

Appraising Landscaping in Chukwuemeka Odumegwu Ojukwu University, Uli Campus, Anambra State, Nigeria

By

Chukwunonso O. Umeora, Boniface S.A Okoye, Oluchi C. Ifebi & Chijioke C. Onwuzuligbo

ABSTRACT

Amid the growing benefits for proper landscaping design and planning, there is the need for man to be in a decent, well-organised and aesthetically pleasing environment. This could add value to concentration of staff and students in the campus as well as provide relaxation points within the campus. The landscaping quality of Uli campus of Chukwuemeka Odumegwu Ojukwu University deserves attention in view of its state. The objectives of this paper are to appraise the quality of the present status of landscaping in the campus and assess the perception of people on the quality of present landscape in the campus environment. This is with a view to providing a feedback for improved landscape management of the University campus environment. The methodology adopted for this research was survey design. The focus was on academic staff of the Faculty of Environmental Science of the university randomly selected from the research population. This selection was premised on their assumed knowledge of the subject matter. Data was collected from primary sources using questionnaires and observation schedules. Data analysis was done at the univariate level using Statistical Package for Social Sciences (SPSS). The outcomes show that the landscape environment within the campus is not in a good state. Some contributing factors to this were attributed to inadequate maintenance operations, inadequate provision of funds and inadequate equipment for maintenance operations, among others. The study recommends involving professionals in the built environment in the physical planning unit and works department of the institution to handle landscaping concerns within the campus, provision of enough funds for landscape improvement and maintenance operations, incorporating man-made features such as trash cans, street lights, sculpture, defined pedestrian walkways, paving and other road furnishings incorporated into the landscape. The university management may revive an existing landscape committee that would liaise with the horticulture unit of the faculty of Agriculture and have adequate as well as regular supply of new plants for possible replacement of dead plants and/or planting of new ones where they are desired. A redesign of the general landscape of the campus is desirable.

Keywords: assessment, campus, landscaping, maintenance, university

INTRODUCTION

Through designed landscapes, people can attain personal consciousness and responsibilities for the environment while letting go the pressures of everyday life. As such, landscaping plays a vital role in the quality of the environment as well as the physical and psychological wellbeing of the people. There have been tremendous changes in the building professions over time, as new advances brought new challenges that generate opportunities on the one hand, and present the probability of displacing those not prepared for it, on the other hand (Ogeye, Senibi & Akinboboye, 2019).

Landscaping refers to any activity that modifies the visible features of an area including the living elements, natural elements and man-made elements, while the landscape is everything one can see looking across an area of land. Landscape design can be seen as the art of designing and management of the components of landscape (i.e. Landforms, water bodies, vegetation and man-made features) to make good outdoor spaces for aesthetic purposes, useful, healthy and enjoyable purposes through application of cultural and scientific knowledge with concern for resources preservation (Adekunle & Basorun, 2016). Landscape practices comprise of the designing, installation and maintenance of the landscape design. Ayeni, Olotuah and Adedeji, (2013) noted that landscape design compliments architecture and provides the opportunity to contribute to the aesthetics of an area in order to improve the built environment. In addition, the principle of landscape design is to fuse the buildings with the environment, to achieve a well-planned environment.

Landscape design, as a separate discipline and business, is becoming conspicuous in the Architecture profession in Nigeria. Landscaping practices constitute a form of trade, which can be a veritable source of livelihood while serving the function of beautifying the physical environment. This prospect is yet to be fully realized in the country.

University campuses are expected to be distinguished in landscaping. A key way of achieving this is the use of well-defined landscapes, and these could be a means of attracting people to visit and to study. Good landscape design can, therefore, play a vital role in the enhancement of universities' environments and open spaces, by creating a nexus between aesthetics and open space management (Adekunle & Basorun, 2016). In pursuance of this, University campuses ought to denote landmarks as spaces which indicate attractive spaces that represent campus identity, thus creating impressions of the campus environment as an exceptionally

distinct institution. Unfortunately, poor attention has been given to the outdoor spaces around buildings in different university campuses in Nigeria. It can be shown that if considerable attention is given to the surroundings of the building structures, there will be an improvement in the environment.

Observations of the landscapes of university campus reveal such problems as the lack of outdoor landmark spaces, poor landscape design and poor landscape management. This situation naturally, negatively affects the associated academic and residential activities within the campus. For that reason, this study seeks to appraise the state of existing landscape in the campus, with a view to providing a framework/feedback for improving and sustaining the landscape management of the University campus environment. The objectives are to appraise the quality of the present landscaping in the campus and assess the perception of people on the quality of present landscape in the campus environment of Chukwuemeka Odumegwu Ojukwu University, Uli Campus Anambra State.

LITERATURE REVIEW

WiseGEEK (2012) as cited in Ayeni, Olotuah and Adedeji, (2013) stated that landscape architecture is a branch of architecture that deals with planning and design of land and its relation to the building around it. Wright, (2008) defined Landscape design as an art with the function of creating and preserving the beauty in the surroundings of human habitations as well as broader natural scenery of the country. Architecture ought to transcend the designing of buildings, and incorporate the transformation of the physical environment through proper design. This will improve the quality of the environment, as the combination of hard and soft landscape elements makes the environment ecofriendly.

The art of landscape practice pulls together elements to create an aesthetically pleasing extension of interior to outdoor living spaces (Asiedu, Buah, & Blankson, 2010). Hard landscape elements are non-living hard materials used by landscape designers to develop landscape designs. Examples of these are: rocks, stones, paving, gravel, steps, garden furniture and other man-made components of landscape. Soft landscape elements refer to living things brought into the landscape. Examples of these are plant materials such as: lawn, borders created with trees, flowers and shrubs (Ogunsote, Adedeji, & Prucnal-Ogunsote, 2011).

Landscaping entails some of the following activities- growing/installation of plants, planning beautiful gardens, mow lawns, prune shrubs, erect fences (as enclosures), among others. Elf, (1996) as cited in Adekunle and Basorun, (2016) noted that a well-designed landscape helps to reduce erosion and global warming as well as prevent pollution of the environment. This is achieved since soft landscape elements used for landscape designs can improve air quality. Amongst several factors, landscaping, as an aspect of campus development and beautification needs to gradually gain acceptance and be transformed into a culture, which would gradually influence the university campus environment. Most of the plants that could be found on the University campus are native to the local environment, and could thus aid in the modification of the microclimate of the environment.

Good landscape management involves right plants selection, appropriate timing of plantings and plant maintenance techniques, maintenance of hardscapes when broken, among others. These are important towards realizing an attractive environment. Principally, the selections should be based on the functional roles the elements would play in the landscape (Ayeni & Adedeji, 2014). Maintenance involves the care and upkeep of the landscape after installation. Since landscapes change appearance and size over time, different types of maintenance works are required. These may include: weeding in lawns, replacement of dead plants, spraying of insecticides for insects and disease control, mowing of lawn, irrigation of lawn, repairing of paved surfaces, pruning of trees/shrubs, cleaning of fountains, repainting of outdoor furnishings and preventive maintenance on the equipment. Also of great importance is the quality of maintenance tools and equipment used in carrying out the exercise. Some of the tools/equipment used in the maintenance can be grouped into sophisticated and simple equipment. Examples include hand trowel, shears, shovel, crosscut saw, rake, wheel barrow, transplanting hoe, mower, sprinkler, hedge trimmer, shears, and cutlass.

STUDY AREA

Chukwuemeka Odumegwu Ojukwu University, Uli Campus, is situated in Uli, Ihiala Local Government Area of Anambra state. It is located on latitude 5°46'11"N and longitude 6°50'10"E. The University was established in year 2000 by the Anambra State Government with the name Anambra State University. The University was renamed to the current name in the year 2014. Chukwuemeka Odumegwu Ojukwu University has three-campus arrangement – Igbariam (which is the seat of administration), Uli and Awka. There are six faculties in the Uli

campus and they are: Engineering, Natural Sciences, Physical Sciences, Environmental Sciences, Basic Medical Sciences and Education. The Uli campus has lecture halls/classrooms, laboratories, library, offices, hostel, chaplaincy, banks and other businesses.

METHODOLOGY

The sources of data for this study were primary and secondary. The primary data were obtained through the administration of questionnaires and observation schedule. The secondary data were obtained from documents and research materials on staff strength and university campus master plan. The target population for this study are academic staff of the Faculty of Environmental Science of the university. This selection was premised on their assumed knowledge of the subject matter. Samples would be taken from each of the departments that make up the faculty. Owolabi, Ogunsajo, Bodunde and Olubode (2020) stated that landscaping is greatly valued by people with education of the environment based on their knowledge of elements used and the important roles they play in man's environment.

Table 1 shows the numbers of academic staff of faculty of Environmental Science obtained from the university.

Table 1: Staff Population in Sampled Unit

Target Population:	Academic Staff of the Faculty of Environmental Science of Chukwuemeka Odumegwu Ojukwu University, Uli Campus
No. of Academic Staff:	41

Source: Authors field survey, 2023

30% of this research population was chosen as the sample size. In sampling ratio, St. Olaf College (2023) noted that for populations under 1,000, a minimum ratio of 30% is advisable to ensure representativeness of the sample. This gives a figure of 12, so 12 copies of questionnaire were randomly administered across the lecturers across the four (4) departments in the faculty.

FINDINGS AND DISCUSSION

Types of landscape elements dominant on campus

The results shown in Table 1 indicate that 41.7% of the respondents stated that softscape elements were dominant on campus, 25% stated that hardscape elements were dominant on campus while 33.3% stated that both hardscape and softscape elements are balanced on campus.

Table 1: Data on types of landscape elements dominant on campus

Value Label	Frequency	Valid Percent	Cumulative Percent
Softscape	5	41.7	41.7
Hardscape	3	25	66.7
Both hardscape and softscape	4	33.3	100.0
Total	12	100.0	

Source: Authors field survey, 2023

Quality of Landscaping Perception on Campus

The data obtained show that bulk of the respondents (58.3%) rated the quality of landscaping on campus as poor, 33.3% rated it as very poor. Also, a small percentage (8.3%) of the respondents rated it as good. These are illustrated in Table 2.

Table 2: Data on Quality of Landscaping Perception on Campus

Value Label	Frequency	Valid Percent	Cumulative Percent
Very poor	4	33.3	33.3
Poor	7	58.4	91.7
Neutral	-	0.0	0.0
Good	1	8.3	100.0
Very good	-	0.0	0.0
Total	12	100.0	

Source: Authors field survey, 2023

Factors Influencing the Quality of Landscaping on Campus

Data analysis on the factors influencing the quality of landscaping on campus and the perception of the respondents vary. Majority of them (58.3%) are of the opinion that inadequate provision of funds affects the quality, 25% attributed the quality to lack of capacity to carry out landscaping maintenance operations. 16.7% opined that the factor affecting the landscaping quality is poor maintenance culture as shown in figure 1. Akin to this, 75% of the respondents noted that there are no landscape maintenance operations done on campus while 25% stated that landscape maintenance operations done as need arises. This finding is

consistent with the opinions of Forbes and Kindle (2013) which stated that landscape should be properly maintained to sustain its quality.

Similarly, 83.3% suggested that both man-made elements and plant materials be incorporated into the landscaping to improve the beauty of the campus. 16.7% were of the view that only man-made elements are needed to improve the beauty of the campus.

The usage of softscape and hardscape elements can aid in regulating the microclimate around buildings and outdoor environment within the campus. The use of these softscape elements – trees and shrubs – is important in providing shades, wind breaking, improving air quality and adding to the beauty of the environment. The use of hardscape elements with less maintenance cost are important in order to prevent threats of floods and soil erosion as well as define car path within the campus.

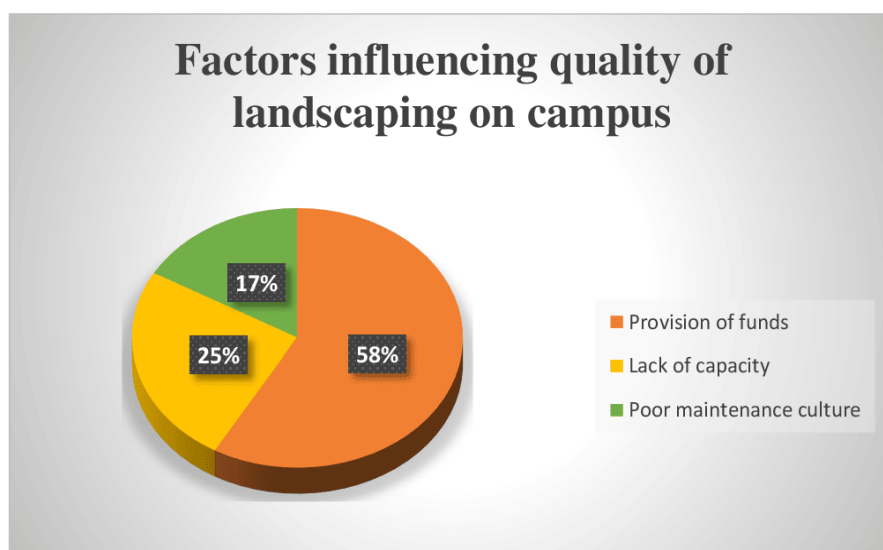


Figure1: Data on Factors Influencing the Quality of Landscaping on Campus

Source: Authors field survey, 2023

Type of equipment predominantly used in maintenance operations on Campus

The results from the analysis on type of equipment predominantly used in maintenance operations on campus show that majority (91.7%) of the respondents stated that simple equipment are used in the maintenance operations. 8.3% of the respondents stated that sophisticated equipment are used in the maintenance operations as shown in Figure 2. The simple equipment identified are machete/cutlass, hand shears and hoe are used in maintenance operations. The sophisticated equipment identified normally used is the riding mower.

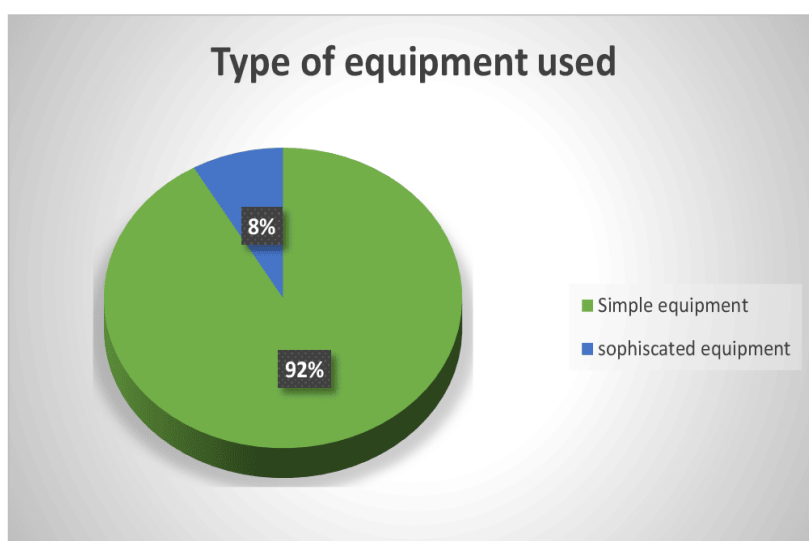


Figure 3: Data on type of equipment predominantly used in maintenance operations on campus
Source: (Authors' field survey, 2023)

CONCLUSION AND RECOMMENDATION

Proper landscaping practices have great potentials to uplift aesthetic status of campuses. There is the general acknowledgement of good landscaping as a suitable tool for improving environmental value of Uli campus, COOU. This can be achieved by devising a feasible idea to change the existing campus environment by the introduction of landscape features for good microclimate within the campus, neatness of the environment and for aesthetic purposes. Spaces that are not built up within the campus need to be designed and planned; structured management will entail proper maintenance practices.

The maintenance routine practices should be reviewed so there could be improvement in the state of the landscape within the campus. This can be achieved by involving professionals in the built environment in the physical planning unit and works department of the institution to handle landscaping concerns within the campus. The professionals should draft a programme chart of landscaping features for the improvement and sustenance of the beauty of the campus. The university administration may need to allocate more resources (human and funds) towards improvement of the campus. They can plan the release of funds in tranches based on the planned chart.

The equipment such as bush cutter, pruning shear, sprinkler, and hedge trimmer can be incorporated to the existing equipment in use for better output. Man-made features such as trash cans, street lights, road benches for sit-out, sculpture, defined pedestrian walkways, controls/ barriers

created to direct flow of movement, paving, road signs, etc can be incorporated into the landscape. Similarly, plant materials such as trees of diverse species, flowers of different colours, lawns should be improved upon to advance the aesthetic appeal of the campus. From the environmental point of view, these elements can serve as wind breakers; inhibit soil erosion and control ponding during the rainy season; as well as help to regulate the effect of global warming by maintaining in the atmosphere in the campus.

Since landscaping practices constitute a form of trade, which can be a source of income, the university management may consider opening horticulture unit where plants can be grown in the nursery and sold to members of the public.

References

- Adekunle, O.J. & Basorun, J.O. (2016). The Evolving Roles of Landscaping in Campus Space Management: Ekiti State University, Ado-Ekiti, Nigeria in Focus. *Journal of Environmental Protection*, 7, 1380-1388. <http://dx.doi.org/10.4236/jep.2016.710119>
- Asiedu, J.B.K.; Buah, J.N. & Blankson, J.E. (2010). The landscape industry and practice in Ghana. Proceedings of the International Horticultural Congress on Science and Horticulture for People on Advances in Ornamentals Landscape and Urban Horticulture, 5(38), 1023-1032
- Ayeni, D.A. & Adedeji, Y.M.D. (2014) Controlling Urban Sprawl through Sustainable Landscaping in Nigeria. In: Fadamiro, J.A., Olujimi, J.A.B. and Okedele, O. Eds., Urban Environmental Sustainability: Livable Cities. Urban Design Research Team (UDRT), Department of Architecture, School of Environmental Technology, Federal University of Technology, Akure, Nigeria.
- Ayeni, D.A.; Olotuah, A.O. & Adedeji, Y.M.D (2013). Appraising Landscape Design Education in Architecture Departments in Nigerian Universities. *International Journal of Education and Research*, 1(5), 1-10
- Elf, D. (1996) Enhancing our Environment through Landscaping. VCE Publication, 429-721.
- Forbes, S. and Kendle, T. (2013) Urban Nature Conservation; Landscape Management in Urban Area, London, UK. E and FN spon and Imprint of Thompson Professional, 2-6.
- Ogeye, O.O.; Senibi, J.G & Akinboboye, O.O (2019). The Miseducation of the Nigerian Architect, *Arts and Design Studies*, 76, 56-61

- Ogunsote, O.O., Adedeji, Y.M.D. & Prucnal-Ogunsote, B.P. (2011). Combating Environmental Degradation through Sustainable Landscaping in Emerging Mega Cities: A Case Study of Lagos, Nigeria. In: Cox, L., Ed., *Proceedings of the 24th World Congress of Architecture "UIA2011 TOKYO"*, 25 September-October 1 2011, 16-21.
- Owolabi, C.O., Ogunsajo, O.O, Bodunde, J.G., Olubode, O.O (2020). Assessment of designed landscapes and their management practices in selected capital cities in Nigeria. *Ornamental Horticulture*. 26(1), 95-108
- St.Olaf College (2023). Sample size- institutional effectiveness and assessment. Retrieved from www.stolaf.edu/iea/sample-size Accessed on 12/2/23.
- WiseGEEK (2012). What is Landscape Architecture? Retrieved from www.wisegeek.com/what-is-landscape-architecture.htm Accessed on 12/11/12.
- Wright, R.T. (2008) Environmental Science: Toward a Sustainable Future. PHI Learning, New Delhi.



Author Information: Chukwunonso O. Umeora is of the Department of Architecture, Chukwuemeka Odumegwu Ojukwu University, Anambra State, Nigeria. Email: co.umeora@coou.edu.ng



Boniface S.A Okoye is affiliated to the Department of Architecture, Chukwuemeka Odumegwu Ojukwu University, Anambra State, Nigeria.



Oluchi C. Ifebi is affiliated to the Department of Architecture, Chukwuemeka Odumegwu Ojukwu University, Anambra State, Nigeria.



Chijioke C. Onwuzuligbo is of the Department of Architecture, Chukwuemeka Odumegwu Ojukwu University, Anambra State, Nigeria.