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SPACE FOR CONVENIENCE PLANNING AND ACADEMIC PERFORMANCE OF SECONDARY SCHOOL STUDENTS IN OYO STATE, NIGERIA

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ABSTRACT
Every secondary school leaver is expected to be able to seek and gain admission into institutions of higher learning, both locally and internationally. However, this has become unattainable as a result of the poor academic performance seen in senior secondary school examinations; the quintessential example being the West African Senior School Certificate Examination (W.A.S.S.C.E.). Therefore, in line with this worrisome predicament, the study investigated the influence of space for convenience planning on the academic performance of students in Oyo State, Nigeria. The study adopted the descriptive survey research design of the ex-post facto type and made use of a sample of 1,440 selected through a multi-stage sampling procedure. The two validated instruments used for data collection were space for convenience planning scale (r=0.81) and student academic performance scale (r=0.70). Three hypotheses were tested at 0.05 level of significance. Data collected were analysed using Pearson Product Moment Correlation (PPMC) and Multiple Regression analysis. Two, out of the three independent variables, had significant relationship with the academic performance of students. These were toilet facility (r = 0.336; P < 0.05) and water facility (r = 0.262; P < 0.05). Also, the independent variables (i.e. the three spaces for convenience planning elements) accounted for 13.9% of the variance in the dependent variable and the joint effect of space for convenience planning is significant on the academic performance of students (F=78.597; df= (1,439); P<0.05). The study concluded that toilet and water facilities have been adjudged to have contributed immensely to the academic performance of students. Thus, based on the findings, some of the recommendations made include correction of errors made during planning of the existing schools and proper planning as well as implementation of plans through strategic positioning and provision of adequate toilet and water facilities for the intended schools.

Keywords: Influence, Space for convenience, Toilet facility, Water facility, Academic performance of Students.

Introduction

Any impartial individual who examines the Nigerian system of education critically would agree that it is faced with a lot of problems. These problems include corruption, inadequate funding, poor academic performance of students, inconsistent educational policies, insufficient

infrastructural facilities among others; the most worrisome and persistent being the poor academic performance of students. This is especially particular in secondary schools as evidenced by the performance of students at the examinations conducted by the West African Examination Council (W.A.E.C.) (Ojo and Olaniyan, 2011). The disturbing development of the Nigerian education sector, especially as regards the academic performance of students, has persisted for a long time despite efforts made by stakeholders to reverse it (Idakwoji, 2016). This is clearly demonstrated in table 1.

Table 1: Nigerian West African Senior School Certificate Examination Results: 2012-2016

S/N	Year Of Examination.	Number of Students Who Sat for the Examination.	Number of Students who Passed with 5 Credits or More, Including English &Mathematics.	% of Those who Passed with 5 Credits or More, Including English & Mathematics.
1.	2012	1,695,878	658,170	38.81
2.	2013	1,543,683	564,524	36.57
3.	2014	1,705,976	529,425	31.03
4.	2015	1,593,442	616,370	38.68
5.	2016	1,552,758	878,040	52.92

Source: WAEC, Oyo State 2016.

As shown in table 1, in the West African Senior School Certificate Examination (W.A.S.S.C.E.) conducted between the months of May and June in 2012, 38.81 per cent of the total number of candidates who sat for the examination had a minimum of five credit passes, including English and Mathematics respectively. Nonetheless, in 2013, it fell to 36.57 per cent, and in 2014, it further deteriorated as only 529,425 candidates out of the total 1,705,976 who sat for the examination (representing 31.03 per cent) had five credits, including English Language and Mathematics respectively. Contrary to previous performances, it slightly improved in 2015 as only 616,370 candidates, representing 38.68% out of 1,593,442 candidates who sat for the 2015 May/June W.A.S.S.C.E. obtained credits in five subjects and above, including Mathematics and English Language respectively. It further improved in the 2016 May/June W.A.S.S.C.E. as reported by the examination body that out of the 1,552,758 students who sat for the May/June

examinations, 878,040 candidates representing 52.92%, obtained credits in five (5) subjects and above, including English Language and Mathematics respectively.

Granting that the improved performance of students as evidenced by the result released by the West African Examination Council (W.A.E.C.) in the W.A.S.S.C.E. between the months of May and June in 2016 is highly commendable when compared with the previous years, nevertheless, it is on the average which continues to be a source of worry to the researcher. Deductively, the 47% students who failed the 2016 May/June W.A.S.S.C.E. are not eligible to seek and gain admission into higher institutions of learning in Nigeria. Consequently, the broad goal of secondary education which shall be to prepare every individual for higher education is yet to be achieved.

The most worrisome is the fact Oyo State which is supposed to set the pace for other states in the South-West Region is not found in the leading position. A breakdown of the released results of students who sat for the W.A.S.S.C.E. in 2016 revealed that Oyo State came 26th out of 36 states and Abuja, the Federal Capital Territory of Nigeria (F.C.T.). Furthermore, only 19% obtained credits in five (5) subjects and above, including English and Mathematics respectively. Lagos state ranked highest in the southwest (6th), followed by Ekiti (11th), Ondo (13th), Ogun (19th), Oyo State (26th) and Osun (29th) (WAEC, 2016).Besides the rate at which students fail, there have also been complaints that secondary schools are not meeting the expected requirements of producing qualitative students (Olorundare, 2011). Jaiyeoba (2011), in her own opinion, lamented that the stakeholders' aspiration and expectation from education industry dwindles daily, because of the disability of products from this industry. The end result is half-baked graduates who employers find unemployable (Onipede, 2003). This ugly situation actually tends towards threatening the future of the nation (Olaniyi, 2000). This, therefore, should be a source of concern to Nigerians- parents, researchers and educators (Ebong, 2015). Hence, the need for a significant improvement of the student academic performance.

Meanwhile, apart from the fact that significant efforts, including provision of funds for resources, materials and structures have been made by the government in order to improve the performance of the sector (Ministry of Education, 2013), several studies of students' academic

performance have been conducted on such issues like gender differences, teachers' education and teaching styles, class environments, socio-economic factors and family education background (Ogunsola, Osuolale and Ojo, 2013) in an attempt to proffer solution to the disheartening academic performance of students. Irrespective of these, a significant improvement is yet to be noticed (Idakwoji, 2016). Could it be that some important variables have not been duly considered in the efforts to solve the problem? This, therefore, induced the researcher to consider another variable, which is space for convenience planning.

Space for convenience planning is an integral part of school plant planning. Contextually, space for convenience planning is a process in which suitable locations/spaces within the school site are selected for construction of conveniences. Spaces for convenience consists of toilets, cafeteria, kitchen, dormitories, custodian sheds and stores (Odufowokan, 2011), water facilities, corridors.Space for convenience plays fundamental role in the teaching and learning process. The extent to which these spaces may enhance better teaching and learning depends on their location, structure and facilities within the school premises (Ajayi and Yusuf, 2010). While emphasizing the importance of space for convenience planning to students' academic performance, Jaiyeoba and Atanda (2011) stated that their availability and accessibility by students could also result in better performance and if otherwise, the opposite will be the case. As a result, spaces for conveniences in schools need to be properly planned as they play significant roles in the improvement of the teaching and learning process. However, it has been observed that spaces for convenience such as toilets, cafeteria, water, corridors and so on, in some of the schools, are not properly planned and adequately catered to. Where space for convenience is poorly planned, it is likely that the teaching and learning process may be affected negatively which in turn may affect the students' learning outcomes negatively (Ajayi and Yusuf, 2010). In this study, toilet facilities, water facilities and cafeteria in relation to academic performance of students were examined.

Toilet facilities among others are often considered a necessity that should be provided to meet the physical and emotional needs of students and staff, as well as to prevent incidence of infectious diseases in schools. Apart from its availability, the facilities should proportionately meet the demand of the population of both students and members of staff in such institutions

(Agbo, Envuladu, Adah and Zoakah, 2012). To achieve this, the World Health Organization (2010) states that schools should provide not just toilets but toilets which should be in the ratio of 1:30 learners, that is, at least a toilet should be provided for every 30 students so as to allow students easy access to toilet facilities whenever nature demands the removal of waste from the body. It also states that separate toilet be provided for the opposite sexes. In addition, toilet facilities should be constructed in convenient places near the classroom and administrative block areas (Jedo, 2007). However, none of the schools studied met these criteria. This may either be that, ab initio, it was not taken into consideration during the construction process or that these schools have suddenly been overwhelmed by the growing population of school attendees with no existing policy in place to cater for future expansion (Agbo, Envuladu, Adah and Zoakah, 2012). An insufficient toilet/student ratio contributed to overuse, filthy conditions and in extreme cases, open defecation around schools or absenteeism in order to use a home toilet (Pillitteri 2012). Similarly, Jaiyeoba and Atanda (2011) stated that unavailability or poor toilet facility repels students' regularity in school. If such happens, important topics missed may not be recovered, thereby leading to students' failure since the continuity of such subject's content has been tampered. Studies have revealed the relationship between toilet facilities and students' academic performance. For instance, Jaiyeoba and Atanda (2011) discovered that toilet facility has a relationship with students' academic achievement in mathematics and has contributed significantly. Similarly, Sirengo (2015), in his study, found that toilet has significant positive relationship with students' academic achievement.

Water facilities are necessary requirements for institutions, whether running day or boarding system (Jedo, 2007). According to Adu and Aremu (2012), providing adequate levels of water supply in schools is of direct relevance to the United Nation Millennium Development Goals of achieving universal primary education, promoting gender equality and reducing child mortality. In view of the importance accorded to water facilities in the school system, its provision in schools ought to be one of the requirements for granting approval for its commencement. However, this is not usually enforced by the government. Even in some schools with such facilities, the water is found to be contaminated and therefore, undrinkable. The students, therefore, go out of the school premises during the break period to get drinking water and return after the break period has passed (Afework and Asfaw, 2014). Topics missed when the students

were absent owing to unavailability of potable water supply may not be taught again by the teacher and thereby affect their academic performance negatively. In addition, the water drunk is untreated and could be adulterated, capable of causing water borne diseases such as cholera, diarrhoea which may become widespread. In fact, it is estimated that 88% of diarrrhoea disease is caused by unsafe water supply (UN, 2008). These could question the health situation of students as the infected one would not be in school and go to seek treatment at the hospital (Afework and Asfaw, 2014). This invariably means that, schools with potable water supply for consumption have students who are healthy and thereby have better chances of achieving high academic excellence. According to the United Nations Children Emergency Fund (U.N.IC.E.F.) (2006), water is linked to school attendance and academic performance.

The cafeteria is a place set aside for food vendors to sell food to students. Students who are famished would find it difficult to concentrate in class, especially those ones whose parents do not cook before leaving home. The school administrator should therefore, endeavour to provide a school cafeteria, built under strict sanitary condition as it is essential for students to take their meals in a serene and hygienic environment. In light of this, the cafeteria has to be attractively built and spacious enough to occupy all students conveniently and make for free movement into and out of the place (Jedo, 2007). However, experience has shown that most public secondary schools do not have cafeteria. The food vendors, in most cases, use the classroom corridors or stay under trees to sell their food. One, therefore, wonders if unavailability of cafeteria in most schools could be responsible for the poor academic performance of students.

From the discussion so far, the empirical studies have established that there are a number of spaces for convenience planning found within the school which could influence students' academic performance. It is on this premise that this study investigated the extent to which space for convenience planning influences students' academic performance in Oyo State, Nigeria.

Statement of the Problem

The poor performance of secondary school students has persisted for a long time despite efforts by stakeholders to reverse it. It is worrisome to note that secondary schools in Nigeria are not meeting the expected requirement of producing qualitative students who are eligible to seek and

gain admission into higher institutions of learning and are also employable upon graduation. This ugly situation actually tends towards threatening the future of the nation. One, therefore, wonders if poorly planned spaces for convenience are responsible for low academic performance of secondary school students. Thus, the study investigated the influence of space for convenience planning on academic performance of senior secondary school students in Oyo State, Nigeria.

Hypotheses

The following hypotheses were formulated to guide the study:

Ho1 There is no significant relationship between spaces for convenience planning (toilet facilities, water facilities and cafeteria) and students' academic performance in Oyo State, Nigeria.

Ho2 Spaces for convenience planning (toilet facilities, water facilities and cafeteria) have no significant joint effect on students' academic performance in Oyo State, Nigeria.

Ho3 Spaces for convenience planning (toilet facilities, water facilities and cafeteria) have no significant relative contribution to students' academic performance in Oyo State, Nigeria.

Methodology

The study adopted descriptive survey research design of the *ex-post facto* type. There was no manipulation done to the variables under study. The population of the study covered principals and teachers in all the public senior secondary schools in Oyo State. The total number of schools in Oyo state as at the time of data collection was 631. The sample for the study was selected through multi-stage sampling procedure. The first stage was selecting 16 out of the 33 Local Government Areas of Oyo State using simple random sampling technique. The total number of schools sampled in the selected Local Governments was 240. The Principals and Vice-principals of all the selected schools (720) participated in the study while 2 teachers (1 English Language teacher and 1 Mathematics teacher teaching SSS 3) were sampled in each of the 240 schools through purposive sampling technique. Therefore, a total of 1440 respondents consisting of 240 school principals, 480 vice-principals and 720 teachers formed the sample of the study. Two research instruments were used for data collection: Space for Convenience Planning Scale

(SCPS) and Student Academic Performance Scale (SAPS) completed by the teachers were face and content validated. The reliability coefficient for space for convenience planning scale (SCPS) was 0.83 and that for student academic performance scale (SAPS) was 0.79 indicating that the instrument was reliable for the study. The content validity was determined by experts in Educational Management and Test and Measurement who examined the instrument to determine whether or not they measured what they purported to measure. Their comments were made use of to improve the quality of the instrument in relation to the research hypotheses. The data collected were analyzed with multiple regression and hypotheses were considered at 0.05 level of significance.

Results and Discussion

Results

Ho1 There is no significant relationship between space for convenience planning (toilet facilities, water facilities and cafeteria) and students' academic performance in Oyo State, Nigeria.

Table 2: Pattern of Relationship between Space for convenience (Independent Variables) and Students' Academic performance in

Independent Variables	**Academic Performance**		**Remarks**
	R	**Sig**	
Toilet facilities	.336	.000	Significant
Water facilities	.262	.000	Significant
Cafeteria	-.027	.309	Not Significant

Table 2 shows pattern of relationship between space for convenience planning (toilet facilities, water facilities and cafeteria) and students' academic performance in Oyo State. Out of the three independent variables, two have significant positive relationship with students' academic performance. These are toilets ($r = .336$; $P < 0.05$) and water facilities ($r = .262$; $P < 0.05$).

The Results of Testing Research Ho2

The study established the relationship between space for convenienceplanning and joint effect on students' academic performance in secondary schools in. The responses were arranged into the effect of Independent variables onstudents' academic performance presents through ANOVA in Table 3.

Table 3: Composite Effect of Independent Variableson the dependent variable

R	R Square		Adjusted R Square	Std. Error of the Estimate	
.376	.141		.139	1.33401	
A N O V A					
Model	Sum of Squares	DF	Mean Square	F	Sig.	Remark
Regression	419.606	3	139.869	78.597	.000	Sig.
Residual	2555.476	1436	1.780			
Total	2975.083	1439				

From table 3 coefficient of determination (Adjusted R2) = 0.139 and this gives proportion of variance (Adjusted R2 x 100) = 13.9%. This implies that the independent variables accounted for 13.9% of the variance in the dependent variable. The joint effect of space for convenience planning is significant on the students' academic performance in Oyo State ($F=78.597$; df (1439); $P<0.05$).

The Results of Testing Research Ho3

The study established the relationship between space for convenienceplanning and relative contribution to students' academic performance in secondary schools in Oyo State. The responses were arranged into three items of Independent variables and presents in Table 4.

Table 4: Relative Contribution of Space for convenience planning on Students' Academic performance

Model	Unstandardized Coefficients		Standardized coefficients	T	Sig
	B	Std. Error	Beta		
(Constant)	7.800	.289		26.955	.000
Toilet facilities	.182	.017	.285	10.941	.000
Water facilities	.135	.021	.167	6.419	.000
Cafeteria	-.028	.013	-.052	-2.106	.053

Table 4 shows the relative contribution of independent variables on dependent variable. Out of the three variables, the two variables that contributed significantly to student's academic performance are toilet and water facilities (ß = 0.285, t = 10.941, P < 0.05) and (ß = 0.135, t = 6.419; P < 0.05) respectively.

Discussion

The study revealed that toilet facilities are related to students' academic performance. This shows the importance of toilet facilities in school system. The findings of Jaiyeoba and Atanda (2011) are in agreement with the findings of this study. They found in their study that toilet facilities contributed significantly to the praiseworthy academic performance of students in mathematics. Similarly, Sirengo (2015) found that toilet has significant positive relationship with students' academic achievement.

The study also confirms that water facility has strong relationship with students' academic performance. Therefore, the study is in line with the assertion of United Nations Children Emergency Fund (U.N.IC.E.F.) (2006) that water is linked to school attendance and academic performance.

The relationship between cafeteria and students' academic performance was not significant. This explains that cafeteria alone cannot enhance students' performance as other factors are

responsible.

Conclusion

It has been shown that toilet and water facilities are not only necessary for, but also stimulate excellent academic performance. This implies that where other school plants are well planned without proper planning and provision for adequate toilet and water facilities, excellent students' academic performance may not be guaranteed.

Recommendations

In view of the above, the following recommendations were made for the improvement of students' performance in secondary schools:

Efforts should be made to correct errors made in the planning of toilet and water facilities of existing schools by employing the service of architects who are knowledgeable in the school plant design for redesigning the toilets and water facilities. Also, during school plant design of the intending schools, toilet facilities should be strategically positioned in such a way that the distance from the classrooms is easily accessible, that is, it is not far from or too close to the classrooms, in order to prevent disruption of the teaching and learning process by possible odour which may emanate from the toilet. Separate toilets for the different sexes should also be incorporated in the plan because of the kind of privacy that these sexes require. Water facilities should also be positioned in such a way that the distance between it and the toilet is at least 50 metres so that the water does not get contaminated and is easily accessible to both students and staff.

A plan that is not implemented is but a mere paper work; thus, government should ensure that the plans made are properly implemented. This implies that government should not only ensure that schools are provided with toilet and water facilities but that they also follow the plans in adequately providing these facilities.Also, the school authorities should endeavour to sensitize parents and contact the alumni about the need for toilet and water facilities and solicit for their support. Potable water supply should be made available so as to prevent students from leaving the school premises during school hours.

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