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Perception and Knowledge Assessment of Aesthetic and Environmental Effects of Lawns in the Federal University of Technology Akure Campus

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ABSTRACT

The image of the landscape mirrors the state of the environment of many organizations and campuses in Nigeria. In recent time green lawns has been considered as of the landscape design to optimally utilize and beautify open spaces in campus area. This study was conducted among students of Federal University of Technology Akure, to assess their knowledge and perception about the aesthetic and environmental effects of lawns within the campus. Simple random sampling technique was used to select seventy seven (70) respondents for the study both undergraduate and postgraduate students. Data were collected through the use of a well-structured pre-tested questionnaire and analyzed using descriptive statistics. Findings from the study revealed that majority (85.7%) of the respondents had knowledge and were conscious of the aesthetic value of lawns within the campus. The study further revealed that the respondents have positive perception towards the aesthetic and environmental effects that lawns have in their environment. Also, majority (65.7%) of the respondents perceived the less abundance of lawns within the campus and also poor maintenance of the lawns available within the campus environment.

Keywords: Urban green area, Environmental quality, Recreation, Aesthetics, Turf

INTRODUCTION

The term lawn simply refers to a managed grass space, whose existence could be dated back to no earlier than the 16th century [1]. A lawn is an area of soil covered land planted with grasses and other durable plants such as clover which are maintained at a short height with a lawn mower and used for aesthetic and recreational purposes ("Lawn", n.d.). According to [2] lawn is one of the landscape elements which are used to develop and refine spaces between, around or within buildings and vehicular routes when they occur either intentionally or accidentally. Lawn is very common in public organizations and private places today serving the purpose of covering piece of land or space that would rather be lying fallow and growing bushy.

Among the 44 identified types of urban green areas, the lawn is one of the most common elements, for example in large urban parks, botanical and zoological gardens, historic parks/gardens, institutional green spaces, green playground/school grounds, street green or green verges and house gardens [3]. Hence, since the 20th century, lawns has been used as a massive prefabricated element in all green areas both in the public and private, and also seen as symbol of globalization and market economy today [4].

In Nigeria today, many institutions have consciously or unconsciously added some physiographic and environmental appealing attributes to the spaces found in their domain which has actually defined them and made them distinctive in such that it even serves as source of attraction to prospective students and means of aesthetic gratification and tool for environmental conservation. The federal university of technology Akure is no exception of this, as they possess a monumental design and landscape which is spacious, dignified and distinctive.

The federal university of technology Akure has various lawns within the campus environments with the predominance of grasses like *Axonopus compressors* commonly known as Bahama grass, *Cynodon dactylon* commonly known as Carpet grass and the *Chrysopogon aciculatus* commonly known as Port Harcourt grass or English love grass. Examples of locations where some of

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this lawn could be found in the campus include but not limited to the open space beside the Senate phase I building, lawn in the technology hub building/botanical garden, lawn located in front of the school of Agriculture and Agricultural technology annex building as well as the frontage of the university central laboratory **(Picture 1)**.

Picture 1. Picture of a lawn located besides the senate building of the study area (FUTA).

Ignatieva et al. [5] opined that at a time of climate change and the search for a sustainable urban environment, there is an urgent need to have interdisciplinary empirical quantitative and qualitative studies on lawns i.e. the values of different lawns and conclusions drawn about their negative and/or positive environmental impact. Therefore, this paper, therefore, sought to assess the knowledge and perception of students of the Federal University of Technology Akure (FUTA) on the environmental and aesthetic effects of lawn within the campus environment. The objectives of the study were to:

1. Ascertain some selected socio-economic characteristics of respondents;
2. Assess the knowledge of students about the presence of lawns in the campus environment;
3. Determine the perception of students about the environmental and aesthetic effects of lawn in the study area;
4. Assess the perception of students towards the maintenance of lawns in the study area.

MATERIALS AND METHODS

The area of the study is Federal University of Technology Akure (FUTA) located in the capital city of Ondo State in Nigeria. It is located in the Southwestern part of Nigeria which lies between latitude 50 45" and 80 15" North and longitude 40 30" and 60 East with the coordinate of, 7°15′0″ N, 5°11′42″ E. The study area has several lawns located in strategic open spaces within it, which has made the university environment beautiful, charming and cool to visitors. Simple random sampling technique was used to select seventy seven (70) respondents for the study. The sampled population drawn for the study comprised of students (both undergraduate and the postgraduate) of Federal University of Technology Akure, Ondo state, Nigeria.

A well-structured questionnaire was used to obtain data for the study. The questionnaire was divided into two main parts. Part 1 was structured to elicit data some demographic characteristics of the respondents and 2nd part was designed to get information aimed at providing answers to the research questions considered in the study which centers on the perception of the respondents on the aesthetic and environmental effects of lawns within the campus environment.

To assess the knowledge of respondents about the presence of lawns within the campus environment, respondents were asked to respond to questions which affirmed their knowledge about lawns, a dichotomous response Yes=1, No=0 was used to assess the awareness of each respondents and on the other hand a 4-pole rating scale (Very abundant=3, Abundant=2, Less abundant=1 and not at all present=0) and 5-pole rating scale (Excellent=5, Very Good=4, Good=3, Poor=2 and Very Poor=1) was used to assess their knowledge of abundance of lawns and quality of lawns within the campus, respectively. Descriptive statistics was used to analyze this.

To assess the perception of the respondents about the aesthetic and environmental effects of lawns within the study area, list of various perceptional statements were framed through interview with experts in horticulture, opinions from people and through the review of relevant literatures. Likert [6] designed Likert scale of measuring

psychological concepts like attitudes, perception, etc. Therefore, a 5 point likert-type scale with Strongly Agree=5, Agree=4, Neutral=3, Disagree=2 and Strongly Disagree=1 was used to assess their perception. The mean score of each perceptional statement were obtained and any statement with mean score above 3.00 was judged to be statement agreed with and those less than 3.00 mean score was said to be disagreed with [7].

To assess the perception of students towards the maintenance of lawns in the study area, respondents were asked to rate the management maintenance practices of the lawn in the university on a 5-pole rating scale, Excellent=5, Very Good=4, Good=3, Poor=2 and Very Poor=1. And descriptive statistics was used to analyze this [8,9].

RESULTS AND DISCUSSION

Distribution of respondent's according some selected socio-economic characteristics (N=70)

According to **Figure 1**, 51.4% of the respondents were female while 48.6% were male. **Figure 2** revealed that 74.1% of the respondents were within the age range of below 20 and 21-30, therefore there is utmost tendency that the obtained result from the study is genuine and valid and the right age group is sampled because there is connection between age and aesthetical perception as well as rational judgment of contributions of objects to the environment. Also **Figure 3** showed the educational level of the respondents, 32% of the respondents were postgraduate students, 23% were in there final years in the undergraduate level, 17% were in 200 level, while 14% of the respondents were in there first and third year, respectively. The student in the penultimate year of their undergraduate study were absent amongst the respondents because the study was conducted during the course of the compulsory Student Industrial Work Experience Scheme (SIWES) hence majority of them were not in campus. However, the distribution of the respondents according to their educational level in the campus shows that more than half (54%) have spent more than a year in the university and ditto should be able to respond to the questions appropriately.

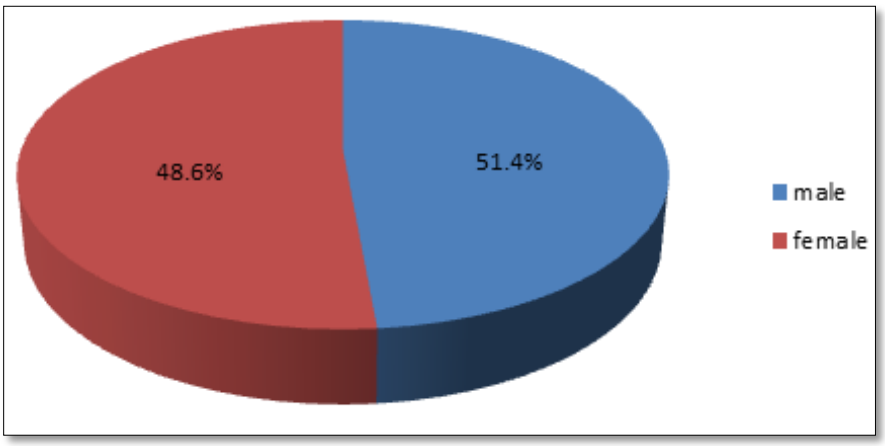

Figure 1. Respondent's distribution according to their sex.

Source: Field survey, 2016

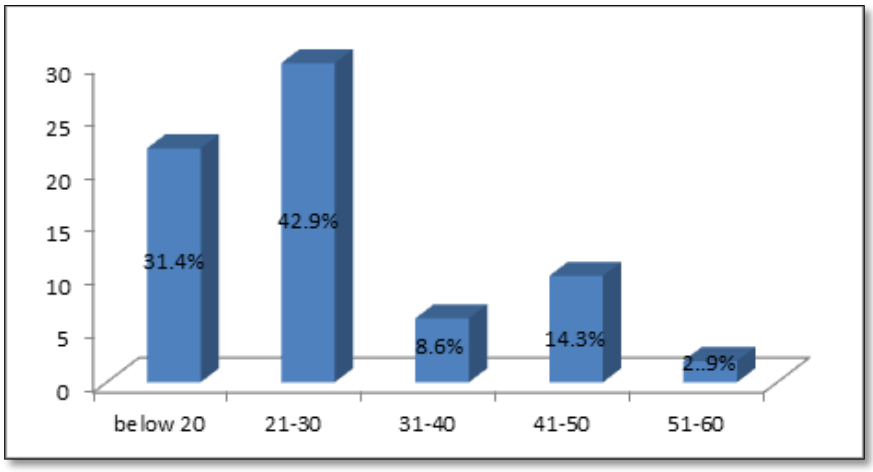

Figure 2. Age distribution of the respondents.

Source: Field survey, 2016

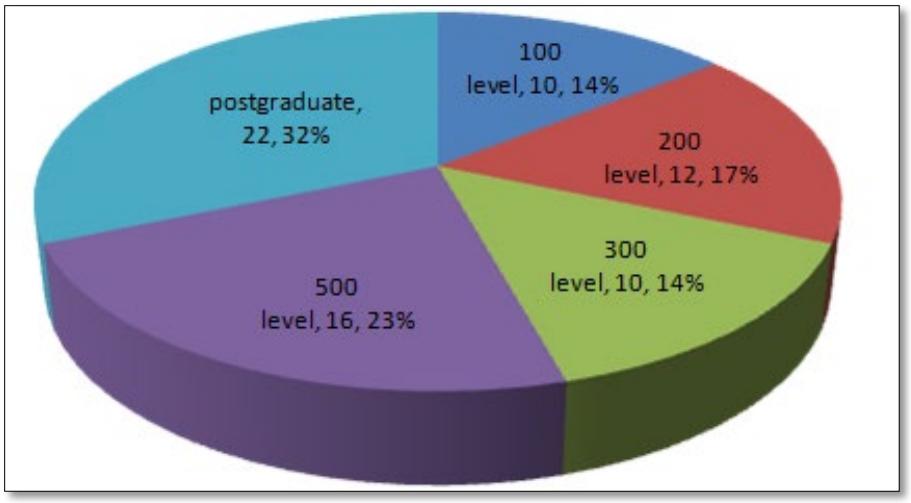

Figure 3. Respondent's distribution according to the educational level.

Source: Field survey, 2016

Knowledge of students about lawns in the campus environment

Figure 4 indicated that majority (85.7%) of the respondents had the knowledge and are conscious of the presence of lawns in several locations around the campus. It also revealed that 71.4% of the respondents had the knowledge and awareness of the environmental values and effect that lawns give to the locations and environments where they are found. Again, **Figure 4** showed that 94.3% of the students that responded to the question were knowledgeable about the aesthetic value of lawns that are found in the area and this was further affirmed in objective 3 of this study where majority of the respondents had positive and high score in the perceptional statements of aesthetic value of lawns in the campus.

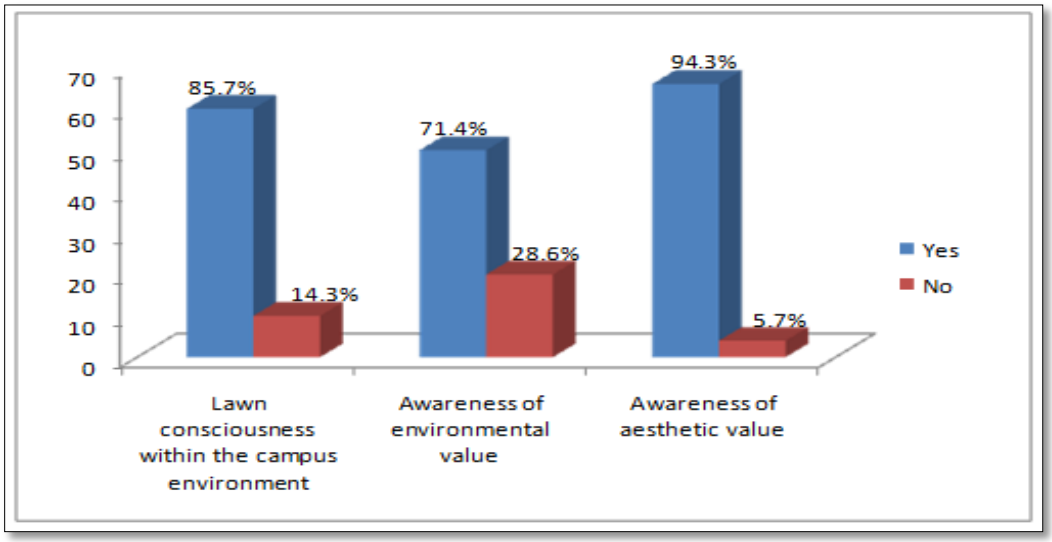

Figure 4. Respondent's knowledge and awareness about lawns in the study area.

Source: Field survey, 2016

Distribution of respondents according to their responses to the perceptional statements on environmental effects of lawn in the study area

Regarding the answers to statements given to respondents **(Table 1)** about their perception of the environmental effects of lawns in the campus environment, people had quite a range of opinions. However, the result in **Table 1** showed that "lawns prevent soil erosion", "it reduces water runoff" and "Lawn improves dust control" had higher mean score ($\bar{x}$=4.80, $\bar{x}$=4.69 and $\bar{x}$=4.57), respectively. This opinion can probably be explained by the fact that respondents had not experienced or seen soil erosion or water runoff in areas covered with lawns and grasses within the campus or rather had had experienced dust in the area which they presumed are been controlled by the presence of the lawns.

Table 1. Student's responses to their perception on environmental effects of lawns in FUTA.

S/N	Statements	SA	A	N	SD	D	Mean score	Decision
1	Lawns prevent soil erosion	56	14				4.80	Agree
2	Lawn reduces water runoff	50	18	2			4.69	Agree
3	Lawn improves dust control	48	16	4	2		4.57	Agree
4	Lawns improve soil nutrients	44	18	6	2		4.49	Agree
5	Lawn has a cooling effect in the environment	30	32	8			4.31	Agree
6	The university lawn areas provide comfort to life	20	44	2	4		4.14	Agree
7	Mowing the lawn causes litters in the environment	16	32	4	4	14	3.46	Agree
8	Lawns serve has hide out for dangerous animals	8	32	4	12	14	3.11	Agree
9	Lawns give out unpleasant odor which makes one feel uncomfortable	2	26	6	24	12	2.74	Disagree
10	The university lawn areas don't contribute to air quality	2	8	10	34	16	2.23	Disagree
11	Lawn releases poisonous substances to the environment (causes air pollution)	0	6	2	36	26	1.83	Disagree

SA: Strongly Agree, A: Agree, N: Neutral, D: Disagree, SD: Strongly Disagree
Source: Field survey, 2016

Distribution of respondents according to their responses to the perceptional statements on aesthetic effects of lawn in the study area

Results in **Table 2** revealed that the respondents agreed to all the statements with high mean score of above 4.00, this shows that the respondents have high and good perception about the aesthetic values of lawns within their campus. The quite high ranking mean score and a positive response from FUTA students towards the aesthetic value of lawns in there campus environment could be, possibly because modern people are hungry for nature and green environment. Another explanation for this positive response is because most of the students have seen in photographs the settings and landscape of universities in the western world which they consider as models for their own institution. Hence, they appreciate and are aware of the aesthetic values of grasses and lawns in their campus.

Table 2. Student's responses to their perception on aesthetic effects of lawns in FUTA.

S/N	Statements	SA	A	N	SD	D	Mean score	Decision
1	Lawns give a good identity to the community	60	8	2			4.83	Agree
2	Lawn add more color to the natural environment	58	10	2			4.8	Agree
3	The uniformity of lawn adds beauty to the campus	56	10	2	2		4.71	Agree
4	Lawn increases the value of building properties	52	16	2			4.71	Agree
5	I would love to go for a photo shoot on the lawn	52	12	6			4.66	Agree
6	I like to relax on the lawn during your leisure time	40	26	4			4.51	Agree
7	I love to play sports on the lawn	40	10	16		4	4.17	Agree

SA: Strongly Agree, A: Agree, N: Neutral, D: Disagree, SD: Strongly Disagree
Source: Field survey, 2016

Respondents' perception towards the abundance and maintenance of lawns in the study area

Result in **Figure 5** showed that majority (65.7%) of the respondents perceived that the lawns in the study area were less abundant. This could be implied from the fact that they still see many open spaces within the school environment been left to fallow, which would have rather been covered with grasses and lawns that could add beauty to the landscape of the school environment. Hence, there is the need for the school management and the horticultural unit to

work on more establishments of more lawns in free open spaces within faculties and other appropriate places.

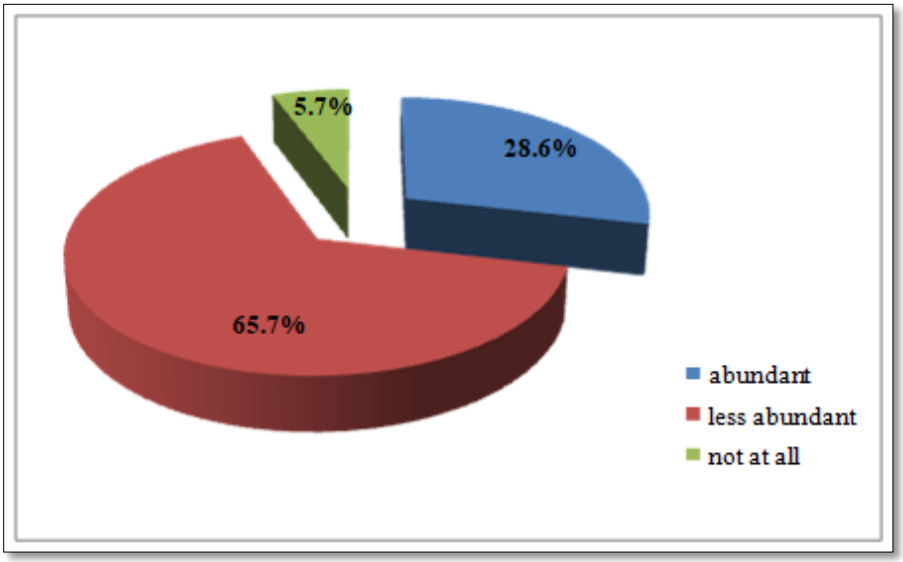

Figure 5. Respondents' perception of the abundance of lawn in the campus.
Source: Field survey, 2016

According to **Figure 6**, 48.57% of the students interviewed rated the maintenance level of the lawns within the campus to be poor. Only 31.43% was of the view that the maintenance level is on the average (good). Therefore, it could be concluded that lawns within the campus environment is not properly maintained as expected by the students which could be due to the poor allocation of funds for its maintenance by the university management following its underestimated role and importance within the school environment.

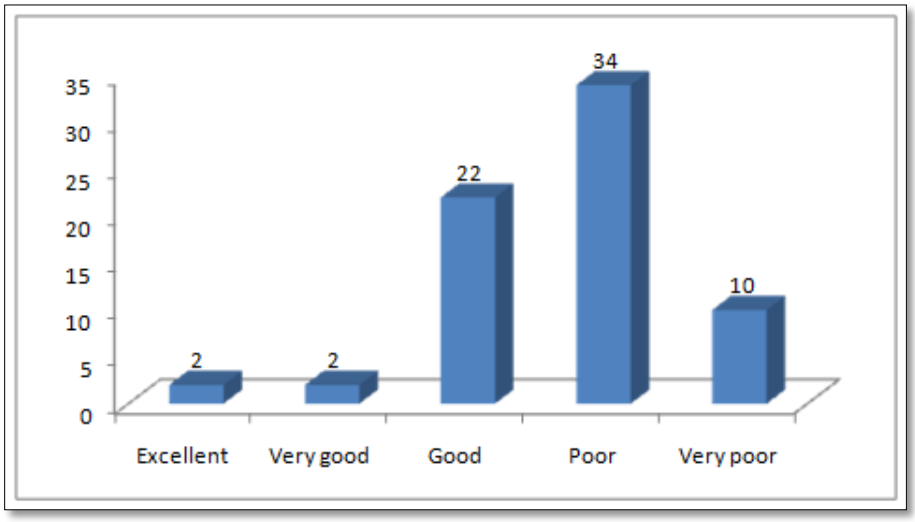

Figure 6. Respondents' perception of the maintenance of lawn in the campus.
Source: Field survey, 2016

CONCLUSION

The study assessed the perception of Aesthetic effects and environmental effects of Lawns in the Federal University of Technology Akure Campus, Ondo State, Nigeria. The population for the study comprised of all students of the University from which some were sampled randomly to be the respondents for the study. This study revealed that the students of the campus have knowledge about the environmental and aesthetic effects of lawns within their campus and they are positively disposed to the effects these lawns has on the environment in terms of beauty gratification and environmental conservation. Respondents have the perception that lawns are less abundant and poorly maintained within the campus environment.

Since the respondents had negative perception about the abundance and maintenance of the lawns in the campus environment, the school management and the horticultural units and landscape improvement related departments should synergize together to ensure the open areas are improved upon by planting lawns and ensuring its utmost maintenance since the students has positive perception of its values.

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