SCHOOL PLANT MANAGEMENT AND STUDENTS' ACADEMIC PERFORMANCE IN AKURE SOUTH LOCAL GOVERNMENT AREA, ONDO STATE

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Abstract

School plant management is an integral part of the overall management of the school. This study examined the relationship between school plant management and students' academic performance in Akure South Local Government Area in Ondo State. A descriptive research design of survey type was adopted for the study. The sample consisted 13 principals and 324 teachers in 13 selected senior public secondary schools in Akure South Local Government Area, Ondo State. Simple random sampling technique was used to select the sample. Data collected were analyzed using Pearson Product Moment Correlation statistics. Six hypotheses formulated were tested at 0.05 level of significance. The study revealed that students' academic performance was significantly related to administrative plant management, school plant maintenance management and school plant depreciation management. It was also revealed that there was no significant relationship between instructional plant management and student academic performance. Going by the outcome of this study, it was therefore recommended that instructional plant management should be given urgent attention, by providing new ones as well as comprehensive repair and maintenance of existing ones.

Keywords: School plant, plant management, accessory plant, plant maintenance, plant depreciation

Introduction

The school plants consist of all types of buildings for academic and non-academic activities, equipment for academic and non-academic activities, areas for sports, games and recreation, landscape, farm and gardens including braces, roads and paths. Others include: furniture, toilet facilities, lighting, acoustics storage facilities and parking lots, security, transportation, Information and Communication Technology (ICT), food services and special facilities for the physically challenged persons. These facilities play pivotal role in the actualization of the educational goals and objectives by satisfying the physical and emotional needs of the students and staff of the school. The physical needs are met through provision of safe structure, adequate sanitary facilities, a balanced visual environment, appropriate, conducive environment, and sufficient shelter space for work and play. The emotional needs are met by creating pleasant surroundings, a friendly atmosphere for service delivery and architectural design, multiplicity of curricular programme and extra-curricular activities, introduction of academic support services such as guidance and counseling centers for students, teachers and the

community. The resultant effect of all these changes in needs necessitated for creative and innovative steps in the school plant management.

Secondary schools not only become a strategic place in the educational system in Nigeria, it is the link between the primary and tertiary levels of education, responsible to prepare young individuals for useful living within the society. Also to effect diversified curricular that cater for the difference in needs and talents and as well provide trained manpower through technical knowledge and vocational skills. According to Asikhia (2010), education at secondary school level is supposed to be the bedrock and the foundation towards higher knowledge in tertiary institutions. It is an investment as well as an instrument that can be used to achieve a more rapid economic, social, political, technological, scientific and cultural development in a country. There have been public outcries over the persistent poor performance of secondary school students in public examinations. According to Nwokocha and Amadike (2005), academic performance of student is the yardstick for testing educational quality of a nation and it is expedient to maintain a high performance in internal and more importantly external examinations.

Few years back, reports on the pages of newspapers and research findings have shown the abysmal performance of students of secondary schools in public examinations. Ajayi (2002); Nwokocha and Amadike (2005); West African Examination Council (2007); Adeyemi (2008); Asikhia (2010) have all shown the extent of poor performance of students in public examinations. The persistent decline in students' performance in public examination is not only frustrating to the students and the parents, its effects are equally grievous on the society. There have been a number of factors that contributed to the downward trend in academic performance of students among which are: principal's leadership style, teachers' quality, home and family background, government, non-provision of educational resources and poor school plant management which will be the focus in this study.

In Nigeria at large and in Ondo State in particular, secondary schools are expected to function in consonance with the philosophy of education and the achievement of the national education objectives. School plant ought to be adequately managed for this to be achieved. It is a general opinion that private secondary schools are better in terms of the availability of human and physical facilities and with greater impacts on students' performance than public schools. This situation has made many parents to enroll their children in private schools. The rate of poor academic performance of students in Nigeria had resulted to economic and social wastage and this has become a great concern to all stakeholders in education sector.

Ekundayo (2012) stressed that the importance of school plant and physical facilities cannot be relegated. It is a life wire that cannot be tampered with in the school system. Facilities like modern laboratories, libraries and classrooms are to be put in place in all schools because there are general assumptions that there is a kind of relationship between school plant management and student academic performance.

By way of personal observations and experiences, it has been observed that there has been a long neglect of school plant provision, maintenance and management in our

schools over the years. The off shoot and influx of admitted students have brought about the over utilization and over stretched of the few available facilities. These led to overcrowded classrooms to the extent that some students have to stay outside the classroom or on the ground. In some extreme cases, students hold classes under trees. Laboratory facilities in most schools are nothing to write home about. Dilapidated structures and classrooms with blown-off roof is a common sight scene. Choky school environment without space for recreation and exercise is a common phenomenon. Classrooms, libraries, staff rooms are often very hot owing to the fact that the asbestos for ceilings were not made. All these make learning practically unconducive. Also, shortage of basic materials, poor writing board, science instruments, technological equipment, geographical facilities, vehicles and appliances makes learning uninteresting. All these put together and many more created a need for thoughtful concern and have necessitated the carrying out of this study with the hope of fostering adequate solutions to the problem at hand.

Purpose of the Study

The cardinal thrust of the study is to investigate the relationship between school plant management and students' academic performance in Akure South Local Government in Ondo State. Specifically the study will see to:

(i) Investigate the impact school plant management variables such as instructional, and administrative plants on students' academic performance in Akure South Local Government.

(ii) Examine the effect of school plant maintenance on student academic performance in Akure South Local Government.

(iii) Investigate the impact of school plant depreciation management on student academic performance in Akure South Local Government.

Research Questions

The following questions were raised by the researcher to guide this study:

(1) What is the contribution of school plant management variables on students' academic performance?

(2) What is the contribution of school plant maintenance on students' academic performance?

(3) What is the impact of school plant depreciation management on students' academic performance?

(4) Which of the school plant management variables has the highest contribution on students' academic performance?

(5) Which of the school plant management variables has the least contribution to students' academic performance?

Research Hypotheses

The following null hypotheses were formulated to guide this study:

H_{01}: There is no significant relationship between instructional plant management and students' academic performance in Akure South LGA,Ondo State.

H_{02}: There is no significant relationship between administrative plant management and students' academic performance in Akure South LGA,Ondo State.

H_{03}: There is no significant relationship between accessory plant management and students' academic performance in Akure South LGA,Ondo State.

H_{04}: There is no significant relationship between school plant maintenance management and students' academic performance in Akure South LGA,Ondo State.

Research Methodology

The research design adopted for this study was a descriptive survey type. In essence, descriptive survey research is aimed at fact finding regarding current situation with respect to certain educational problems. The population of this study consists of 1,127 teachers and principals of public senior secondary schools in Akure South Local Government, Ondo State. There are 25 public schools in Akure South Local Government Area out of which 13 schools were randomly selected through lottery method. The total population of teachers and principals in the selected sample schools was 725. 45.5% of teachers in the sampled schools were selected randomly to make a total of 324 teachers, while principals of each of the 13 schools was included in the sample to make a total of 337 respondents in all. Principals were selected to provide information on the students' academic performance in West African Senior Secondary Certificate Examination (WASSCE) for the last three (3) consecutive years in the school between 2010 and 2012.

A structured questionnaire titled "School Plant Management Questionnaire (SPMQ)". Also, the proforma titled "Student Academic Performance Proforma (SAPP)" was used to elicit information from the principals to gather data on students' results in WAEC (May/June) from 2010 to 2012 academic years. In order to test the reliability of the instrument, Cronbach alpha reliability test was used and the co-efficient value of 0.79 was obtained.

Linear regression was used to analyze the research questions while Pearson product moment correlation statistics was used to test the hypotheses generated at 0.05 level of significant

Presentation of Results

Table 1: Multiple regression analysis between four school plants management variables and student academic performance.

Coefficients[a]

Model	Unstandardized coefficients		Standardized coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	8.498	4.342		1.957	.051
Instructional Plant Management	-.099	.074	-.103	-1.343	.180
Administrative Plant Management	.103	.084	.106	1.219	.224
Accessory Plant Availability	.103	.071	.112	1.459	.145
Maintenance	-.020	.083	-.020	-.235	.815

(Researcher's field work, 2014).

From Table 1, it can be seen that instructional plant management has 0.099 as its coefficient value, while administrative plant management has 0.103. and accessibility, accessory plant availability, maintenance and school plant repair and replacement, and depreciation management have 0.044, 0.103, 0.020, 0.047, as their regression coefficients respectively.

It observe that both administrative plant management and accessory plant availability contributed most to students' academic performance, followed by institutional plant management and accessibility respectively; while maintenance plant repair and replacement has the least contribution to students' academic performance according to this study during the period under investigation in selected schools in Akure South Local Government Area in, Ondo State.

Hypotheses Testing

H_{01}: There is no significant relationship between instructional plant management and students' academic relationship in Akure South Local Government Area in Ondo State.

Table 2: Correlation analysis between instructional plant management and students' academic performance

Variable	N	ẍ	S.D	D.f	Calculated r-value	P-value	Decision
Student's Academic Performance	337	19.54	16.49				
				335	0.158	0.290	H_O Accepted
Instructional Plant Management	337	62.33	11.70				

*P<0.05

Table 2 shows that p-value (0.290) is greater than alpha level of significance (0.05) with the degree of freedom 335. Since the p- value (0.290) is greater than the 0.05 level of significance, the null hypothesis is accepted and it is therefore concluded that there is no significant relationship between instructional plant management and students' academic performance in Akure South Local Government, Ondo State.

H_{02}: There is no significant relationship between administrative plant management and students' academic performance.

Table 3: Correlation analysis between administrative plant management and students' academic performance

Variables	N	ẍ	S.D	D.f	Calculated r-value	P-value	Decision
Student Academic Performance	337	19.54	16.49				
				335	0.140	0.010	H_0 Rejected
Administrative Plant Management	337	61.94	17.07				

*P<0.05

Table 3 shows that p-value (0.010) is less than the alpha level of significance (0.05)with the degree of freedom 335. Since the p-value (0. 010) is lesser than the 0.05 level of significance, the null hypothesis is rejected and it is therefore concluded that there is significant relationship between administrative plant management and students' academic performance in Akure South Local Government Area in Ondo State.

H_{03}: There is no significant relationship between accessory plant management and students' academic performance

Table 4: Correlation analysis between accessory plant management and student academic performance

Variable	N	ẍ	S.D	D.f	Calculated r-value	P-value	Decision
Student Academic Performance	337	19.54	16.49	335	0.160	0.003	H_0 Rejected
Accessory Plant Management	337	62.83	17.89				

*P<0.05

Table 6 shows that p-value (0.003) is less than the alpha level of significance (0.05) with the degree of freedom 335. Since the p-value (0.003) is lesser than the 0.05 level of significance, the null hypothesis H_{04} is rejected and it is therefore concluded that there is significant relationship between accessory plant management and students' academic performance in Akure South Local Government Area in Ondo State.

H_{04}: There is no significant relationship between school plant maintenance management and students' academic performance.

Table 5: Correlation analysis between school plant maintenance management and students' academic performance.

Variable	N	ẍ	S.D	D.f	Calculated r-value	P-value	Decision
Student Academic Performance	337	19.54	16.49	335	0.112	0.039	H_0 Rejected
School Plant Maintenance	337	57.85	16.56				

*P<0.05

Table 5 shows that p-value (0.039) is less than the alpha level of significance (0.05) with the degree of freedom 335. Since the p-value (0.039) is lesser than the 0.05 level of significance, the null hypothesis is rejected and it is therefore concluded that there is significant relationship between school plant maintenance management and students' academic performance

Discussion of Findings

Hypothesis1 was accepted which implies a no significant relationship between instructional plant management and academic performance this may not be unconnected

with the dilapidated and deplorable condition of the instructional facilities in almost all the schools visited in the course of carrying out this research. Instruction plant management is directly linked with teaching and learning process in the school system. And any problem arising from this variable will spell doom for the academic success of the student as revealed by the outcome of this research as against the submission of Isaac and Musibau (2009) and also contradicts that of Bullock, Festus, Elizabeth, Kennedy in Isaac and Musibau (2010) where they opined instructional plant management as a veritable tool for students' academic performance.

It could be expected that better instructional plant management would enhance better learning and teaching process which will in turn lead to improved students' academic performance, but this study has proved otherwise. This implies that availability better instructional plant may not necessarily lead to better academic performance owing to the other factors responsible for students' success in school, such as effective delivery of instructional content by the teachers, teachers' competence and motivation, students' readiness to learn.

Hypothesis 2 was rejected and affirms the importance of administrative plant management in students' learning outcomes. This implies that a better administrative plant management would lead to better students' academic performance. Since a school cannot exist without adjunct staff such as bursar, typists, account, clerks, gateman, kitchen and the likes. And good office apartment for the teachers is necessary for instructional planning. Furthermore, guidance counselor's office and health clinics are important to students to receive counseling for academic and career decisions and get medical attentions when needed. This is supported by Odufowokan (2011) and Stevenson in Isaac and Musibau (2010) while it contradicts that of School Facilities Board in Isaac and Musibau (2010).

Hypothesis 3 was rejected which implies that, there is a significant relationship between accessory plant management and student academic performance. It means that a well developed accessories plant will enhance better students' learning outcome and overall development.

This finding agreed with the work of Isaac and Musibau (2010) on students' interest in games, athletics and sports which usually motivate students to always come to school, by so doing attending classes regularly, which in turn will lead to their better academic performance. It corroborates findings of Ekundayo and Alonge (2012) which affirms that, the affective and psychomotor domains of learning are greatly helped through accessory plant management and this has a positive response on the cognitive domain which ultimately leads to better student academic performance.

Hypothesis 4 was also rejected which implies a significant relationship between plant maintenance management and academic performance of students. This result suggests that adequate and prompt repair of cracks on broken walls, broken ceiling roof, bad electric fixtures in schools is very needful for better student academic outcome. This study also reiterated that when damage louvers, door, window, office equipment-that is computer and photocopy machine are put in good working condition, they promote good

working atmosphere for the teachers which in turn helps for better performance of the students. Regular repair and replacement of workshop tool and implement, laboratory apparatus and other farm tool and implement, which are instructional materials, make learning practical, fascinating, interesting and enhance remembrance, all these contributed to better academic performance as supported by this study and corroborated by Ebenezer in Ifeoma (2012) but opposed by Fabunmi in Ifeoma (2012).

Conclusion

The study established the extent to which school plant management has contributed to students' academic performance in Akure Local Government Area in Ondo State.

It was concluded from the study that instructional plant management have no significant influence on students' academic performance partly due to great decay in school instruction plant facilities which have been neglected over a long period of time.

It was also concluded that there is gross inadequate, supply of school facilities leading to poor standard classrooms; ill-equip and non-functioning library, laboratory and technical workshop; overstretching and congestion of the few available ones.

The study also concluded that regular maintenance of school plant facilities have a big role to play in effective teaching and learning activities of schools in Akure South Local Government Area of Ondo State.

Finally, the study concluded that supply and maintenance of school accessory plants will go a long way in enhance students' regular school attendance which will in turn promote class attendance of lessons and consequently aid achievement of positive learning outcomes.

Recommendations

From the study, the following recommendations were made:

1. A holistic overhaul of the school plants in the local government by preparing a blue print of the level of dilapidation of the available classroom, library, laboratory, workshop, offices and school equipment and estimation of the amount that would be needed to cater for them. This should be carried out by the State Ministry of Works under a joint collaboration with the State Ministry of Education.
2. The state government should increase the vote for infrastructure facilities in those schools.
3. Regular preventive maintenance should be carried out on the school building in every two year by the State Ministry of Works.
4. Regular inventory of books in the library, tools in the workshop and apparatus in the laboratory should be carried out and the exercise should be appraised by the school principal.

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