

Qualitative Education and Public School Facilities: The Roles and Challenges of Public School Administrators

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The purpose of this study is to investigate on the roles of principals in the management of physical facilities for qualitative education in secondary schools in Enugu state. Descriptive survey design was employed in the study. Data was collected through thirty (30) - item questionnaire titled: Management of Physical Environment for qualitative Education in Enugu state, Nigeria; Principal's Roles and Challenges (MPEQEPRC). Findings of the study revealed the following: dilapidated infrastructure and lack of maintenance is a hindrance to qualitative education in secondary schools. It is recommended that school principals should supervise all the physical facilities and ensure that they are properly maintained in order to enhance qualitative education.

Keywords: *Management, Physical Environment, Qualitative education.*

Introduction

Education is the foundation upon which all aspects of national development rest. Any society seeking to improve upon the people of the nation must gear towards qualitative education. Maduewesi (2005) sees quality in education as multi – faceted and encompassing on how learning is organized and managed. Educational management is the co-ordination of physical and human resources which can be achieved using the administrative processes like planning, decision making, organizing, implementing, supervising and evaluating. Yusuf (2009) stated that the purpose of educational management is to bring teachers and students under conditions to successfully promote the outcome of the education. One of the factors that impact the level of qualitative education is the physical infrastructure in the school environment.

Nations seeking to gain competitive advantage over their peers pay special attention to the quality of their educational system. According to Afemikhe (2007) the quality of education is important as products are expected to service the economy. The quality of a nation's graduates impacts the type and the level of acceleration of its national development. The cherished good and quality education cannot be achieved in an environment that is not conducive. Therefore there is a need for the principals/school administrators to manage the physical infrastructure of their institutions effectively.

Physical infrastructure in secondary schools include: moveable and immoveable equipments, the physical building, teaching aids and other facilities provided like electricity, pipe borne water and the playing field and lawn gardens. It is the responsibility of the principal/school administrator to harness, utilize and maintain the physical infrastructure in order to provide quality education for their students (Chidobi 2008).

Adeboyeje (2000) and Emetarom (2004) asserted that school facilities are the physical and spatial resources which enable teaching and learning to increase and the production of good results. School physical resources can be grouped into three components:

1. Infrastructural facilities or school plant: such as building classroom, library, laboratories, workshop, toilet, buildings and water, electricity.
2. Equipments, machinery and furniture.
3. Instructional materials such as audio and visual aids, graphics, printed, and display materials and books.

All the above physical facilities found in the school physical environment, are geared towards achieving quality education. It is very crucial to the quality of education. Castald (2000) asserts in Nkoyo and Highise (2015) that the physical environment determines how and what learners learn. Akande (1985) opined that learning occurs through ones interaction with ones environment. For example school library serves as an instructional resource which positively influences student's achievement in learning. Ola (1990) reiterated that secondary school library in whatever form, has beefed up the traditional method of 'chalk and talk' in impacting knowledge to students and its effect on academic performance needed not be overemphasized. He added that well-equipped library is a major facility that enhances high quality education.

Management of School Facilities

The management and maintenance of school facilities has to do with repairs and upkeep of school equipment. This helps the equipment to render efficient services and create enabling physical learning environment. The management makes the facilities in the school physical environment to retain the state of its originality. Hirium (1999) asserted that the quality and durability of a building largely depends on the type and level of servicing, repair and the rate at which the equipment is changed when needed.

The management of school record is the duty of school principal who is at the helm of affairs at the secondary school level of education. It is the duty of the principal to ensure adequate maintenance of the facilities in the school physical environment. He should design regular maintenance to keep facilities operating at their maximal level. The principal should organize orientation for all the human resources to develop maintenance culture for the school facilities, inculcate in them the respect for school property and development of neat habit. The encouragement of teachers to participate in infrastructural maintenance and evaluation of the available facilities are the duties of the principal. Sanoff (2001) noted that facility assessment can include tasks like determining the arrangement of classroom, furniture, study of mechanical, electrical and plumbing system and check their status. The principal should maintain regular supervision of the school facilities because it has explicit relationship with learning outcome. In the words of Lyon (2001) there should be regular inspection and supervision of school facilities in order to ensure effective teaching and learning process in the school.

Management of the facilities in the school environment includes observing the condition of school buildings and other facilities. Nkoyo and Highise (2015) opined that where the facilities in the school environment like buildings and the entire compound are maintained the same high quality will be extended to academic programs in the school. The management of the school physical environment does not stop at buildings or compound but includes teaching facilities. For example library which is one of the most important educational facilities needed to be maintained in schools. Farmobi (1998) reiterated that school libraries may not be effective if the books therein are not adequate and up – to – date as its impact may only be meaningful, if the library could be opened to the students always for a considerable length of time in a school day. As a follow up Shodimu (1998) stated that school cannot operate without libraries. Popoola (1989) discovered that library correlates

with academic achievement and those schools with well equipped library normally maintain high academic performance.

The school physical environment should be adequately managed because it provides a conducive environment for learning and enhances qualitative education. As Adaralegbe (2002) in Nkoye Highise (2015) rightly posits that the right type of atmosphere required for effective learning is the one consisting of better teaching. Educational institutions like secondary schools require favorable physical facilities to enhance qualitative education but it was discovered that some factors hinder the management of physical environment in the school. Such problems as inadequate supply of facilities to match the learning population in the public secondary schools. Also that most of the physical facilities in the public secondary schools are dilapidated and not maintained.

Challenges associated with the management of school facilities

Several research papers have established that the physical conditions under which teachers work have direct positive and negative effect on their morale, sense of personal safety, feelings of effectiveness in the classroom and the general learning environment (American Federation of Teachers, 1997). Poor ventilation in schools, accumulation of dust and growth of mould in ceilings and walls can lead to respiratory infections, headaches, and sleepiness among students and staff (Environmental protection Agency, 2000). Poor air quality has been linked to student absenteeism, asthma and other respiratory diseases (American lung Association, 2002).

The Federal Republic of Nigeria in 2013 reinstated its belief in the value of physical facilities in schools when it stated that “government will ensure that schools are properly equipped to promote sound and effective teaching and in particular that suitable text books and libraries are provided for schools. However, what is the extent to which government has succeeded in schools where enough facilities are lacking? Okpala (2005) commented that it is disheartening that in our school today, one finds nothing but dull uninviting sagging roof and colourless dilapidating walls. It is under this appalling physical condition that students and teachers are squatting in the name of education. He recommended that school buildings should be well built and attractive as well as equipped. He also concluded that lack of facilities is a serious contributory factor hindering teachers with initiatives and zeal from making use of audio-visual resources. In a similar view, Okoro (2008) stated that most of the physical facilities in schools are grossly inadequate as a result of the population explosion in primary and secondary schools. Okoro further observed that very often two classes are placed in one room and the classroom space is in most cases inadequate. The students were observed to be uncomfortable because the seats and tables were in short supply. He said that as a result of this, quality education is sacrificed and standard fails.

Problem of the Study

There are some public schools that are worn out with dilapidated buildings and very filthy surroundings. The entire classrooms are unkempt. There are lots of careless writings on the wall.

In state secondary schools, the services of cleaners are not procured by the government as it ought to be. This is why grasses are not cut, toilets are very dirty and the stinking odor from the toilet disturbs the students in the class. The teachers on the other hand find it extremely difficult to carry out their duties in a filthy environment. This unhealthy environment affects the quality of learning. It is against these problems that the researcher is challenged to ask what are the roles and challenges of principals in the management of physical resources in secondary schools in Enugu State for qualitative education.

Research method

The purpose of the study is to identify the role and challenges of the principal in management physical resources in the secondary schools in Enugu State. The study focuses on the following:

1. Identifying the role of principal in the management of physical environment
2. Examining the challenges encountered by the principals in the management of physical environment of the school.

The following research questions will be answered in the study:

1. What are the roles of the principal in the management of physical resources in the secondary schools?
2. What are the challenges facing principals in the management of physical resources in the public secondary schools.

The research hypotheses are as follows:

- a. There is no significant difference in the mean rating scores of male and female principals on the principal's role in the management of physical resources in the public secondary schools in Enugu state, Nigeria.
- b. The difference in the mean rating between male and female principals is not statistically significant.

Descriptive survey design was adopted for the survey. The study was carried out in Enugu State public Secondary Schools. Enugu state is made up of six Education zones.

The population of the study consists of all the principals (both male =204 and female = 71) in the public secondary schools of Enugu state, Nigeria. The research used the whole population of 204 male principals and 71 female principals without sampling, since the population was manageable. Therefore the sample size for the study was 275.

The instrument for the data collection was a 30-item researcher structured questionnaire titled – Management of physical Environment for qualitative education: Roles and challenges. (MPEQERC). Two experts in Educational Management and measurement and Evaluation validated the instrument. All corrections given were reflected in the final copy. To determine the reliability co-efficient of the instrument, 0.79 and 0.75 for cluster A and B respectively and 0.77 overall reliability index were obtained using Cronbach Alpha method. This was high enough for the study. The instrument was a modified 4 – point scale ranging from strongly Agreed (SA) - 4 points to strongly Disagreed (SD) – 1 point. This instrument was administered to the respondents with the help of five trained research assistants.

Out of 275 copies of the questionnaire distributed, 250 copies were retrieved, (180 male principals and 70 females) thereby giving return rate of 91 percent. Mean(x) and standard deviation (SD) were used to collate the scores that answer the research questions while t-test was used to test the null hypothesis. For decision making, 2.50 was used as a benchmark, any item with a score of 2.50 and above was regarded as agreed while those scores less than 2.50 was disagreed. For hypothesis if the t –calculated is greater than or equal to t-critical, the null hypothesis is rejected while if less the null hypothesis is not rejected.

Results

Research question 1

What are the roles of principals in the management of physical resources in the public secondary schools in Enugu state?

Table 1

Mean (x) and standard Deviation (SD) of the respondents on the role of principals in the management of physical resources in secondary schools in Enugu State

S/N	Items	180			70		
		X	SD	Decision	X	SD	Decision
	Principal should play the following roles:						
1.	Repair and maintain the school plant and equipment so that effective services can be rendered	3.06	0.78	Agreed	3.26	0.77	Agreed
2.	Replacement of the spoilt teaching aids or improvised.	2.94	0.97	Agreed	2.94	1.07	Agreed
3.	Use PTA money to hire the services of cleaners to sweep and scrub the school floors.	1.94	0.98	Disagreed	2.14	0.89	Disagreed
4.	Call for the services of skilled technicians –men for the plant maintenance like electricians, plumbers, and carpenters.	3.31	0.66	Agreed	3.43	0.498	Agreed
5.	Use Handwork money to supply toilet materials like mop, toilet rolls, brush, wash hand basin for cleanliness	2.50	1.02	Agreed	3.00	1.01	Agreed
6.	Using the students on punishment for cutting of lawns and grasses	2.75	0.896	Agreed	3.00	0.93	Agreed
7.	Making taking proper care of school grounds to be a keep issue in PTA meetings.	2.97	0.80	Agreed	3.03	0.99	Agreed
8.	Supervising regularly and maintenance services of the school property	3.28	0.56	Agreed	3.29	0.71	Agreed
9.	Keeping regular record of the maintenance done in the school for analysis	2.60	0.89	Agreed	3.00	0.95	Agreed
10.	Ensuring that the school plant is attractive	2.87	0.85	Agreed	3.29	0.59	Agreed
11.	Employing security men to check vandalism and stealing of school property	3.19	0.63	Agreed	3.29	0.46	Agreed
12.	Using dialogue to prevent students from going on rampage to avoid vandalism	2.92	1.01	Agreed	3.26	0.68	Agreed

13.	Avoidance of external bodies that will encourage vandalism.	3.28	0.81	Agreed	3.50	0.50	Agreed
14.	Educating the students and members of the community to have respect, pride and protective attitude for the school facilities.	3.22	0.75	Agreed	3.10	0.80	Agreed
15.	Giving all school personnel the orientation towards recognition of the physical conditions of the school facilities.	2.53	1.095	Agreed	2.57	1.12	Agreed
16.	There should be periodic and systematic inspection of all school property	3.00	0.95	Agreed	2.93	0.94	Agreed
17.	Assigning a personnel to be in charge of school physical facilities	3.39	0.49	Agreed	3.29	0.66	Agreed
18.	Encouraging school personnel to maintain neat habit in the classroom.	3.08	0.64	Agreed	2.83	1.04	Agreed
19.	Reporting any incidence of theft on the school property to the police.	2.68	1.01	Agreed	3.00	0.93	Agreed
20.	Using the neighborhood watch to protect the school physical facilities.	3.16	0.72	Agreed	3.36	0.61	Agreed
	Grand mean	2.93	0.82	Agreed	3.08	0.81	Agreed

Result on Table 1 above revealed that 19 items out of 20 items are factors depicting the roles of principals in the maintenance of the physical resources in the public secondary schools. The grand mean of 2.93 and 3.08 for both male and female principals were above the benchmark too.

Only item 3 with a mean score of 1.94 and 2.14 for both male and female were below 2.50. This has shown that almost all the items for both male and female principals agreed that the items show the role of principals in the management of physical environment in secondary schools in the state.

Table 2: Mean Response of the respondents on the challenges encountered by the principals in the management of physical environment in the public secondary schools.

S/N	Items	180			70		
		X	SD	Decision	X	SD	Decision
21.	Population explosion hinders effective management of physical facilities	3.05	1.22	Agreed	3.55	0.65	Agreed
22.	Inadequate supply of school equipment to match the population increase	3.00	1.25	Agreed	3.32	0.85	Agreed
23.	Generation of funds at this period of economic depression has adversely affected management of physical resources.	3.14	0.97	Agreed	2.30	0.87	Disagreed
24.	Lack of provision and maintenance of school building which enhance learning.	3.25	0.73	Agreed	3.23	0.88	Agreed
25.	Non availability of energetic security men to safe guards the physical facilities.	2.90	1.24	Agreed	2.75	0.88	Agreed
26.	Not making adequate utilization of teaching and learning facilities like library.	2.78	1.34	Agreed	2.61	1.10	Agreed
27.	Lack of maintenance culture and supervision on the part of school	2.35	1.03	Disagreed	2.48	1.32	Disagreed
28.	Not establishment neat habit in the school	3.04	1.00	Agreed	2.93	0.87	Agreed
29.	Lack of supervision and non-chalet attitude on the part of staff personnel	2.83	1.33	Agreed	2.90	0.81	Agreed
30.	Principals inability to manage risk and safety	2.54	1.42	Agreed	2.51	1.19	Agreed
	Grand mean	2.89	1.15	Agreed	2.86	0.94	Agreed

Result on table 2 shows a grand mean of 2.89 for male principals and 2.86 for female principals. The two grand means were above the 2.50 benchmark. The results revealed that the subjects agreed that most of the items listed are challenges facing principals in the management of physical environment in the public secondary schools in Enugu state.

Research Hypothesis

H₀₁: the difference in the mean scores of male and female principals on the role of principals in the management of physical environment is not statistically significant.

Table 3: t – test statistical analysis on the response male and female principals on the role of principals in the maintenance of physical environment in the public secondary schools in Enugu state.

Variable	No	Mean	SD	df	Proba	t-cal	t- critical	Decision
Male principals	180	2.93	0.82	248	0.05	- 1.40	± 1.96	NS
Female	70	3.08	0.81					H ₀₁ upheld

P < 0.05 – NS – not significant

The P value is 0.05 level of significant

Table 3 revealed that calculated t-test value of -1.40 is less than the critical t – test value of ± 1.96 at 0.05 level of significance and 248 degree of freedom. This has shown that the null hypothesis is not rejected. From the above result there is no significant difference in the response of male and female principals on the role of principals in the management of physical environment in the secondary schools in Enugu state.

Table 4 t- test statistical analysis on the challenges facing principals in the management of physical environment.

Variable	total	mean	std	df	t –table	t –cal	Decision
Male	180	2.89	1.15	248	± 1.96	0.21	NS
Female	70	2.86	0.94				H ₀₂ upheld

$$t - cal = \frac{t - x1 - x2}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

t - cal = 0.21

Table 4 above revealed that calculated t – test value is 0.21 is less than the t – critical test value of ± 1.96 at 0.05 levels of significance and 248 degree of freedom. Therefore, the null hypothesis is not rejected. This shows that there is no significant difference in the mean score of principals on the challenges facing principals in the management of physical environment in public secondary school in Enugu state. Both male and female experience all most the same challenges.

Discussion of Findings

The result in Table 1 revealed some of the roles of principals in the management of physical resources in secondary schools in Enugu state. These roles include ensuring of the repair and upkeep of the school facilities, replacement of the spoilt teaching aids, hiring of the services of cleaners, supplying of toilet materials, involving the community in taking care of school play-ground, maintenance and regular supervision of school facilities. The above roles help in enhance the quality of education as rightly stated by Nkoyo and Highise (2015) that the right type of atmosphere required for effective learning is the one consisting of better teaching facilities.

Regarding Research Question 2 which sought to identify the challenges facing principals of public secondary schools in the management of physical environment. Findings

in table 2 revealed that both male principals and female principals agreed that almost all the items are militating factors looking at their grand means of 2.89 respectively and 2.86. There are these problems of population explosion which hinders effective management of physical environment, inadequate supply of school equipment, lack of maintenance of school building, unavailability of security to guard, to mention but a few. The findings are in line with the view of Okoro, (2008) who stated that most of the physical facilities in schools are grossly inadequate as a result of population explosion, in primary and secondary schools. In the same view Okpala (2008) commented that it is disheartening that in our schools today one finds nothing but dull uninviting sagging roof and colourless dilapidating walls. These ugly situations hinder student's academic performance and quality of education.

These findings are in line with the views of Lyon (2001) that there should be regular inspection and supervision of effective teaching and learning process in the school. Also Sanoff (2001) made some statements that agreed with the findings of the study that principals should do facility assessment which includes tasks of determining the arrangement of classroom, furniture etc. All these roles will bring about a conducive learning environment, of which Akande (1985) observed that learning can only occur through one's interaction with one's environment.

Taking care of library materials and building goes a long way in enhancing qualitative education. The finding is in agreement with the views of popoola (1989) that library correlates with academic achievement and those schools with well equipped library normally maintain high academic performance.

The t – test analysis in table 3 revealed that there is no significant difference between mean rating scores of male and female principals on the role of principals in the management of physical environment in secondary schools in Enugu state.

Also table 4 showed that the difference between the mean scores of male and female principals on the challenges facing principals in the management of physical environment is not statistically significant.

Conclusion and Recommendations

The study identified some of the roles of principals in the management of physical resources in public secondary schools in Enugu state. The physical resources include: infrastructural facilities like school blocks, libraries etc, equipments like generators, laboratory equipment etc. and instructional materials like books, chalkboard, etc. The findings of the study have a lot of implications to education in Enugu state as regards to public schools educational achievement. This is because if the principal discharge those roles effectively in maintenance of physical resources, quality of education will be enhanced and the national development will be realized in Nigeria.

Based on the findings of the study, the following recommendations were made:

1. School principals especially in public secondary schools should beef up their functions of the management of school facilities.
2. Principals should supervise all the facilities and ensure that they are properly maintained.
3. Principals should encourage teacher, students and member of community to develop neat habit and maintenance culture in the school physical environment.
4. Facilities in the physical environment should be made available and old ones removed, or discarded.
5. Security consciousness should be built in all the personnel in the school in order to secure the facilities.
6. Strong security men should be employed in the secondary school to guard the facilities kept in the school.

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