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Implications of School Plant Utilization in State Universities in South East Geo-Political Zone of Nigeria

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ABSTRACT
The study was carried out to analyze the implications of school plant utilization in State Universities in South East Geo-political zone of Nigeria. Specifically, the study examined the relationship between school plant inspection and environmental aesthetics of State Universities; ascertain the relationship between school plant safety measures and environmental aesthetics of State Universities; assess the relationship between n school plant safety measures and environmental aesthetics of State Universities. Data for the study were collected from 336 respondents from Abia State, Anambra State, Ebonyi State, Enugu State and Imo State using survey method. Pearson Product Moment Correlation PPMC was used to analyze the data collected. From the result, degree of freedom was 334 with a t-calculated value of 12.35, while the coefficient of relationship was 0.56 indicating the existence of a moderate and positive relationship between utilization of school plant and environmental aesthetics of State Universities. The degree of freedom is 334; the t-calculated value of 5.75, while the coefficient of correlation was 0.30. This index shows that there is a low but positive relationship between school plant safety measures and environmental aesthetics of State Universities. The result gave 334 degree of freedom; t-calculated value of 6.61 and coefficient of correlation of 0.34. This index shows that there is a low but positive relationship between school plant inspection and environmental aesthetics in State Universities. The study concludes that poor use of school plant in the study area influenced the study environment, which indirectly undermines the quality of teaching and learning in the area. Hence, the study recommends among other measures the establishment of school plant maintenance committee to ensure prompt repairs/replacement of school plant in the event of breakdown or dilapidation.

Keywords: State Universities, School Plant, Teaching and learning, Environmental aesthetics, South East Geo-political zone

1. Introduction

School environment in the context of this work entails the surroundings of the school, its physical facilities and infrastructure. Beyond providing aesthetic appeal, the environment of a school influences the outcome of school product, in terms of knowledge, skills and behavior. That this to say the quality of air, water, food, social activities, teaching and learning that occur in the school ultimately determines the quality of personality produced. Thus, what happens in and around the school environment is considered a priority in delivering quality teaching and learning in the school. Precisely, Anyaogu (2016) explained that measures are put in place to achieve bright, colourful and neatly arranged trees, lawns, flowers, among other aesthetic measures that project the good image of the school and positively influence the activities of staff and students. Hays (2011) noted that when the environment is maintained aesthetics is spontaneously enhanced, implying that aesthetics shares a direct relationship with environment. Thus, neither can be discussed in isolation to the other.

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Defining aesthetics, Hays (2011) stated that it is concerned with the sense of appreciation that follows a sense of appeal. Environmental aesthetics has consisted of transference of sorts, where artistic paradigms are simply applied to the environment. The two most notable paradigms in this regard have been the object and landscape models of aesthetic appreciation. Hays further emphasizes that the object model entails abstracting a physical object from its environment and appreciating it as one might appreciate a sculpture, paying attention to the actual physical qualities of the object itself. These physical qualities entail the design of the school building which contributes to academic excellence in a university.

The aesthetics of a school environment have significant influence on students' learning abilities. Onasanya and Adegbija (2007) opine that well sited school buildings with aesthetic conditions usually contribute to higher educational attainment by the students. The environmental aesthetic is of utmost importance to the students' learning outcome. The aesthetics of a school environment are achieved through school building and all its contents including physical structures, infrastructure, furniture, and the use and presence of chemicals and biological agents; the site on which a school is located; and the surrounding environment including the air, water, and materials with which children may come into contact, as well as nearby land uses and roadways (Rushton and Juola-Rushton, 2008). All these parts consists school plants which invariably means that environmental aesthetics and school plants compliments each other in a school setting.

School plants according to Onye (2014), are the physical resources of the school such as classrooms, lecture theatres, auditoriums, typing pools, administrative block, libraries, laboratories, workshops, gymnasia, assembly halls, special rooms like sickbay, staff quarters, students' hostels, kitchen, cafeteria, lavatory, etc. She further opines that the availability, relevance and adequacy of school plants contribute to students' achievement. Anyaogu (2016) posits that school plant or school facilities consists of the site, buildings, equipment and all facilities located in the school which enhance the teaching and learning activities and at the same time protects the physical well-being of the teachers and learners. Asiabaka (2008) emphasizes that both teachers and students need places to search, read, write, confer, interact, view, listen, think, experiment, and record. Students need places to transact student affairs or to gather for social purposes. Lecturers need office space, conference rooms for team planning, facilities for diagnosis of pupil's needs, and facilities for preparing instructional presentation.

The management of school plant therefore involves planning for the facilities, keeping track records of the facilities, supervising the facilities, motivating students and lecturers to participate in facilities maintenance and evaluating the available facilities. In the same vein, Eboatu and Agogbua (2018) see school plant management as the process of planning, organizing, coordinating and controlling material and physical resources for effective teaching and learning processes in schools. Effective management of school plant is vital because the success of any educational programme depends largely on handling of school's facilities in terms of provision, maintenance and monitoring of usage of available plants. Anyaogu (2016) opines that school plant management is the process that ensures that building and other technical system support the operation of a school. Fenker (2004) defines school plant management as the application of scientific method in the planning, organizing, decision making, coordination and controlling of physical environment of learning for actualization of the educational goals and objectives.

The poor state of school plants in State Universities across South East Geo-political zone makes a compelling case that school plants in the study area are not properly operated and maintained. Though the various State Governments have done a lot better to equip schools, lack of maintenance culture remains a subsisting bane undermining efforts to improve the aesthetics of institutions across the zone. For instance, equipment do not get repaired as they break down and other school plant maintenance/operations do not seem to be adequately put in place. Based on the premise, could it be that if school plant management is associated with environmental aesthetics, effective teaching and learning process will be achieved in the Universities?

Objectives of the study

i. Examine the relationship between school plant utilization and environmental aesthetics of State Universities;

ii. Examine the relationship between school plant inspection and environmental aesthetics of State Universities;
iii. Assess the relationship between school plant safety measures and environmental aesthetics of State Universities.

2. Methodology

The study carried out in South East Geo-political Zone of Nigeria. The zone is made up of five States, namely: Imo State, Abia State, Enugu State, Anambra State and Ebonyi State. Each of the States has a State and Federal Universities owned by the government which forms the focus of this study. South East, Nigeria has a population of 24.8 million and is surrounded across by other Geo-political zones. Educationally, the universities in this zone are grouped into three categories namely: the Federal Government Owned University, the State Government Owned University and Privately Owned University.

The population of the study was made up of 48 Deans and 288 Heads of Departments from 5 public State Universities comprising a total of 336 respondents from 5 state owned universities. In each state, the respondents were 106 for Abia State, 58 for Anambra State, 47 for Ebonyi State, 42 for Enugu State and 83 for Imo State (Source: Personnel Units of the Various Universities in the Department of Research and Statistics, 2018). A sample of three hundred and thirty-six (336) respondents was selected for this study. This sample represents 100 per cent of the entire population because of its handy size. Hence, the sampling technique is census sampling because of the researcher's ability to cover cum reach out to the entire population.

Research questions were answered using Pearson (r) statistics thus indicating the coefficient of relationship between the variables in the study while the hypotheses were tested with t-test of significance of simple correlation statistics thus indicated the "significance" or "non-significance" of the extent of relationship existing between the variables. The hypotheses were tested at 0.05 level of significance. The bases for the decision for the research questions' conclusion were as follows: 0.00 = no relationship, 0.01 – 0.19 = very low relationship, 0.20 – 0.39 = low relationship, 0.40 – 0.59 = moderate relationship, 0.60 – 0.79 = high relationship, 0.80 – 0.99 = very high relationship and 1.00 = perfect relationship. The acceptance or rejection of null hypotheses was based on the calculated value of the t-test of correlation coefficient "r". When the t-calculated is greater than the t-tabulated, the null hypothesis is rejected but if otherwise, the null hypothesis is accepted.

3. Results and Discussion

3.1. Utilization of school plants and environmental aesthetics of State Universities

Table 1 gave a summary of the coefficient of relationship between utilization of school plant and environmental aesthetics of State Universities. From the result, degree of freedom was 334 with a t-calculated value of 12.35, while the coefficient of relationship was 0.56 indicating the existence of a moderate and positive relationship between utilization of school plant and environmental aesthetics of State Universities. Hence, the rejection of the null hypothesis and accepting the alternate hypothesis, that posits that there is a significant coefficient of relationship between utilization of school plants and environmental aesthetics of State Universities in South East Geo-political Zone of Nigeria.

In agreement to the findings, Ihiegbulem (2006) contends that resource materials utilization during practices lessons inculcates in the students the spirit of careful observation, manipulative skills, respective thinking and creativity in the learners. Similarly, Lewin (2000) however reported that science facilities are only important when they are used. School plants apart from being provided, are expected to be properly utilized for goal attainment. Utilization of school plants is as important as making them available. It remains one of the major tasks of the university management to ensure that available school plants are effectively utilized. These findings were supported by the view of Osahan (2008) who observed that no meaningful teaching and learning can take place without school plants, which must be properly utilized to facilitate all school programmes. The findings of this study are also corroborated in the observation of Mba (2003) who lamented the low rate of utilizing certain school plants by students maintaining that facilities such as games courts and pitches are abandoned by majority of the students

in preference to ball-room dances. Furthermore, Denyer (2008) reports that games when used as a resource enable less able children to stay on task and remain motivated for longer period. Goal attainment in any school depends on adequate supply and utilization of educational resources which enhance proper teaching and learning process within a conducive environment. Similarly, Njoroge (2010) observed that unavailability of educational resources among other factors hinders effective utilization. Njoroge's view lead to the reason for the moderately utilized school plants because most of these plants were not available for use.

The utilization of school plants include that school premises and maintenance schedule are mapped out drawn respectively, there is effective use of school laboratory and replacement of any damaged school facility are ensured, school plants are used to conduct evening and holiday extra-mural programme for the students, students engage in practical works with school plants, query are given to staff or students for any destruction or manhandling of facilities, it is ensured that room utilization suits the number of students per class, enlightenment programmes are organized on proper utilization of school plants, there is establishment of a responsible team that sees to the affairs of daily use of school plants by the recipients.

Table 1: Correlation between utilization of school plant and environmental aesthetics of State Universities South East Geo-political Zone of Nigeria at P<0.05

N	R	∝	df	t_{cal}	t_{tab}	Decision	Magnitude	Direction
336	0.56	0.05	334	12.35	1.96	Reject H_0	Moderate Relationship	Positive

Source: Field survey data (2018)

3.2. Relationship between school plant inspection and environmental aesthetics of State Universities

Table 2 presents a summary of the coefficient of correlation between school plant inspection and environmental aesthetics of State Universities in South East Geo-political Zone of Nigeria. The result gave 334 degree of freedom; t-calculated value of 6.61 and coefficient of correlation of 0.34. This index shows that there is a low but positive relationship between school plant inspection and environmental aesthetics in State Universities. Hence, the null hypothesis is rejected and the alternative which states that there is a significant coefficient of correlation between school plant inspection and environmental aesthetics of State Universities in South East Geo-political Zone of Nigeria accepted

The results aligned with the findings of Onasanya (2008) which posits that inspection is also carried out on schools as a necessary condition after crises to ascertain the extent of normalcy and security of lives and property after schools/educational institutions have been hit by any form of social unrest like students protests or demonstration, natural disaster or any other emergency, where the aim is to report the state of affairs to the appropriate authority and the authorities to communicate the outcome of such inspection to the general public who in turn can restore their confidence in the system. Chan (2009) found that eighth-grade students scored consistently higher across a range of standardized tests if housed in new or modernized buildings. Bowers and Burkett (2007) found that students in newer buildings outperformed students in older ones and posted better records for health, attendance, and discipline. The study attributed approximately three percent of the variance in achievement scores to facility age, after considering socio-economic differences in the students' populations.

Table 2: Correlation between school plant inspection and environmental aesthetics of State Universities in South East Geo-political Zone of Nigeria at p<0.05

n	r	∝	df	t_{cal}	t_{tab}	Decision	Magnitude	Direction
336	0.34	0.05	334	6.61	1.96	Reject H_0	Low Relationship	Positive

Source: Field survey data (2018)

3.3. Relationship between school plant safety measures and environmental aesthetics of State Universities

Table 3 gave a summary of the coefficient of relationship between school plant safety measures and environmental aesthetics of State Universities in South East Geo-political Zone of Nigeria. The

degree of freedom is 334; the t-calculated value of 5.75, while the coefficient of correlation was 0.30. This index shows that there is a low but positive relationship between school plant safety measures and environmental aesthetics of State Universities.

Contrary to the findings of this study, Nwokike (2012) revealed that principals played significant roles in the procurement, maintenance, safe guarding, as well as ensuring adequate utilization of school plant facilities. Ajayi (2007) corroborated that high level of students' academic performance may not be guaranteed where instructional space such as classrooms, libraries, technical workshops and laboratories are structurally defective and have formed death traps. They maintained that it is not good to site a school very close to an industry for fear of noise and air pollution. Supporting the findings of this study, Williams, Persand and Turner (2008) reported that safe and orderly school plant environment and school facilities were significantly related to environmental aesthetics. In tandem to the findings of this study, Gatua (2015) established that most schools had not fully implemented Ministry of Education Safety guidelines to ensure safety of physical infrastructure. The findings of the study are also in line with the results of Ike (2015) which showed among others that some security devices for the improvement of security situations as well as the emergency response plans for managing security in public secondary schools were not available in most schools. Continuing, it was also revealed that there is need to have constant searches of student's lockers and boxes to seize weapons and dangerous objects from the students. In agreement to the findings of this study, Stewart (2006) opined that before selecting a site for school plant, safety and safety are undoubtedly the most important factors to consider. With regards to this, he suggested that the committee handling the sitting should be familiar with any existing health and safety codes in the state, region or country.

Table 3: Correlation between school plant safety measures and environmental aesthetics of State Universities in South East Geo-political Zone of Nigeria at P<0.05

n	R	∝	df	t_{cal}	t_{tab}	Decision	Magnitude	Direction
336	0.30	0.05	334	5.75	1.96	Reject H_0	Low Relationship	Positive

Source: Field survey data (2018)

4. Conclusion and Recommendations

The study concludes that poor use of school plant in the study area influenced the study environment. School plant is significant in the environmental aesthetics of the institutions especially State Universities. Quality school plant provision stems from making funds available for the procurement of school plants, proper maintenance culture, effective inspection and provision of adequate security personnel. Aesthetic beauty of school environment can attract new students as well as inspire staff and students towards excellence. The study therefore recommends the following:

- The establishment of school plant maintenance committee in State Universities to ensure prompt repairs/replacement of school plants in the event of breakdown or dilapidation. Where such committee exists, it should be adequately funded to facilitate their work.
- Universities should stop outsourcing construction and maintenance of jobs for school plants. Rather, such tasks should be given to corresponding departments and units in the University to undertake. This will enable universities develop internal technical capacity and ability to build and maintain school plants at relatively lesser cost.
- Universities should put in place stringent measures that will restrain students and staff from damaging/vandalizing school plants.
- As part of the project sustainability plan, prior to the construction of the school plant, adequate funds covering about five years should be appropriated for the maintenance of the school plant.

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