



Journal Homepage: -www.journalijar.com
**INTERNATIONAL JOURNAL OF
 ADVANCED RESEARCH (IJAR)**

Article DOI:10.21474/IJAR01/7328
 DOI URL: <http://dx.doi.org/10.21474/IJAR01/7328>



RESEARCH ARTICLE

PRINCIPALS' SCHOOL PLANT PLANNING AND UTILIZATION PRACTICES FOR IMPROVED STUDENTS' ACADEMIC PERFORMANCE IN OYI LOCAL GOVERNMENT AREA, NIGERIA.

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Manuscript Info

Manuscript History

Received: 02 May 2018
 Final Accepted: 04 June 2018
 Published: July 2018

Abstract

This study was designed to determine principals' school plant planning and utilization practices for improved students' academic performance in Oyi Local Government Area of Anambra State in Nigeria. The descriptive survey research design was adopted with two research questions and two hypotheses formulated to guide the study. The population for this study was all the 228 secondary school teachers in the area of study. The entire population was used because of its manageable size. The instrument for data collection was a structured questionnaire which was validated by two experts in Educational Management and an expert in Measurement and Evaluation, all from the Faculty of Education, Nnamdi Azikiwe University, Awka. The reliability of the instrument was ascertained using the test-retest method which yielded a reliability coefficient of 0.8. Data collected were analyzed using mean and t-test statistics. The findings of the study, among others, showed that principals of schools have adequate space to accommodate both staff and students, but they are constrained by lack of funds to provide equipment for improved students' academic performance. Though principals adopt practices such as ensuring that spaces and facilities are used for their intended purposes and making teachers aware of newly provided facilities and forming committees to ensure that school plants are properly used, they do not organize training and workshops for the use of new plants. Based on the findings it was recommended that government should make more funds available to school principals to procure the needed school plants, organize training for teachers to make effective use of available school plants and form committees comprising relevant stakeholders in order to ensure proper utilization of school plants.

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Introduction: -

Education prepares citizens for useful living in the society by maximizing their creative potentials. The educational system can only do this if adequate school plants are provided and utilized for effective teaching by teachers, which in turn produces improved learning by the students. Yusuf, Ajayi and Sofoluwe (2005) agreed that the place of school plant planning in the development of effective educational programmes of the school system cannot be over-emphasized. Education is a capital-intensive enterprise of which successful operation significantly depends on the

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available funds, the quality of human and material resources and how effectively and efficiently these are managed by the school principal.

Management of school plant is the sum of all the activities and practices undertaken in schools, under the leadership of the principal, to provide and keep school facilities ready for use. Good leadership, monitoring of both the plants and their users, applying sound maintenance culture and other things are needed for school plant to give maximum services. Ukeje, Akabogu and Ndu (1992) and Uko (2015) established the following aspects of school plant management: school plant planning/provision, school plant utilization, school plant operation, school plant maintenance, school plant improvement and school plant audit. This paper focuses on school plant planning/provision and school plant utilization.

School plant planning is the aspect of school facilities management that ensure that the schools, as the basic learning units, have adequate teaching aids, equipment, building/learning space and other things required for effective teaching and learning to take place. Planning for school plant involves school site planning, instructional planning, circulation space, building construction and procurement of materials among others. Effective school plant planning should start with plant audit which gives information on existing school plants, their functional states and the students' needs based on the schools' programmes and students' population. Principals, being the administrators on the ground, must be part of this planning process before the provision of the plants. In public schools, facilities provision is done centrally by the government with the other stakeholders such as the PTA (Parents Teachers Associations), communities and NGOs contributing substantially. There is usually apparent lack of equity in school plant provision in schools (Amanchukwu & Ololube, 2015). School principals are merely involved in plant planning to the extent that they indicate their school requirements to the Education Boards and government. Adequate budgetary allocations are not made for them to provide equipment or buildings and many technical and vocational subjects are not properly taught at junior secondary schools due to dearth in facilities. Also, electricity supply to power the equipment is in epileptic and short supply. According to Uko (2015), a situation where some schools have more plants than others is an indication of poor planning. There is need for adequate school plant planning by principals and government to ensure that schools have facilities for skill training.

Achievement of improved academic performance by the students depends on the degree to which schools make effective use of the available resources. Adopting effective school plant utilization practices by principals will help the realization of the desired educational objectives. Some of these practices are: ensuring that plants are used to their full capacities while avoiding under-utilization or over-utilization, that equipment and spaces are used only for the purposes which they were provided, supervision of plants and their users, informing staff of newly supplied facilities and giving staff training on how to use equipment, among others.

School plant utilization is riddled with problems in Nigeria and in Anambra State. Schools are unable to use school plants due to a lack of technicians and specialist teachers who can operate and use new equipment. Moja (2000) reported that over 50% of schools in Oyo State were unable to install equipment provided by the government in 1987 due to lack of expertise and lack of basic facilities such as space and electricity.

Principals play a great role as far as school plant management is concerned. A principal is first and foremost a professional teacher. Nigeria's Teacher's Manual (2006) describes a principal as the administrative and academic head of a school. Akubue (2008) further contended that a principal is a head teacher, school maker, adviser, public relations man, innovator, policy maker, projectionist and a philosopher. A principal is also a plants manager. The extent he is able to manage the school plant will go a long way in determining students' academic performance.

Students' academic performance can be appraised from different perspectives due to the fundamental connection between school plant and students' academic performance. The National Policy on Education (2013) stated that educational services facilitate the implementation of educational policy, the attainment of policy goals and the promotion of effectiveness of educational system. The ability to perform well in internal and to a greater extent, external examinations is a determinant of the extent the goals of secondary education are being realized. A situation where a student obtains five or more distinctions or credit passes, including in English Language and Mathematics at one sitting is considered an excellent academic performance. When a school produces such candidates in high numbers, such school stands out among other lesser performing schools. Observers continue to point out the need for improved academic performance of students, most of whom need two or more sittings before securing the required result for University admissions. Certain variables promote better academic performance by students and

vice-versa. Obviously, effective management of school plant by principals will go a long way to improving students' academic performance in secondary schools.

Statement of the Problem:-

School plant provision in our schools leaves much to be desired. Though principals continue to press their demand for facilities to the government through the Education Boards, they are highly constrained because provision of school plants is centrally done by the government. There also seems to be no equity in the distribution of school plant and this calls for more involvement of the principals who are the administrators on the ground that ensure that schools have the facilities that they need for improved academic performance.

From 2011 the Anambra State Government started to aggressively pursue a policy of renovating the badly dilapidated school buildings and to equip schools through its ANIDS (Anambra Integrated Development Strategy) and UBE (Universal Basic Education) programmes. School buses, textbooks, computers, laboratory materials, sports equipment, electric generators, etc. have been given to secondary schools all over the State. New buildings (classrooms and laboratories) were erected while old, dilapidated ones were renovated.

But it appears that some of these facilities are being poorly managed. Facilities are not adequately and equitably supplied to schools. Even though school principals know that better students' academic performance is hinged on effective management of school plant, the question remains what management practices do they put in place to ensure that school plants are provided and in the state of readiness for use by staff and students? The problem of this study is to establish principals' school plant planning and utilization practices for improved academic performance of students in Oyi Local Government Area of Anambra State.

Purpose of the Study:-

Generally, the purpose of the study is to investigate principals' school plant management practices for improved academic performance of students in Oyi Local Government Area. Specifically, the objectives of the study are to establish:

1. Principals' school plant planning practices for improving students' academic performance in Oyi Local Government Area.
2. Principals' school plant utilization practices for improving students' academic performance in Oyi Local Government Area.

Research Questions:-

The following research questions guided the study:

1. What are the principals' school plant planning practices for improved students' academic performance in Oyi Local Government Area?
2. What are the principals' school plant utilization practices for improved students' academic performance in Oyi Local Government Area?

Hypothesis:-

1. There is no significant difference in the mean responses of male and female teachers on principals' school plant planning practices for improving students' academic performance.
2. There is no significant difference between the mean responses of male and female teachers on principals' school plant utilization practices for improving students' academic performance.

Method:-

This study adopted the descriptive survey research design which, according to Alli (2007), examines peoples' opinions, motivations, interests and perceptions on a subject through the use of questionnaire and/or interview. The survey design was considered appropriate for this because this study will collect teachers' opinions on the plant management practices in Oyi Local Government Area.

The population for this study consisted of the 239 secondary school teachers in Oyi Local Government Area. The entire population was used for the study. This was informed by the fairly small and manageable number of the population for the study.

The instrument used for data collection was a structured questionnaire which had three sections. Section A contained 2 items designed to elicit personal information about the respondents' sex and school. The other sections contained 7 items each and organized so that respondents expressed their opinions on the questionnaire items based on a four-point rating scale of: Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) and were weighted 4, 3, 2 and 1 respectively. The instrument was subjected to face and content validation by two experts in Educational Management and Policy Department and one Measurement and Evaluation expert from the Department of Educational Foundations, Nnamdi Azikiwe University, Awka. The experts, amongst other corrections, reduced the initial number of items from 20 to 14, corrected grammatical errors and re-phrased some of the statements. Their corrections helped to ensure the validity of the instrument.

The reliability of the instrument for data collection was pre-tested using test-retest method. It was given to 50 select teachers in secondary schools within Idemili North Local Government Area of Anambra State. After seven days, the instrument was re-administered to the same teachers. The scores collected from each of the tests were correlated using Pearson Product Moment Correlation. A coefficient score of 0.81 was obtained, thus, the instrument was deemed reliable for the study.

A total of 239 copies of questionnaire were administered to the respondents with the help of contract teachers in the sampled schools, while 228 were retrieved representing a 95.4% return rate. These were 90 male and 138 female teachers. The data generated from the respondents were analysed using weighted mean for answering the research questions. A mean score of 2.50 and above indicated agreement to the item while those below were judged non-acceptance. The t-test statistic was used to test the hypotheses at 0.05 significance level.

Results:-

Research Question 1:-

What are the Principals' School Plant Planning Practices for Improved Academic Performance of students?

Table 1:- Mean ratings of principals and teachers on principals' plant planning practices.

S/N	Description of Items	F	Total Score	□	Remarks	F	Total Score	□	Remarks
1	My principal is constrained by lack of funds to plan and provide needed school plants.	11	38	3.5	Agree	228	796	3.5	Agree
2	My school has adequate space for both teachers and students.	11	36	3.3	Agree	228	748	3.3	Agree
3	My principal draws the attention of teachers and non-tutorial staff to the need to protect available school plant.	11	37	3.4	Agree	228	796	3.5	Agree
4	Buildings in my school are not designed according to specifications for effective teaching and learning.	11	36	3.3	Agree	228	756	3.3	Agree
5	My principal is not allocated enough funds to procure the needed school plant.	11	36	3.3	Agree	228	804	3.5	Agree
6	My principal initiates fund raising events for school plant without waiting on the government.	11	17	1.5	Disagree	228	356	1.6	Disagree
7	My principal makes requests for school plant in school budgets but government procures equipment.	11	38	3.5	Agree	228	748	3.3	Agree
	Cluster Mean			3.1				3.1	Agree

Table 1 above shows that respondents agreed to items 1, 2, 3, 4, 5 and 7, with mean scores that were above 2.50. Conversely, they disagreed to item 6 on fund-raising (1.6), recording a mean rating below the cut-off point of 2.50 and above.

Research Question 2:-What are the Principals' School Plant Utilization Practices for Improved Academic Performance of students?

Table 2:-Mean ratings of principals and teachers on principals' plant utilization practices.

S/N	Description of Items	F	Total Score	□	Remarks	F	Total Score	□	Remarks
8	My principal ensures that space/rooms are used for their intended purposes.	11	37	3.4	Agree	228	776	3.4	Agree
9	My principal ensures that teachers sign to use equipment and sign to return them.	11	39	3.5	Agree	228	756	3.3	Agree
10	My principal makes teachers aware of school facilities that are available for effective teaching and learning.	11	35	3.2	Agree	228	766	3.4	Agree
11	My principal organizes training for the use of newly purchased learning equipment.	11	16	1.5	Disagree	228	356	1.6	Disagree
12	My principal sets up committees that ensure that school plants are properly used.	11	32	2.9	Agree	228	776	3.4	Agree
13	An accurate and up-to-date record of all school plant is maintained in my school.	11	39	3.5	Agree	228	784	3.4	Agree
14	My principal ensures that any school plant destroyed by teachers or students is promptly replaced by culprits.	11	20	1.8	Disagree	228	266	1.2	Disagree
	Cluster Mean			2.8				2.8	Agree

Data in Table 2 show that respondents agreed to items 8, 9, 10, 12 and 13, while they disagreed that principals practice items 11 and 14.

Ho₁:-

There is no significant difference between the mean ratings of male and female teachers on principals' school plant planning practices for improved students' academic performance.

Table 3:-t-test of difference in the responses of male and female teachers on principals' school plant planning practices for improved students' academic performance.

Group of Teachers	No. Of Respondents	Mean □	Standard Deviation	Degree of Freedom	Level of Significance	T-Calculated	T-Critical
Male Teachers	90	3.14	0.92				
				3.34	0.05	0.61	1.96
Female Teachers	138	3.25	0.79				

From Table 3, there is no significant difference between the responses of male and female teachers on principals' school plant planning practices for improved students' academic performance in secondary schools.

H₀₂:-

There is no significant difference between the responses of male and female teachers on principals' school plant utilization practices for improved students' academic performance.

Table 4:-t-test of significant difference in the responses of male and female teachers on principals' school plant utilization practices for improved students' academic performance.

Group of Teachers	No. Of Respondents	Mean \bar{x}	Standard Deviation	Degree of Freedom	Level of Significance	T-Calculated	T-Critical
Male Teachers	90	3.5	0.65				
				3.34	0.05	1.83	1.96
Female Teachers	138	3.16	0.95				

From Table 4, there is no significant difference between the responses of male and female teachers on Principals' School Plant Utilization Practices for improved students' academic performance in secondary schools.

Discussion of Findings:-

The findings of this study indicated that principals make use of many of the items of school plant planning practices listed in the instrument. Secondary schools in the study area have adequate space provision for both staff and students but unfortunately some of the buildings in the schools are not properly designed for effective teaching and learning. The Government does not make adequate funding provisions for principals to procure the equipment for their schools. The principals make requests, but school plants are often provided centrally by the government. This result agrees with Aloga (2014) and Ezeocha (2015) which reported that the state of school plant in Nigeria is unsatisfactory and that facilities such as libraries, workshops, laboratories and other necessary school facilities are inadequate. In public schools, provision of facilities is centrally done by the government. Principals know their school plant requirements and they make requests to the Education Boards but are not allocated funds to directly do the procurement of school plants. They may be equally constrained to organize fund raising without government approval. Bolaji (2002) revealed that administrators who are starved of funds would have problems meeting staff requirements for improved academic achievement. Corroborating this, Amanchukwu and Ololube (2015) observed that the school authorities should be more concerned about what the students' needs are at their particular developmental stages and instructional levels. School buildings should be constructed according to specifications to accommodate students in their various classrooms and adequate facilities and equipment provided for their effective learning (Udosen, 2015). Though schools in Oyi Local Government Area have adequate classroom space, there is need for them to conform to standards that will engender positive correlation with the students' academic performance.

On school plant utilization practices for improved students' academic performance in secondary schools, this study found that principals in the study area form committees to enforce good use of school plants, ensure that staff sign to use facilities, inform staff of available plants and keep accurate record of existing facilities. These are positive utilization practices which are in consonance with Udosen (2015). They however disagreed that principals do organize workshops and trainings or make culprits replace damaged school plants. This situation can lead to depletion in school facilities and this can ultimately give rise to lower students' academic performance. These findings agree with the observations of Olanrewaju (2013) that standards of education have fallen due to certain factors like general increase in student enrolment, inadequate supply of qualified teachers, absence of job satisfaction on the part of teachers and overall poor funding of education. In addition, Ayeni and Adelabu (2011) asserted that poor condition of school buildings, crowded classrooms, non-availability of instructional and recreational facilities contributed to poor quality teaching-learning process and the non-attainment of quality education by students in secondary schools.

The finding that principals lack the capacity to organize trainings and workshops for the use of school plants underscores Moja (2000) which reports that many years after equipment were supplied to some schools in the western part of Nigeria, they had not installed them for use in teaching and learning. School plant effectiveness derives from putting management measures in place that will enable both staff and students to put materials to good use.

The analysis of hypotheses showed that there was no significant difference in the responses of male and female teachers on principals' school plant planning practices for improved students' academic performance in secondary schools. There was also no significant difference in the responses of male and female teachers on principals' school plant utilization practices for improved students' academic performance in secondary schools in Oyi Local Government Area. According to Udosen (2015), school plant is the pillar and support of all teaching and learning activities and central to achieving positive outcomes in the teaching-learning process. It is, therefore, not surprising that no significant difference exists in the response of female and male teachers.

Conclusion:-

From the findings of this study, the conclusion is that principals in Oyi Local Government Area have positive school plant practices which include forming committees, ensuring good use of school plants, making staff aware of available plants, making staff sign to use equipments and facilities, and others. They are, however, highly constrained by lack of funds to plan and procure necessary school plant for their schools or organize training for proper utilization of existing and newly acquired school plants.

Recommendations:-

Based on the conclusion and implications of the findings, the following recommendations are made:

1. There is need for regular workshops for principals on vital aspects of school plant planning practices to make them proficient enough in handling aspects of school plant management.
2. Both staff and students need to be thoroughly sensitized through seminars on the best approach to utilization of available school plant so as to help the principals excel in school plant utilization practices.
3. There is need for better funding of education to enable principals provide facilities needed in their schools.

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