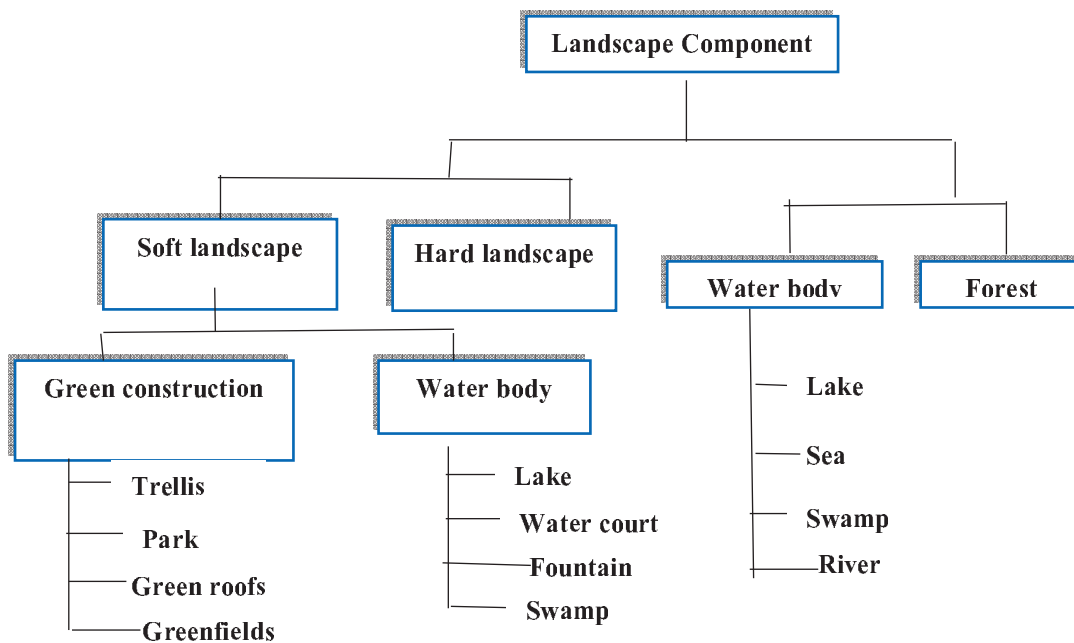


Figure 1: classification of landscape components.

Source: Authors’ construct 2023, as adopted from Orewere *et al.*, (2022).

Perception is not new in the world of architecture and design as posited by Ejeh, Adedire & Salihu, (2016), it has to do with how the users or occupants of a space perceive or feel about the space they are in. The Merriam-Webster dictionary (2014) defines it as awareness of the

elements of the environment through physical sensation. Hence a mutual relationship between people and their physical environments which influences each other. Onuwa, Joshua, Kambai, Iorpenda & Orewere, (2021) assert that the perception of the physical environment is not merely a physiological phenomenon, but influenced by the individual's experiences, (social and cultural) factors. They reiterated that landscape architects must acknowledge that perception of the environment plays an essential role in comprehension of this relationship. The localization of Landscape perception makes it difficult for outright generalization. Thus, human interaction with the landscape and the perception of what the landscape present at any particular time is reflected in these interactions in our natural and cultural heritages, landscapes need to be protected and managed in the context of sustainable development.

A number of researches conducted (in Tempesta, 2010; Ejeh *et al.*, 2016; Sati, 2015; Sati *et al.*, 2016) reveal a considerable attention in literature on perception of landscapes affected by human activities in the built environment. For instance, Ejeh *et al.*, (2016), studied the influence of user perception and social sustainability on architectural design. Through a review of relevant literature, a theoretical background was established between social sustainability, perception and architectural design. Questionnaires (65) were used to collect primary data from the student respondents. The study revealed students' perception helped to clearly show a strong link with the concept of user perception and social sustainability in Architecture. The study recommended due to the subjective nature of social sustainability with respect to its location and the constant demand to satisfy user needs, the concept of user-perception should be incorporated in architectural design as a major tool in the architectural design process. Sati *et al.*, (2016) surveyed the perceptible attributes of urban green spaces of the built environments of metropolitan areas of Jos. A sample of five green spaces; were selected through stratified random

sampling as well as simple random sampling. The data was obtained by administration of structured interview to a sample size of 365 respondents. The outcome of the surveyed revealed that the attributes of green spaces play the generative role in the process expressed by the synergy of the aesthetics of the built form with green space that is perceived. The study recommended preemptive action plan in developing a more exhaustive and long term vision for green spaces, a policy framework for implementation of more regulations and changes that will integrate more green spaces into the planning and design of metropolitan areas of Jos metropolis and perhaps Nigerian cities beset by similar situation be established.

Furthermore, going through existing literature, there is an apparent gap that this paper attempts to abridge by examining the perceptible attributes of landscape components used in enhancing the built environment of Jos metropolis, with the view to determine shortcomings and suggests intervention strategy. Consequently, the objectives are to: (1) identify landscape components utilised within the study area, (2) assess tenants' perception of landscape components in enhancing the built environment.

METHODOLOGY

Research Area of Coverage

Jos South is a Local Government Area in Plateau State, Nigeria, is home to the Governor's office in Rayfield and hence serves as the state's de facto capital. It is located between latitudes 9° 36' 41.5915" N and 9° 51' 14.2973" N and longitudes 8° 38' 24.4785" E and 8° 57' 14.0240" E. It has its headquarters in Bukuru, some 15 km from Jos, the state capital, in the north-western portion of the state. Kuru, Gyel, Du and Vwang are the four districts of Jos South. It has a population of 306,716 people (NPC, 2006) and a total land area of around 1,037 km² (Wapwera, Ayanbimpe & Odita, 2015; Owolabi & Ogunro, 2022). It has a cool climatic condition due to its altitude. The coldest period is between November and February with an average mean daily temperature of 18°C, while it gets warm between March and April before the onset of rain. The rainy season, which is between the months of May and October, has its peak in August. The mean annual rainfall varies between 1347.5 and 1460 mm per annum. The major inhabitants of the area are the Beroms (Adegboye, 2012; Aliyu, Abdullahi, Rozilah & David, 2015).

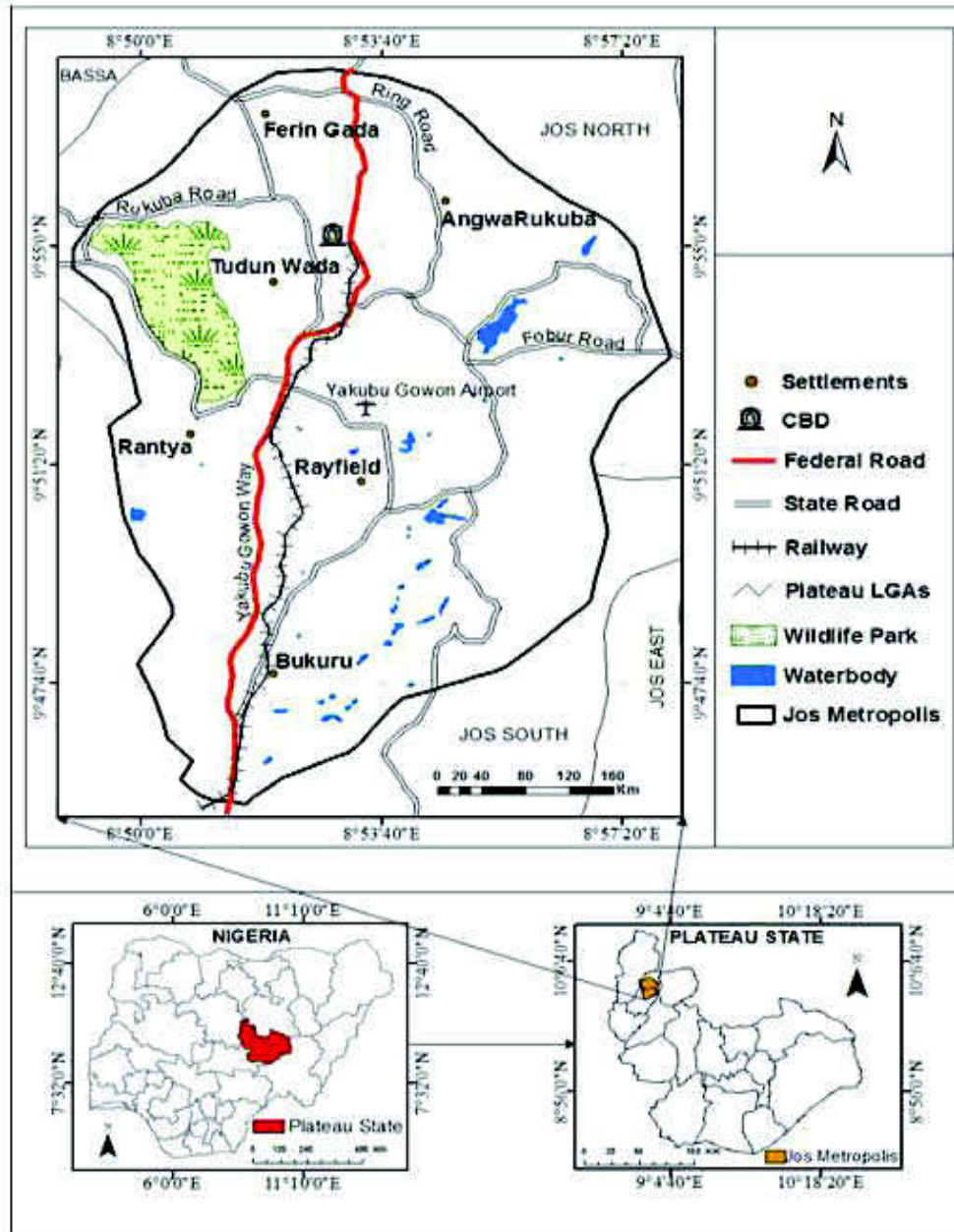


Figure 2: Location of Jos Metropolis in Plateau State, Nigeria
 Source: Department of Urban and Regional Planning, University of Jos, 2021.

Method of Data Collection

The study adopted the survey research design approach. The research instruments used include questionnaires, non-formal interviews and direct observation schedule. The primary data were direct observations of planted and installed landscape components in the urban residential

settlements and questionnaires were administered to tenants within study areas; non-formal interview was also conducted. According to Kumar, (2011) the strength of non- formal (unstructured) interviews is the almost complete freedom they provide in terms of content and structure. As the researcher, you have complete freedom in terms of the wording you use and the way you explain questions to your respondents. Furthermore, secondary data was accessed both manually and online, from relevant text and publications on the subject matter; which form the background of the study.

Sampling Techniques

Using simple random sampling technique, Jos South LGA was selected by balloting from a list of all 17 LGAs in Plateau State. In stage one, 5 wards out of the 16 political wards in Jos South Local Government Area were selected using simple random sampling by balloting. These were Bukuru, Du A, Kuru A, Zawan B, and Gyel B wards. Second stage involved the random selection of 4 communities in each of the 5 wards. Lastly, from the lists of residents a random selection of 10% from the sample frame of 1,880 respondents from each of the 5 wards were selected, which gave a total sample size of 188 residents. However, only 150 questionnaires were retrieved and used for the purpose of this study. The data collected from the respondents were subjected to both descriptive statistics and weighted average index (WAI) for objectives (i) and (ii) respectively.

Weighted Average Index (WAI)

Weighted average index (WAI) analysis is an Index ranking method that can be used to evaluate the perceived impact of landscape elements in a given area. To determine the weight of each scale, each item was calculated by multiplying the frequency of each response pattern with its appropriate nominal value and dividing the sum with the number of respondent to the items.

Responses for the components in objectives are rated by using a three-point scale with the scoring order 3, 2 and 1 as high, moderate and low. A weighted average index (WAI) analysis was then estimated as adopted from Onuwa *et al.*, (2021); using the mathematical formula:

$$\frac{\sum fiwi}{\sum fi} = WI \dots \dots \dots \text{Equation (1)}$$

Where:

Σ =Summation;

F = frequency;

W = weight of each scale;

i = weight;

WI = weighted index

RESULTS AND DISCUSSION

Table 1 reveals the landscape components most observed (Plate i, ii, iii & iv) in the study area; Trees (70%), Fences (64.7%), Drainages (54%), Flowers/Shrubs (50.7%), Lighting (49%), Pedestrian walkways (44.7%), Driveways (41%), Stones/Rocks (36.7%), Statues (19%) and Fountains/Pools (10%). The findings from this section confirmed with the studies of (Barmelgy 2013; Bello 2016; Orewere and Ogenyi, 2019) who identified different landscape components installed in the environment to improve user satisfaction.

Table 1: Identified landscape components utilized within the study areas

Element	Frequency*	Percent (%)
Trees	105	70
Fence	97	64.7
Drainages	81	54
Flowers/Shrubs	76	50.7
Lighting	71	49
Pedestrian walkways	69	44.7
Driveways	61	41
Stones/Rocks	55	36.7
Statues	33	19
Fountains/Pools	15	10

Source: Field survey, 2023.

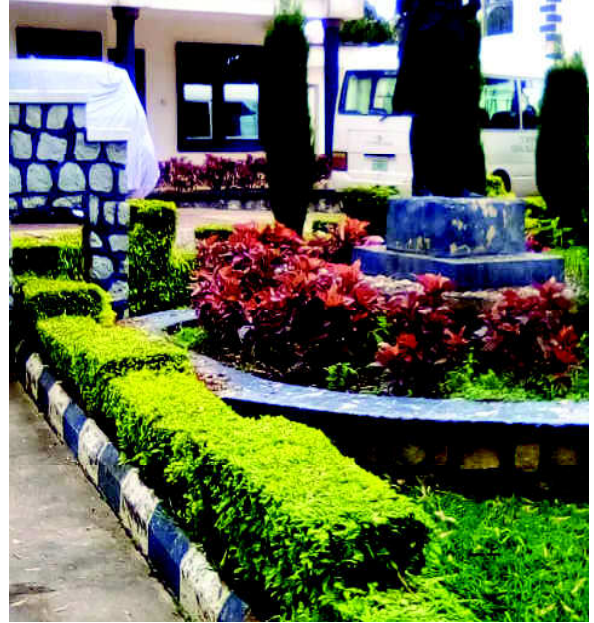


Plate i: Variety of trees that provide shade, rest and comfort during hot weather **Plate ii:** Shrubs that beautify the environment

Source: Field work, 2023.

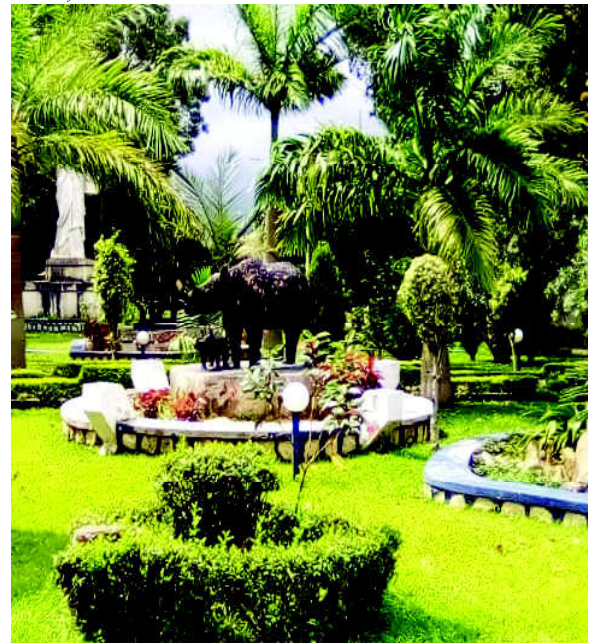


Plate iii: Interlocks and kerbs used to define Pedestrian walkways

Plate iv: Statue of a Rhinoceros as focal point

Source: Field work, 2023

Table 2 reveals the weighted index of landscape components in enhancing the built environment. The ranking of improvement in visual and aesthetic appeal of the built environment 2.97 (1st), conserves energy and facilitates biophysical interaction 2.61 (2nd) and promotes sustainable ecological management 2.35 (3rd) values are considered the most important landscape component in enhancing the built environment. Others include enhancing sustainable recreation and tourism potentials 2.26 (4th), social and mental integration between human and environment 2.14 (5th), and reduces maintenance cost of buildings 1.98 (6th) respectively.

Table 2: Perception of landscape components in enhancing the built environment

Item	$\Sigma fiwi$	WI	Rank
Improves visual and aesthetic appeal of the built environment	445	2.97	1
Conserves energy and facilitates biophysical interaction	391	2.61	2
Promotes sustainable ecological management	352	2.35	3
Enhances sustainable recreation and tourism potentials	339	2.26	4
Encourage social and mental integration between human and environment	321	2.14	5
Reduces maintenance cost of buildings	297	1.98	6

Note: The highest weighted index indicates the most important landscape component in enhancing the built environment.

Source: Field survey, 2023.

This finding concurs with the study of Sati *et al.*, (2016) who affirmed that attributes of green spaces play the generative role in the process expressed by the synergy of the aesthetics of the built form with green space that is perceived. In addition, Orewere *et al.*, (2019), affirmed that landscape development of outdoor environments enhances user satisfaction and improve productivity levels.

CONCLUSION

From the onset, this paper set out to examine the perceptible attributes of landscape components used in enhancing the built environment of Jos metropolis, with the view to determine shortcomings and suggests intervention strategy. A survey instrument was developed and responses from one hundred and fifty (150) respondents were collected. The results revealed landscape components available to residents in the study area have significant environmental impacts. Based on the findings of this study, the paper therefore recommends that long term plans of integrating landscape components from inception of design by relevant professionals and policy makers be encouraged as this promotes outdoor environmental beautification. Also, adoption of policies that integrates effective utilization of sociocultural aspects of landscape elements be sustained.

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