



An Analysis of the Aesthetics of University Campuses in Nigeria Using Hard Landscape Elements and Its Impact on the Wellbeing of the Staff and Students: A Case Study of the University of Jos Campus (Permanent Site/ Naraguta)

**Uyi Ezeanah; Slyvanus Songden; & Da'orong
Kyenshak James**

Department of Urban and Regional Planning, University of Jos, Nigeria

Abstract

The aesthetics of a university campus are determined by the landscape elements of the surrounding area, which influence the impression made on staff, students, and visitors. According to research, landscape design of outdoor spaces with vegetation, water features, or other landscape elements, as well as landmarks and structures, contributes to the creation of a more sustainable and healthy environment that surrounds humans and provides the highest possible quality of life. This paper examines The Aesthetics of University Campuses in Nigeria Using Hard Landscape Elements and Its Impact on the Wellbeing of the Staff and Students: A Case Study of the University of Jos Campus (Permanent Site). A quantitative method was employed for this study making use of questionnaires and visual images. The study's findings reveal that the aesthetics of the University of Jos (Naraguta Campus) have been degraded, as evidenced by the state of the hard landscape features analysed in this study and this affect the overall productivity of both the staff and students of the university. The study proposes some designs that will help to enhance the aesthetic of the university campus.

Keywords: *Aesthetics, campus, landscape, university, wellbeing*

Introduction

In industrialized countries, public space, aesthetics, and the art of aesthetics are typically given precedence, and residents prioritize their immediate environment, which always attracts them back (Pretty et. al., 2005; Van-den et. al., 2018). Great campuses are defined by their visual strength, which attracts students and creates a favourable view of the campus environment, as seen in the European Reserved Area, also known as the Government Reserved Area (Adersson and Bodin, 2009). While in poor countries, emphasis is placed on the construction of massive structures with little or no regard for campus aesthetics and open spaces (Carlson, 2013; Dutton, 2005; Chan, 2010; Steve & Reuben, 2012).

The state of aesthetics at the majority of Nigerian universities is similar to that of secondary schools (Adersson and Bodin, 2009). According to studies conducted at Ekiti University, the campus environment is not pleasant, with inadequate drainage, insufficient parking facilities, low environmental quality, and poor orientation to campus locations (direction or guide). Many Vice-

Chancellors of Universities in Nigeria place a premium on structures, overlooking the aesthetics of the setting, which improves student learning, aids in their retention, and relieves stress, as Janet and Sally and Hag observe (2013).

The perspective of university campuses is shaped by its utility and identity, which shape the impression they make on students, faculty, and visitors. These are visualized through the entrance, campus edge, vehicular/pedestrian walkways, lighting, parking arrangement, site furnishings, fountain, drainage systems, and campus open space (greenery), as well as the organized aesthetics for learning and the impression the campus design gives to people (Ahmet et. al., 2016; Van-den et. al. 2018; Sasaki, 2000; Bagheri, 2018 & Western Australia Planning Commission, 2004).

Since 1985, the Naraguta campus's master plan has been constructed, and there has been no significant revision to the master plan that has impacted the campus's aesthetics. Although it provides space for landscaping, the university's planning unit has had little

or no impact on the campus's landscaping to date. Additionally, the master plan was planned to accommodate just 10,000 students and 915 instructors, but as the institution has grown and the number of students and staff has increased (20,000 students and over 5,000 lecturers), it has become problematic. However, on a practical level, with the increase in population, the emphasis has been more on delivering buildings to meet the campus community's expanding population than on the campus's aesthetics. Thus, green and open areas are being used for these objectives, while the aesthetic component of the master plan, including its landscape components/elements, is being neglected. While various research (Carlson, 2003; Blanc, 2013) have explored the aesthetics of the environment, *Aesthetic Engagement in the City*, among others, little or no attempt has been made to investigate the aesthetics of university campuses in Nigeria and its impact on the wellbeing of the staff and students: *A Case Study of the University of Jos Campus (Permanent Site)*. This study, therefore, aims at analysing the aesthetics of the university of Jos campus and its impact on people's well-being. It does this by highlighting the physical hard and softscape elements on the campus, it also assesses the state of these landscape elements with a view of understanding how it affects the university population and finally it proposes a design that incorporates the visual landscape elements that will not only enhance the university's aesthetics but also enhance university's staff and students productivity within this given space.

REVIEW OF LITERATURE

AESTHETICS AS A CONCEPT

The aesthetic idea derives from the concept of taste. Immediacy, according to rationalists, is the notion that judgements of beauty are rational judgments, which means that we determine what is beautiful by thinking it out, which generally includes inferring from principles or applying concepts (Sibley, 2001). Since the eighteenth century, when aesthetics was brought into the philosophical vocabulary, the term has evolved to refer to a variety of things, including a type of object, a type of judgment, a type of attitude, a type of experience, and a type of value. Whether artworks are necessarily aesthetic

objects; how to reconcile the allegedly perceptual basis of aesthetic judgments with the fact that we give reasons for them; how to best capture the elusive contrast between an aesthetics attitude and a practical attitude (Lopes, 2011; Sharpe, 2000). This is vital in understanding the aesthetics of the university. According to rationalists' theory of taste, the debate over the immediacy thesis is whether we judge objects to be beautiful by applying aesthetic principles to them. They maintained that, while judgments of beauty are subjective and not rational, taste nevertheless operates according to general principles that can be discovered empirically. The aesthetic experience involves the aesthetic perception of an item, is founded on aesthetic attention to the object, and elicits a pleasant hedonic, emotive reaction to the perception or its content (Rind, 2002).

THE NEED FOR LANDSCAPING IN THE UNIVERSITY ENVIRONMENT

Students and faculty spend a significant amount of time in and around the campus environment. Students are obliged to pay attention, take tests, and complete assignments during their stay at university; these duties may require their directed attention, resulting in mental weariness or raising their stress levels. It is therefore critical to understand that stress among students is caused by a variety of factors. Additionally, pupils report experiencing stress and other psychological difficulties. According to research, students' self-reported psychological symptoms increased by 11% between the start of the first academic year and the middle of the second academic year. Students reported significantly higher levels of anxiety and sadness in their second academic year as a result of the pressures of learning. Only a few research have been conducted to determine the beneficial impacts of greenery in academic settings. A study conducted in the United Kingdom on a university campus featuring a variety of green spaces discovered that the utilization of campus greenery positively corresponds with students' perceived quality of life and the impression they receive. (2018) (Van-den et al.). According to the WHO, depression and depression-related illness will become the leading cause of sickness in the world by 2020, as cited by (Pretty et. al., 2005). Additionally, he underlines that green

spaces are seen as being better for stress and mental fatigue recovery. As a result, a study done at the University of Sunderland in the United Kingdom Students preferred indoor areas with a nature poster, a green wall, or a green wall plus interior plants above regular designs and designs with colourful posters. Additionally, students ranked outdoor places with flora as having a higher preference and projected the possibility of repair than those without. This finding is consistent with the findings of earlier studies conducted in Europe, North America, and Asia showing adults prefer green surroundings over those devoid of vegetation, and the finding also supports existing research on the restorative capacity of greenery (Van-den et al., 2018).

LANDSCAPES, HARD AND SOFT

The term "Hard Landscape" refers to the structural aspects of a landscape design. This is analogous to a computer's hardware. The landscape structure's larger chunks of hard material comprise the majority of the design. They are constructed using natural elements such as rocks, stones, or brick. They are mostly required to establish a sense of space and to complete the appearance of a home. A hard landscape not only enhances the appearance of a building, but also assists in resolving numerous basic issues such as water and drainage diverting, determining outdoor living zones, preventing erosion, and providing a long-lasting influence on your property (news headline).

Campus open spaces and public realm contribute significantly to the University's identity and the formation of lasting initial impressions of the campus environment and experience. The university's open spaces and streetscapes should be designated as landmarks, creating visually appealing locations that reflect the campus's identity, reflect the campus's environmental quality, and call attention to the campus as a distinctive and distinct institution. A lasting and memorable experience of the campus's public domain is established via careful consideration of the campus's design, functioning, and materials.

On the other hand, Yucel (2013) identified eight distinct exterior campus hardscape design elements, including gateways and entrances, parking lots, and

paths. 1.5m minimum traffic roads that are 2.1m wide to accommodate a wheelchair turn comfortably (a time-saving standard for landscape planners), Dining places, Children gardens, Art grounds, Water fountains, and Site furniture including seating, signage, lighting, and receptacles.

Kayode (2012) studies the use of stones in landscape development; the inherent difficulty with its use and methodologies is that it is an eco-friendly hard landscape element. He stated that the use of stone in landscaping is resourceful and provides the environment with a natural feel, as well as their ability to absorb and reflect heat and light, which are both desirable attributes for a landscape design's aesthetic and functional aspects.

It is the live part of your landscape structure that is referred to as the Softscape or the Soft Landscape. The plants, the grass, the trees, and the bushes are the elements that make up the Soft Landscape composition. For example, the materials required to construct a pond in a garden area are considered hard landscapes; but, the Pond itself is considered Soft Landscapes because it is made up of living things (news headline).

According to Paraskevopoulou and Kamperi (2018), plants that require little water beyond the foundation period and can withstand changes in the urban environment and atmosphere should be prioritized in campus open-air arrangements. Numerous plant-animal groupings have been established to enhance the human habitat by concealing, changing the temperature, reducing wind speed, reducing noise, providing security, and preventing soil degradation (Ola-Adams et. al., 1977). To establish a practical and visually acceptable planting design, it is critical to select plants that are native to the research area. An appealing landscape is critical in decreasing emotional strain on students and parents. According to Ke-Tsung Han's (2009) research, students' interactions with plants can help lower negative emotions, enhance good thoughts, alleviate physical stress, and increase students' enthusiasm for learning. Additionally, the landscape could help cool the area around the schools. This is because plants that perform photosynthesis contribute significantly to the environment by creating oxygen and absorbing carbon dioxide that is discharged into the air (Wells, 2000). The landscape contributes

an attractive component in terms of aesthetic value (Rasidi et. al., 2013). Relationship with the environment refers to the fact that when a student is surrounded by natural elements such as plants, a water supply, or an outdoor environment, the student's mind experiences serenity, feels refreshed, and is relaxed.

STUDY AREA/METHODS

The University of Jos Naraguta campus is located in the Naraguta ward of Plateau state's Jos north local government district. In 1971, the University of Jos was founded as a satellite campus of the University of Ibadan. It was chartered as a fully independent university in 1975. The University began in the current Gangare Campus, but due to space restrictions, several units in other sections of town were bought for staff quarters and other functions. A landmass of 5000 hectares was granted to the university on the northern outskirts of Jos, allowing for the drafting of a master plan for the permanent site and its ultimate construction. In the interim, the Bauchi Road Campus was built as the institution's temporary location.

The area of the permanent site has had to be dramatically decreased throughout the years, from 5000 to 300 hectares, due to difficulties related to land acquisition and compensation. Dar Al-Handasah finally used the 300-hectare land to develop the master plan. It is the same location as the University of Jos' permanent campus. (For further information, see Figure. 1) The permanent campus of the University of Jos Naraguta comprises a total land area of 361.84 hectares (Unijos master plan, 2008). It is surrounded on the north by Naraguta, on the south by Angwan Rogo, on the east by Naraguta hill, and on the west by Resau. The campus began with four faculties but has grown to around 12 faculties with over 90 departments, including approximately 8 faculties with 44 departments on the Naraguta campus. According to the University's master plan, it was designed for just 10,000 students and 915 teaching instructors, but the campus has grown to nearly 20,000 students and over 5,000 lecturers and non-academic personnel throughout the years.



Figure.1: Map of Plateau State in the Context of Nigeria.

Source: google maps, (2020)

This study used a survey research design. The population for this study constituted of all undergraduate students and faculty members of the Faculty of Environmental Sciences at the University. The Faculty of Environmental Sciences was chosen because its faculty members and students are familiar with urban planning, in addition to the aesthetics and

landscape features of the built environment. The faculty has a total population of 3000 undergraduate students and faculty members based on student records from the University of Jos. Due to the large sample size, a subset of 10% of the accessible population was used. Accordingly, 10% of undergraduate students and academics in the faculty of environmental sciences fall within the range of 1001-5000, which equals 150. As a result, the sample size was set at 150, and this number of questionnaires was distributed.

The data for this study were gathered utilizing a well-structured with a closed-ended questionnaire and direct personal observation. Also, images were used in the study to identify the level of landscape execution on campus to determine whether the school environment possesses these aesthetic values. This is critical in understanding the nature of the aesthetic within the campus and how it affects the wellbeing of staff and students. The data were analysed using descriptive and inferential statistics and were presented in the form of maps, images, and

tables. This aided in the comprehension of the identified issues, the drawing of inferences, and the formulation of conclusions.

RESULTS AND DISCUSSION

This paper examines the aesthetics of university campuses in Nigeria and its impact on the wellbeing of the staff and students: A Case Study of the University of Jos Campus (Permanent Site). However, it begins by highlighting the physical hard and softscape elements on the campus, it then assesses the state of these landscape elements. It also analysis the user's perception of the aesthetics of the campus and it evaluates the planning implications of the aesthetics of the university campus on the staff and students of the institution. Finally, it proposes a design that incorporates the visual landscape elements that will not only enhance the university's aesthetics but also enhance the university's staff and student's productivity within this given space.

EXISTING PHYSICAL HARDSCAPE AND SOFTSACPE ELEMENT OF THE UNIVERSITY CAMPUS

Table 1.1: Existing physical hardscape and soft scape elements of the university campus.

Type	Names	Description
Soft landscape	Trees	Royal Palm (<i>Roystonea Regia</i>), Mango, Cashew, Locust Bean, Flame of The Forest, Queen Palm (<i>Syagrus Romanzoffiana</i>), Butterfly Palm (<i>Dyopsis Lutescens</i>)
	Lawns	
	Hedges	Korean Grass (<i>Zoysia Tenuifolia</i>)
	Shrubs	<i>Duranta Goldiana</i> (<i>Duranta Goldiana</i>), Tropical <i>Ixora</i> , <i>Duranta Rapens</i> (<i>Duranta Rapens Variegata</i>) Star Light Weeping Fig (<i>Ficus Benjamina</i>)
Hard landscape	Gateway	There are 4 gates one main entrance and three others linking two different hostels and one other linking the Staff quarters.
	Drainages	

		There are drainages along some of the paved roads of 1 meter.
	Paved road	
	Parking facilities	10m main access and 8m collecting from access to car park respectively covering. There are different parking facilities of different capacities within the faculties and departments.
	Site furniture	Many signboards are pointing to a different department, many streetlights are accounted for, which were newly mounted and all in a functional state, and there exist location sit-out spaces in different departments within these departments and faculties.
	Fountain	
	Path	1 fountain was accounted for which is not operational.
		1.2m walkway along the paved road.

Source: Field survey, 2020

Table 1.1 above shows that both hard landscape elements (paved roads, drainages, street lights, site furniture's, parking spaces, water fountain and gateways) and soft landscape elements (trees, lawns hedges) are present in the study area, but it's worthy to note that these identified landscape elements are not evenly distributed within the entire campus area. The hard and soft landscapes are restricted to the areas such as the hostels and some faculties such as (faculty of education and faculty of Art) which are not properly landscaped and well managed. No functional and aesthetically pleasing landscaped areas within the campus as illustrated by plates 1.1 and 1.4 which is important for better study, working experience and living by members of the campus community. This result implies that the existing landscape in the University is problematic since it is limited to certain areas which are not functional and which do not reflect an aesthetically pleasing working environment that the

existing landscape is expected to create for the users (students and staff in the University).



Plate 1: 1: The aesthetic quality of the entrance gate. **Source:** Field survey, 2020



Plate 1.2: Hard and Soft Landscaping Element. **Source:** Field survey, 2020



Plate 1.3: The Main Library Complex with limited Landscaping. **Source:** Field survey, 2020



Plate 1.4: Faculty of Environmental Science path with poor Landscaping Element. **Source:** Field survey, 2020

Assessment of the State of the Hard Landscape Elements within the Naraguta Campus

This section explores the hard landscape elements within the campus. This is done to provide an understanding of how these hard-landscape elements affect the aesthetics of the university campus. The table below shows the condition of the diverse hard landscape elements of the campus.

Assessment of the state of the Hard Landscape Element in Naraguta Campus

Table 1.2: Hard Landscape Element Condition Assessment (In the table below “f” mean frequency)

Condition	Pedestrian		Road		Drainage		Entrance		Seating		Lighting		Waste bin		Parking		Water Fountain	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
V. Poor	10	6.7	9	6	6	40	2	18	2	18	4	2.7	5	33	3	22	11	17
Poor	72	48	7	4.6	31	20.7	7	50.7	6	40	7	4.7	5	37.3	8	58	12	8
Good	39	26	8	54.7	3	23.3	2	16.7	3	23.3	16	10.7	3	22.7	2	14.6	11	7.4
V. Good	17	11.3	2	4.7	11	7.3	12	8	15	10	2	18.3	6	4	7	4.7	5	3.3
Excellent	12	8	3	20	13	8.7	10	6.6	13	8.7	9	6.3	4	2.7	0	0	0	0
Total	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150	100

Source: Field survey, 2020

Table 1.2 above shows that 6.7% and 48% of the respondents show that the landscape of paths within the campus is in a poor state as further illustrated by plate 1.4. The findings show that the road assessment of the hard landscape within the campus is in good condition and this accounts for 54.7% of the responses. While 4.6% of the responses accounted for the poor condition of the roads illustrated by plate 1.6. The table also reveals that 40% reveal that the state of the drainage area is of very poor condition, (20.7%) poor while 23.3% is in a good state (see Plate 1.8 aesthetics view of the hard landscape). Responses (50.7%) showed that the entrance gate of the university campus was in a poor state and this is illustrated by plate 1.1. Seat-out spaces within the

campus were in a poor state (40%) with poor landscaping elements (see plate 1.8) while the street light within the campus was in excellent condition (63.3%) as revealed by the respondents. also, it was evidenced by the respondents that the waste bin on the campus is in a derelict condition (very poor) and this accounts for 33.3%. Other landscape elements within the study area such as parking facilities, water fountains were also in a poor state. These findings reveal that both the hard and softscape elements used in assessing the aesthetics condition of the campus reveal that they were in a very bad state and as earlier discussed in the previous section of this paper, this shows that Naraguta campus is unaesthetically pleasant for both the staff and students of the university community. This is because the perspective of university campuses is shaped by their utility and identity, which shape the impression they make on students, faculty, and visitors. These are visualized through the entrance, campus edge, vehicular/pedestrian walkways, lighting, parking arrangement, site furnishings, fountain, drainage systems, and campus open space (greenery), as well as the organized aesthetics for learning and the impression the campus design gives to people (Ahmet et. al., 2016; Van-den et. al. 2018).



Plate 1.5: Existing Poor Walkways or path. **Source:** Field survey, 2020



Plate 1.6: Poor Road condition
Source: Field survey, 2020



Plate 1.7: poor parking spaces.



Plate 1.8: Existing Block and collapse Drainage systems. **Source:** Field survey, 2020



Plate 1.9: Poor Seat-out. **Source:** Field survey, 2020



Plate 2.0: Street Lighting. **Source:** Field survey, 2020



Plate 2.1: Poor Waste disposal Method. **Source:** Field survey, 2020

User's Perception of the Aesthetics of the Campus

Table 1.3: User's perception of the aesthetics of the campus (In the table below "f" mean frequency)

	Landscape design		Green spaces/Plants		Circulation, Road & Pathway		Street		Aesthetics	
	f	%	f	%	f	%	f	%	f	%
V. Poor	43	28.7	16	10.7	32	21.4	59	39.3	42	28
Poor	49	32.7	60	40	51	34	34	22.7	60	40

Good	28	18.6	9	6	27	18	38	25.3	28	18.7
V. Good	19	12.7	39	26	23	15.3	13	8.7	28	8.7
Excellent	11	7.3	26	17.3	17	11.3	6	4	7	4.7
Total	150	100	150	100	150	100	150	100	150	100

Source: Field survey, 2020

Analysing the user's perception of the aesthetics of the campus, findings reveal that in terms of elements used such as the landscape design, Green spaces/Plants, Circulation, Road & Pathway, Street and Aesthetics used, the user's perceptions ranged between very poor and poor (32.7%, 40%, 34%, 22.7% and 40% respectively) as shown in Table 1.3 above. This show that there is a need to improve upon the landscape design of the campus, green spaces and plants, circulation and pathways, street and the overall aesthetics of the campus to improve aesthetics of the university campus. As findings show that the users' perception indicates that the campus environment is not aesthetically appealing and pleasing.

An Evaluation of the Planning Implication of the Aesthetics of the University Campus on the Staff and Students

The planning implication of the soft and hard landscaping elements on both staff and students shows that the absence or limited provision of this element within any given university campus will result in poor environmental quality with a resultant effect on the staff and students. Such effects may be psychological thereby affecting their jobs and ability to learn. Also, the poor aesthetics of the campus environment may result in poor psychology and mental ability, unattractive environment, increase in emotional pressure among staff and students, increase in negative emotion and thoughts, low interest toward learning and increase in stress among staff and students as discussed in Table 1.2 and 1.3 above.

DESIGN PROPOSAL: PLANNING AND DESIGN PRINCIPLES

Given the study's results that hard and landscape features are scarce and in poor condition, in addition to inadequate landscaping and parking places, there is a need for a design plan. The design proposal takes into account both the landscape requirements and the fundamental landscaping principles that will be applied to the study area, which include the following:

- i. User requirements: The experience and requirements of users (staff and students) should be taken into account while designing the view.
- ii. Scale: The scale of design elements is required to be proportionate to the aesthetics of the surroundings.
- iii. Balance: Achieving equilibrium on both sides of a focal point through the arrangement, location, and allocation of landscape elements, i.e., colour, shape, or form composition.
- iv. Unity: Monotony should be avoided within the overall unity through the medium contract. This will be accomplished by the deft use of colour and pattern, among other things.

Based on the foregoing, the design proposal is recommended for the University of Jos Campus.



Plate 2.2: Proposed Entrance gateway and parking space at the gate for stop and drop



Plate 2.3: Proposed Landscaping soft and hard, seat-out, grasses and fountain



Plate 2.4: Proposed parking spaces



Plate 2.5: Proposed Landscaping soft and hard, seat-out, grasses and fountain



Plate 2.6: Proposed Pedestrian walkway

CONCLUSION

This paper looks at the aesthetics of university campuses in Nigeria and its impact on the wellbeing of the staff and students: A Case Study of the University of Jos Campus (Naraguta/ Permanent Site). Based on the condition of the landscape features evaluated in this study, the University of Jos (Naraguta Campus) aesthetics have declined, affecting both staff and student productivity. The surrounding landscape influences the aesthetics of a university campus, influencing the impression created on staff, students, and visitors. A more sustainable and healthy environment that surrounds humans and gives the maximum possible quality of life is created by landscape design of outdoor spaces with vegetation, water features, or other landscape elements, as well as landmarks and structures. The research shows that there is a great need to improve upon the Landscape element, circulation and pathways, green spaces (trees, lawns and garden), streets and the aesthetics of the entire campus for environmental sustainability to have a habitable and comfortable environment for work and learning. From the research findings, the importance of landscape planning to enhance a sustainable green environment that is beneficial, comfortable and aesthetically pleasing cannot be overemphasized. Therefore, the benefits of landscaping (e.g. beautification, erosion control, flood, shade,

hedges etc.) will be enjoyed satisfactorily if a landscape plan is properly executed and aesthetical pleasant then the overall well-being of the users will be enhanced.

RECOMMENDATIONS

Given the study's findings, it is advised that an effective management system be implemented. This is to ensure that landscaping resources are effectively used and that landscaping is completed efficiently to achieve the desired result and fulfil its functions of enhancing the continuity and sustainability of the environment, as well as creating a positive impression that improves the University's aesthetics and thus the wellbeing of staff and students.

REFERENCES

- Adersson, E. & Bodin, O. (2009) Practical Tool for Landscape Planning; an Empirical Investigation of Network-Based Model of Habitation Fragmentation. *Echography*, 32, pp 123-132.
- Ahmet, et. al., (2016). Landscape Design Principles of University Campuses: A Case Study in Campus of Alaeddin Key Kubat, Selcuk University.
- Blanc, N., (2013). Aesthetic Engagement in the City”, *Contemporary Aesthetics (CA) online Journal, Volume 11, p.2*, <http://www.contempaesthetics.org>.
- Bagheri, Y., & Mansouri, S. A. (2018). City entrance, as an element for creating an independent identity for the city landscape. *The Monthly Scientific Journal of Bagh-E Nazar*, 15(60), 5-14.
- Carlson, A. (2013). Environmental aesthetics. In *The Routledge companion to aesthetics* (pp. 507-520). Routledge.
- Chan, N.W., (2010). Impacts of human habitat development on the environment – Challenges and the way forward. *Malaysian Journal of Environment Management*. 11(2), pp3-20
- Dar Al-Handasah (1985). University of Jos Master Plan.
- Dutton, D., (2005). “Let’s Naturalize Aesthetics”. <http://aesthetics.online.org/ideas/dutton.html>. [Accessed 20/06/2020]
- Janet S. & Sally E. H. (2013). Everyday Encounters with Nature: Students’ Perceptions and Use of University Campus Green Spaces Department of Geography, Liverpool Hope University, Liverpool, UK.
- Ke-Tsung Han. (2009). Influence of Limitedly Visible Leafy Indoor Plants on the Psychology, Behavior, and Health of Students at a Junior High School in Taiwan. *Environment and Behavior*. 41(5):658-692.
- Kayode, J. O. (2012). Stone and landscaping. In *Stone and landscaping*. Cooper-Marcus, C. and M. Barnes (1995). *Gardens in Healthcare Facilities: Uses, Therapeutic Benefits, and Design Recommendations*. Martinez, CA: The Center for Health Design.
- Lopes, D, (2011). The Myth of Non-aesthetics, Artistic Values, the Philosophical pp. 61, pp.518-536.
- Rasidi, M. H., Jamirsah, N., & Said, I. (2018). The development of urban green space affects neighbourhood community social interaction. *Asian Journal of Environment-Behaviour Studies*, 3(8), 79-88.

[Soft Landscape and Hard Landscape - Sheel Greens \(newsinheadlines.com\)](#)

- Ola-Adams, B. A., & Iyamabo, D. E. (1977). Conservation of natural vegetation in Nigeria. *Environmental Conservation*, 4(3), 217-223.
- Paraskevopoulou, A. T., & Kamperi, E. (2018). Design of hospital healing gardens linked to pre-or post-occupancy research findings. *Frontiers of Architectural Research*, Vol. 7, pp. 395–414.
- Pretty, J., Peacock, J., Sellens, M., & Griffin, M. (2005). The mental and physical health outcomes of green exercise. *International journal of environmental health research*, 15(5), 319-337.
- Rind, M., (2002), the concept of disinterestedness eighteenth-century British aesthetics. *The journal of the history of philosophy pp. 40:67-87*.
- Sasaki & Shapins Associates, (2000), (2003). The campus Landscape Development Plan University of Colorado at Colorado Springs, the Long Range Development Plan and Master Plan.
- Sharpe, R.A., (2000). The Empiricist Theory of Artistic Value *Journal of Aesthetics and Art Criticism*. 58, pp 321-332.
- Sibley, F. (2001). *Approach to Aesthetics: Collected Paper on Philosophical Aesthetics* Oxford Press.
- Steve K. & Reuben G., (2012) Awareness Level of Environmental Aesthetics on KNUST Campus, Kumasi, Ghana: A Descriptive Account.
- Van den Bogerd, N., Dijkstra, S. C., Seidell, J. C., & Maas, J. (2018). Greenery in the university environment: Students' preferences and perceived restoration likelihood. *PLoS one*, 13(2), e0192429.
- Western Australian Planning Commission, (2004), *Liveable Neighbourhoods: A Western Australian Government Sustainable Cities Initiative, 3rd Edition, Western Australian Planning Commission, Perth*.
- Wells, N.M. (2000). At home with nature: *Effects of greenness on children's cognitive functioning. Environment and Behavior*, 32: 75-795
- Yücel, G. F. (2013). Advances in Landscape Architecture. In *Advances in Landscape Architecture*.