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Discovering the Capabilities of Landscaping in Academic Institutions in the 21st Century

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Abstract

The study was carried out to discuss the usefulness or potentials of landscaping in academic institution in Federal Polytechnic Bali Taraba State. Two objectives and two research questions guided the study. Population of the study was thirty (30) landscape practitioners from selected academic institutions. The general population was considered for the study for data collection while structured questionnaire and oral interview was used for the study. Analysis of data was achieved using mean and standard deviation with the help of statistical package social science (SPSS) software. Revealed by the result, it shows that there must be well detailed proper landscape design plan approved before construction, before and during landscape stage there should be constant site visitation, proper market survey of landscape materials must be carried out, landscape experts and professionals must be employed. Landscape is of high importance sites problems must be handled by landscape professionals for good results. The landscape policies are communicated in other to strictly follow it guidelines so as to ascertain standard and meet the durability aesthetics required.

Keyword: Landscape, Aesthetics, Landscape policy, Taraba State, Bali.

Introduction

Landscape is an integral part of any built environment. The art of landscaping deals with consciously arranging or organizing outdoor spaces for enjoyment and human satisfaction. Landscape in academic areas do differs with those of residential, hospital or health areas and sport grounds. Landscape in academic institutions apart from adding aesthetics value and beauty to an environment has an unnoticeable psychological effect on its occupants. It attaches the sense of belonging to the students, staffs and visitors as well.

Landscape elements in academic areas not only adds to aesthetics but aids increase achievements and confidence, improve behavior and health while developing extensive range skills and ultimately improving academic performance amongst students. The school management still has a little awareness of the importance and function of landscape environment in supporting the learning process (Zaleha Abdullah, 2014). In an attempt to explain detailing on the landscape issue, this study seeks to identify the function of the schools' landscape I the learning process (Cody & Heather, 2017). Students spend most of their time in schools under stress that decreases their academic performance and increase level of immoral behavior especially in high school. Students are subjected to attain fatigue as they force themselves to concentrate to certain things. It is vital to have a way of preserving the school's environment. Recognizing the circumstances that there are problems in developing landscaping in schools; the government has its plans to permeate these problems (Salina et al., 2014).

The welcoming atmosphere outside classrooms stimulates the mind and encourages the learning process. Past studies indicated that some plants can stimulate the thinking process through regular interactions with students (Ke-Tsung, 2009; Paddl & Gillil, 2016). The concept of an attractive landscape can also provide opportunities for students, teachers and visitors to obtain information about it flora species, function and diversity of plants within the school environment (Clevenger et al., 2020).

Landscape around a school compound either directly or indirectly assist in the learning process (Dyment & Bell, 2007; Loebach & Gilliland, 2014; Van Dijk-Wesselius et al., 2018). This can be seen interms of affective skills through various spaces for leisure, socializing and interactions with landscaping components during the indoor or outdoor revision of lessons. However,

the landscape school environment can be used to conduct related subject matters such as Survey, Biology, Geography, Chemistry and Building technology. For example, trees can provide shade to reduce the amount of sunlight on the building and the ground to moderate the temperature of the academic environment (Alamah Misni, 2013).

Climate conditions of areas surrounded by grasses and trees are usually more comfortable when compared to open areas. Plants also act as green lung to academic environment by absorbing Carbon dioxide and by releasing Oxygen (Wells, 2000). This shows that green areas turn to generate more Oxygen that is needed in the school environment especially in hot climatic regions. This in turn creates responsive conditions for mental development and good academic performance. The green environment helps in calming of the mind and an increased concentration especially to students who are studying (Berman et al., 2008; Kaplan, 1995; Kaplan & Berman, 2010). Whereas trees are able to reduce extreme heat, thereby, reducing the usage of air conditioning in schools.

The study suggests that individuals need a connection with natural environment for selves' well-being. The young children are increasingly becoming more separated from their natural environment as their access the surroundings are gradually diminishing (Dowell et al., 2011; Robert & Robert, 2020).

Based on interview with some lecturers within my case study area and students, they felt that hard and soft landscaping components can help improve the student mind brightness. With the help of park benches, concrete seats and tables as hard landscaping components, it can be used by students' to discuss, analyze and facilitate the learning process. Whereas soft landscaping components consisting of large, medium and small trees and shrubs along with fruit trees can cool temperatures within the schools by encouraging the students to review their lessons in the school compound. Moogk-Soulis, (2002) reported that trees can be used to provide shades against surfaces as well as to act as a barrier to hot winds and to create cool air instead.

Researchers observed that artificial landscapes consisting of fish ponds and cascading ponds can provide therapeutic facilities to the school's occupants (Kopeva et al., 2017). Sounds of water elements soothe the mind, providing the ideal environment for acumen of knowledge (Kelz et al., 2013). More so, the presence of fishes, turtles and other aquatic animals of selected specie can cultivate a sense of compassion for animals, as well as care for school environment. Students

enjoy sitting near ponds during break period while feeding the fishes, taking some lessons and playing with friends. The significance of schooling and prior to school settings in correcting children with natural surroundings had been recognized. More so, the yielded outcomes suggested that the natural outdoor environments expanded the children's imagination by making them instrumental for the betterment of schools and society.

Due to lack of awareness of landscape benefits in Federal Polytechnic Bali, Taraba State, some departments are not conducive for lengthily studies as a result of harsh weather condition in the school environment and the locality as a whole. Landscape is frequently overlooked consequently; a small initial landscape job with time becomes a major work. It is often expensive to carry out major landscape works and money spend shows no productive returns. In consideration with the above situation which is planning the schools' development and academic achievement, landscaping of the schools' environment has to be highly respected and given a topmost priority to make the school environment a conducive learning area and other school leisure activities.

FACTORS AFFECTING LANDSCAE DEVELOPMENT IN ACADEMIC INSTITUTIONS

Factors affecting landscape development can be grouped into two major parts which are;

- **Managerial Factors affecting Landscaping**

  Managing a landscape means guiding future change and development in other to foster growth of the landscape element. It requires the landscape manager to be ready to adapt to everything mother-nature throws comes up with. Many landscape managers stick to a rigid maintenance schedule and some deliberately led plants to overgrow resulting to total clearance of such plants. Most Nigeria institutions face the management problem of landscaping, whereby management refuses to release the needed funds or facilities needed for regular maintenance of the existing landscape in the school environment. In most cases, the management problem can also arise from those who have been assigned to do the job, because of their status in the academic community, they neglect the act knowing full well they cannot be questioned by the necessary authorities as they usually have good defense strategy to lay when the need arises. Most times, even when they agree to carry out landscape maintenance, the necessary funds are not disbursed for this action to be carried out; even

when they are disbursed they are misused or mismanaged by those in charge especially with the issue of man-know-man, as they do a poor job to the neglect of the needs of the people.

- **Physical Factors affecting Landscaping**

  Understanding the environmental factors that exist on a site is critical to designing a functional, healthy landscape; this can be achieved by incorporating knowledge of site specific consideration into the design. The physical factors affecting landscape includes:

  i. Climate: The climate in essence determines the type of plant that will be used, the type of plan that will best suit the local climate and will require less maintenance.

  ii. Wind: Knowing the direction of prevailing winds is crucial for deciding where to locate a windbreak, which can be especially important to refrain from including structures or plant that block the breeze from outdoor living spaces.

  iii. Sun and Shade: The way the sun affects the buildings and site at different sensors greatly influence the overall design. Good plant placement is based on knowing the suns' direction at different times of the year. Understanding sun exposure helps us make design decisions like planting trees to provide shade in summer.

  iv. Topography: The topography of the land such as steep slopes, vistas, hills and outcrops among others may suggest or determine aspects of design such as layout and can be used and augmented in order to create a particular impression. Also, the topography of the land determines the velocity at which surface runoff will flow, which in turn determines the ferocity of the runoff.

Longer, steeper slopes without adequate vegetal cover are more prone to very high rates of erosion during heavy rains that shorter, less sleep slopes. Stopper terrain is also more prone to mud slides, landslides, and other forms of gravitational erosion process.

OBJECTIVES OF THE STUDY

1. To know the effects of un landscaped departments to students.
2. To determine why un landscaped departments are not populated.

RESEARCH QUESTIONS

1. What are the effects of un landscaped departments to its students?

2. Why are un landscaped departments not populated?

METHODOLOGY

The study employed a survey research design. The area of the study was Federal Polytechnic Bali, central Senatorial Zone, Taraba State. The researched was conducted using research design in accordance to Robson (2002), surveys are used for relatively large number of respondents within a limited time frame. Questionnaire survey method adopted aid consistency of observations and improves replication due to its inherent standardized measurement and sampling techniques (Naoum, 2007). The total population for the study was 30 landscape practitioners in constructions sites within Federal Polytechnic Bali, Taraba State. The whole population was used for the research. The instrument used for the study was questionnaire and oral interview as the primary and secondary source for data collection. It was developed by the researcher based on the review of related literature. The reliability of the instrument was established using Cronbach Alpha coefficient formula to determine the internal consistency of the instrument using SPSS version 21 software. An average reliability coefficient of 0.74 alpha value was obtained which indicates that the instrument was highly reliable since the value was above 0.70 and the closer the reliability value to 1, the greater the item consistency of the rating scale and vice-versa (Enemali,2010). Data collected from the retrieved questionnaires was analyzed using mean and standard deviation with the help of Statistical Package for Social Science (SPSS) software, version 21. The mean and the standard deviation were used in answering research questions 1, 2, 3, & 4. The response modes were assign numerical value as follows: Strongly Agree - 5 points, Agree - 4 points, Undecided - 3 points, Disagree - 2 points and Strongly Disagree- 1 point. For answering the research questions in this study, a decision rule was taken that, any item with a mean response of 3.50 and above was considered as agreed while those below 3.50 were regarded as not agreed-. This is because 3.50 is the beginning of lower limit average of the sum of the five response values and the lower true limit of agreed as stated above.

RESULTS

Research Question 1: What are the effects of un landscaped departments to its students?

Table 1 answered research question one, which aimed at finding the effects of un landscaped departments to its students in Federal Polytechnic Bali Taraba State.

All the items of the research question were agreed by the respondents with the exception of item number 2, but the total mean scores is in category of 3.50 - 4.49, (as stated above) and grand mean of 3.72. This shows that well detailed and proper design plan must be presented and approved before commence of laying, planting and construction. There must be constant visitation and survey on Construction Sites for determining the site's condition. Proper landscaping materials must be surveyed in the market and well inspected during and after purchase before commencing laying, planting and construction. Landscape practitioners and professionals must be employed to carry out the whole landscaping process right from the initial stage to finishing.

Table 1: Mean rating and standard deviation of the effects of building structures deterioration shortly after construction in Jalingo Local Government Area Taraba State.

S/N	ITEMS	Mean	SD	Remarks
1.	Clearly detailed and proper landscape design plan presented and approved before commence of laying, planting and construction.	4.41	0.82	Agreed
2.	Landscape culture does not need special supervision during laying, planting and construction if adopted in Federal Polytechnic Bali.	3.39	1.35	Disagreed
3.	Sites visiting and survey can be done to know it condition and the types of materials to be used during landscape process in academic institutions.	3.65	1.30	Agreed
4.	Landscape materials should properly be surveyed in the market and well inspected during and after purchase before commencing the laying, planting and construction.	3.82	1.24	Agreed
5.	Landscape practitioners and professionals should be employed to carry out the whole landscape process right from the initial stage to finishing.	3.34	1.24	Agreed
Grand Mean		**3.72**	**1.19**	**Agreed**

Field survey (2018)

Research Question 2: To determine why un landscaped departments are not populated.

Table 2 answered research question two, which aim at determining why unlandscaped departments are not populated in Federal Polytechnic Bali Taraba Satte. All the items of the research question were agreed by the respondents with

the exception of item 2, but the total mean scores is in category of 3.50 - 4.49, (see Table 1) and grand mean of 3.57. This shows that there is a need for specialinstructional awareness for delivering the importance and benefits of landscaping the environment of Federal Polytechnic Bali Taraba State to standard, also technical landscaping and maintenance workshops needs to be provided to enanble intended qualified landscape practitioners to aquire more knowledge on landscape policy.

Table 2: Mean rating and standard deviation of the respondents unlandscaped departments are not populated in Federal Polytechnic Bali Taraba Satte.

S/N	ITEMS	Mean	SD	Remarks
1.	Proper landscaping if adopted in Federal Polytechnic Bali will bring about the use of standard landscaping materials from the initial stage.	4.26	0.89	Agreed
2.	Adoption of landscape in academic institutions will bring about proper inspection by government officials.	2.97	1.34	Disagreed
3.	Sites problems arising during landscaping process in academic institutions can be handled by landscape practitioners or professionals if employed.	3.22	1.23	Agreed
4.	Landscape professionals team will help curtail variety of schools' landscape environmental issues arising on daily basis for landscape components durability.	3.55	1.15	Agreed
5.	Proper communication of landscape policy will yield a positive outcome by making schools' landscape components to maintain their expected lifespan.	4.04	1.08	Agreed
Grand Mean		**3.57**	**1.17**	**Agreed**

Field survey (2018)

FINDINGS OF THE STUDY

1. The findings of this study shows that there must be a well detailed and proper landscape design plan presented to the rightful authorities and approved before commence of landscaping process which is laying, planting or construction where necessary.,landscape site must be visited after the survey so as to determine the site condition so as the materials to be used for proper landscaping, proper landscaping materials must be surveyed in the market or in the materials market environment and well inspected during and after purchase before comencing the landscape fully, landscape professionals and practitioners must be employed to carry out the whole landscape process right from the initial stage to finishing for aesthetically mind captivating pleasing appearance. Landscape culture must be highly considered to address the issue of most landscape surpervisors

whom if appointed in a day are expected to perform the entire complex task of landscape the next day without undergoing any form of preparation by the rightful authoritirs.

2. This study findings further shows that landscape must be adopted in Federal Polytechnic Bali which will bring out the use of standard landscaping materials. Problems arising in the landscape process of laying, planting or construction must be handled by landscape practitioners and professionals. Landscaping team are always there to help communicate the landscape policy which yield positive outcome by making the landscape environmental components to maintain their expected lifespan. There is limited availability of suitable standard landscaping materials in the local markets which whereas complicate the process of landscaping works in academic institutions. Recommended standard landscaping materials are costly to academic institutions as they are required to spent a large amount of money to procure the standard recommended landscaping materials.

CONCLUSION

Conclusively, landscaping is an essential aspect in our academic institutions for there was a significant relationship in lower and upper limits of landscape function towards the learning process and academic achievements of the institutions. At this point, the relationship of landscaping functions in improving the learning process made up of several hard and soft landscape components. The hard landscape components made up of benches, concrete seats, garden tables and soft landscaping components whch includes shade trees, shrubs, fruit trees and ground covers. If the academic institutions are better landscaped, including the soft and hard landscaping, the schools' quality and function will be expected to experience a rapid increase in population, school standard, success and development to a higher level. Teachers are also to use the school fish pond or garden for educational purposes especially science, geography and arts. Students as well will make use of hard landscape components such as garden tables and benches for experimental discussions. This in turn shows that landscape is of paramount important in our academic institutions and play a vital role in the learning process of academics. According to the study in addition it was clear that there is need to come up with landscape as a study course in our academic institutions especially in the study area so as to give a vital knowledge on long lasting sound environmental landscaping.

RECOMMENDATIONS

The experience of landscape challenges in Federal Polytechnic Bali Taraba State over the years offered some lessons that can guide future policies for comfortable learning environment for students and teaachers if rightly put into practice. Moreso, landscape professionals must be involve in all stages starting from the design stage, choosing recommended materials to be used and the whole finishing stage in other to achieve a welcoming fresh and conducive educational well landscaped

environment. The Government should emphasize on public awareness about the importance of landscape to our education, and the role it is expected to play in achieving sustainable learning process.

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