

Assessment of Quality of Secondary School Infrastructure in Lagos State: A Case Study of Selected Schools in Lagos Mainland

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Abstract:- This study assessed the infrastructures in public secondary schools on the Mainland, Lagos State. The purpose of this study is to investigate the state of the school infrastructures, the maintenance schedule implemented by school administrators, the factors responsible for quick depreciation of school infrastructures and the roles of school administrators in the management and maintenance of school infrastructures. This study reviewed some literatures on how school infrastructure affects student's learning outcomes and identified key parameters that informs the design project of educational infrastructure. This study adopted the ex-post-facto research methodology. Case studies and oral interview are used as instruments for data collection, using 30 respondents from three public secondary schools selected by stratified sampling technique. Data collected from the field work are analyzed using SPSS to obtain the mean values of the variables, and the results show that infrastructures in public secondary school in Lagos Mainland are variably in a state of disrepair. It further shows that the routine maintenance carried out on school infrastructures are generally inadequate. It was revealed that the factors responsible for school depreciation of school infrastructures include excess pressure on available infrastructures and delayed maintenance amongst others. The roles of school administrators in the management and maintenance of school infrastructures include periodic inspection and decentralization of maintenance. This study recommends that school administrators, teachers and students should exhibit discipline and good maintenance culture, government should have adequate budget for effective maintenance and management of school infrastructures.

Keywords:- School infrastructures, decentralization, periodic inspection.

I. INTRODUCTION

The evident march towards the concept of a globalization has proven that education plays a major role in ensuring that people and nations stay relevant amidst technological, social, economic and political development. According to Ochoyi and Danladi (2008), education is a supports skills and knowledge which develops the learner's potential for national development. Commeyras (2011) in the reports states that education objectives are designed to discover and develop the child for the ultimate benefit of the environment. This has direct and indirect effects

development of skilled and unskilled labour, necessary for the development of the society at large. The notion that the state of public schools' infrastructure has significant impact on academic achievement is evident. This has been proven over time through several investigations into this area of study. As a matter of urgency, it necessary to create sustainable and effective learning environments like classrooms, offices, libraries, workshops, laboratories, cafeteria as well as furniture items and sporting facilities.

Quality of the infrastructure and the learning environment should be given ample consideration due to its effects on the attitudes, behaviour and character formation of students as well as their relationship with the learning environment. Tsavga (2011) reported that the way students behave and respond to situations around them is influenced by the effects of learning environment. It determines how they behave, relate to others and the outcomes can have effects on others they come in contact with either positively or negatively. Lawrence and Vimala (2012) revealed that children use most of their time in school and this has immediate effects on their achievements through curricula and non-curricular activities.

School infrastructure comprises of assignable and non-assignable spaces, their interrelatedness and functions skillfully designed leads to the production of a quality of school environment conducive for learning. In Lagos State, enrolment into public schools is on a steady increase with limited increase in required educational infrastructure for effective student development. This could be partly as a result of underfunding of education, which can be seen in the yearly budgetary allocations to the Ministry of Education in general and for infrastructural development in particular. The state government has been making efforts for proper maintenance of available school infrastructure over the years. In recent years, different administrations of Lagos State Government had at one point or the other intervened in infrastructural development of public schools under five administrations.

Governor Lateef Jakande of Lagos State built government secondary schools and made it free for all the residents of his state. The population of Lagos State was growing at the time and this mounted much pressure on existing school infrastructure. In proffering solutions to the problem, Governor Jakande built new schools and more classrooms to cater for the rising population. This development led to the huge enrolment of school age children between 1980 and 1983. The program was one of the major

educational interventions made by any government of Lagos State till date.

Governor Bola Ahmed Tinubu in 2001 promised to build at least a model “millennium” secondary school in all the 20 local councils of Lagos State. However, by the time the curtain fell on his first term, he had succeeded in building four. These are: The Abibatu Mogaji Senior Secondary School, Oniwaya, Agege Local Government Area, which was commissioned on March 1, 2002, by Tinubu. The other three commissioned are the Bola Ige Millennium Secondary School Complex in Ajegunle, Ajeromi-Ifelodun Local Government Area; The Millennium Senior Secondary, Egbeda, Alimosho Local Government Area and Babs Fafunwa Millennium Secondary, Ojodu, Ikeja Local Government Area all in Lagos State. Surprisingly, all through his four-year second term, Tinubu did not construct any other millennium school. It was learned that his administration failed to construct the other 16 millennium schools because of a change in strategy, which saw it opting to rehabilitate existing schools and construction of smaller and more efficiently managed schools. Over the years, there has been a huge gap in the availability of public schools in the state, and this has resulted in individuals and private organisations coming in to bridge the gap in the education sector, with the establishment of about 18,000 private schools, with a good number of them being substandard and operating without government approval (Sunday Magazine, 2019).

On Tuesday March 16, 2010, Governor, Mr. Babatunde Fashola (SAN) launches Lagos Eko Secondary Education Project. He commissioned it as a mechanism to improving education standard in public secondary schools. The inauguration of the laudable education project yielded immediate results as students’ performances in major examinations like NECO, WAEC and UTME improved. This project assisted students with textbooks for free, and massive school infrastructural development, by construction or renovation, was carried out across the state. In addition to government’s effort in revamping secondary school education in the state, Fashola returned schools taken over by government in the past to their respective missions. Support-a-school program was introduced as a bid to constructing new schools as well as rehabilitating old ones. Through the project, each secondary and technical school received extra funding of N2,000,000- N3,000,000 directly from the State Government.

Bank-Olemoh (2017), reported the Governor Ambode’s administration renovated and remodelled libraries in eighteen public secondary schools in Lagos State with modern school infrastructures. The Government commissioned the Lagos Digital Library, an online library and also upgraded some in selected public secondary schools across the six education districts in Lagos State. These libraries are fully equipped and sustainably designed with solar electricity for round-the-clock operations. The Governor directed that all the children of school age be granted access to quality education received in a conducive environment, therefore, the Digital Library is here to give Lagosians the needed platform to learn, and contribute to improving the knowledge bank of Lagos State (Olasunkanmi, 2017).

The administration of Governor Babajide Sanwo-Olu of Lagos State (2021), reported that so far, they have completed about 1,097 school infrastructural projects, affecting 970 public schools in the state. It was revealed that the commissioning of the new infrastructural projects at Oregon High School, Babs Fafunwa Millennium Senior Grammar School and Babs Fafunwa Millennium Senior Secondary School in Ikeja is yielding the desired results already. The government intervention has open more access to every child across the six Education Districts in Lagos State. These include construction and renovation of 322 public school infrastructure, and 87,000 units of school furniture supplied across the state. Recently, a block of six classrooms and renovation of two-storey building of 12 classrooms, two staff rooms, one library, laboratory and ICT centre are commissioned at Oregon Junior High School while others are under construction in various schools within the state.

II. STATEMENT OF PROBLEM

Quality school infrastructure is a major determining factor the development of a child. However, it is evident that many schools’ infrastructure in secondary schools across Lagos Mainland are confronted with numerous challenges which include deteriorating state, out-of-date design, little or no consideration for the physically challenged and excess pressures. These challenges are due to lack of or inadequate maintenance and management of school infrastructure which have daunting effects on students’ academic and behavioral outcomes.

III. AIM AND OBJECTIVES OF THE STUDY

This study is designed to assess the quality, availability, adequacy and maintenance of infrastructure in selected government secondary schools on the Lagos Mainland and how they affect the quality education offered. This aim will be achieved with the following set objectives:

- Assess the quality of school infrastructure in selected public schools.
- Evaluate the state of repair of public schools in the study area.
- Examine causes of infrastructure depreciation of public schools in the study area.
- Evaluate the extent to which principals have control over infrastructure maintenance of their schools in the study area.

IV. RESEARCH QUESTIONS

This research sets out to address various underlying questions which are:

- What is the quality of public schools infrastructure in the study area?
- What is the state of repair of public schools in the study area?
- What are the causes of infrastructures depreciation of public schools in the study area?
- To what extent do principals have control over infrastructure maintenance of their schools.

V. METHODOLOGY

A. Research Design

This study adopts a case study and oral interview techniques to investigate the infrastructural issues affecting public secondary schools in Lagos Mainland, and to allow for holistic assessment at close range. It forms a key component

of the design project because it will broaden the knowledge base of modern school designs as well as maintenance and sustainability strategies required. The case studies of this project will help to answer the research questions and to proffer solutions through sustainable designs. See Table 2 for summary of research.

Objective	Data Gathering Technique	Data Analysis
1. Assess the quality of school infrastructure in selected public schools.	Case Study/ Non participant observation	Content analysis
2. Evaluate the state of repair of public schools in the study area.	Non participant observation Observation schedule	Descriptive statistics Frequency & Percentage
3. Examine causes of infrastructure depreciation of public schools in the study area.	Non participant observation Observation schedule	Descriptive statistics Mean Rating
4. Evaluate the extent to which principals have control over infrastructure maintenance of their schools in the study area.	Interview	Content Analysis Descriptive statistics

Table 1: Research Summary

Source: field survey, 2021

This design project primarily studies the general landscape of the present school infrastructural conditions of secondary schools in Lagos Mainland. It is observed in the course of this study that there is an urgent need for the construction and remodeling of school infrastructures for effective management and sustainability. This study adopts ex-post-facto research technique for data collection of data from school visited. The population of this study comprises of five public secondary schools randomly selected from five local councils in Lagos mainland. Stratified sampling techniques is used for the sampling comprising 5 Principals, 5 Vice Principal Admins, 10 teachers and 10 students. The stratification was based on education district within Lagos Mainland. Interview was used as instrument for data collection, which focused on demographic variables.

B. Data Collection And Sources

Primary data is acquired through oral interviews with principals and teachers on their experience of public secondary schools in Lagos State as well as direct image capturing and sketches, while study of literature, surfing the internet and some existing public secondary schools on Lagos Mainland constitute secondary data.

VI. RESULTS AND DISCUSSION

A. Results

In the course of this study, it is observed that school infrastructures in public secondary schools in Lagos Mainland are in a mixed state of usability. While some schools need urgent infrastructural intervention, others

are having it good but there is still need for improvement and maintenance. Findings on the adequacy of maintenance activities carried out on school infrastructures indicated that the maintenance carried out on school buildings such as repairing cracks on broken walls, broken ceiling roofs, electric fixtures were inadequate. While damaged louvers, doors and windows were not replaced immediately. School principals should brace up in the management and maintenance of school infrastructures, by having periodic inspection of the infrastructures, decentralization of maintenance, preventive and emergency maintenance, keeping records of school facilities and seeking community involvement in infrastructure management and maintenance.

B. Case Studies

In the course of this study, five public secondary schools in Lagos Mainland selected through random sampling technique. Approval from the principals of the selected schools were obtained before the data collection process. The researcher personally administered oral interviews, took photographs of infrastructures and made sketches of site layout and existing structures. The administration is done during school session. The sample includes 30 interviewees out of which 10 were administrators, 10 teachers and 10 students, whereby 2 administrators, 2 teachers and 2 students were carefully selected at random from each secondary school which is to validate the figures gotten from the offices of the Vice Principal Administration of the selected schools. The figures obtained are tabulated below:

Infrastructure	Repairable		Disrepair	
	N	%	N	%
Classroom	15	83.3	3	16.7
Assembly place	1	100	-	-
Laboratory	1	100	-	-
Workshop	1	50.0	1	50.0
Furniture	209	51.5	197	48.5
Toilets	4	66.7	2	32.3
Fields	2	100	-	-
Library	1	50.0	1	50.0

Table 1: State of school infrastructures in Oba Moruf Ojoola Junior High School, Ayobo, Lagos

Source: Author's field work, 2021

Infrastructure	Repairable		Disrepair	
	N	%	N	%
Classroom	19	90.5	2	9.5
Assembly place	1	100	-	-
Laboratory	1	50.0	1	50.0
Workshop	2	66.7	1	32.3
Furniture	183	78.2	51	21.8
Toilets	4	80.0	1	20.0
Fields	-	-	-	-
Library	1	100	-	-

Table 2: State of school infrastructures in Jibowu Junior High School, Yaba, Lagos

Source: Author's field work, 2021

Infrastructure	Repairable		Disrepair	
	N	%	N	%
Classroom	24	88.9	3	11.1
Assembly place	2	100	-	-
Laboratory	3	60.0	2	20.0
Workshop	2	50.0	2	50.0
Furniture	304	76.6	93	22.4
Toilets	7	66.7	4	32.3
Fields	2	100	-	-
Library	2	100	-	-

Table 3: State of school infrastructures in Surulere Junior and Senior High School, Alagbado, Lagos

Source: Author's field work, 2021

Maintenance Activities	OJHS		JJHS		JSHS		Remarks
	N	%	N	%	N	%	
1. A quick fix of broken ceiling, roofs, walls.	3	50	5	83	2	33	Inadequate
2. A quick fix of broken chairs and tables.	5	83	4	67	4	67	Inadequate
3. A quick fix of broken windows and doors.	2	33	3	50	2	33	Inadequate
4. Routine servicing of gen, bus & machines.	1	17	2	33	2	33	Inadequate
5. Buildings are regularly renovated.	2	33	5	83	4	67	Inadequate
6. Regular grass clearing and picking of liters	5	83	5	83	5	83	Adequate

Table 4: Adequacy of maintenance activities carried out on school infrastructures

Source: Author's field work, 2021

Maintenance Activities	OJHS		JJHS		JSHS	
	Score	Mean	Score	Mean	Score	Mean
1.Excess pressure on available facilities.	4	0.7	3	0.5	5	0.8
2. Lack of proper maintenance.	5	0.8	5	0.8	4	0.7
3. Poor maintenance culture.	5	0.8	3	0.5	4	0.7
4. Over centralization of maintenance.	1	0.2	2	0.3	1	0.2
5. Delayed maintenance.	3	0.5	4	0.7	5	0.8
6. Environmental pollution.	1	0.2	2	0.3	1	0.2

Tables 5: Factors encouraging infrastructure depreciation in schools

Source: Author's field work, 2021

Role	Score	Percentage
Routine inspection of infrastructure.	16	53.3%
Designation of maintenance duties.	7	23.3%
Preventive maintenance.	4	13.3%
Emergency maintenance.	19	63.3%
Records keeping of school infrastructure.	24	0.8%
Partnership in facilities management and maintenance.	21	0.7%

Table 6: Principal's roles in school infrastructure maintenance

Source: Author's field work, 2021

VII. DISCUSSION

After analysis of the data collected, results obtained are tabulated. Tables 3, 4 and 5 indicate school infrastructures in government secondary schools in Lagos Mainland need timely remodeling and/or renovation. For Oba Moruf Ojoola Junior High School, Ayobo, 83.3% of the classrooms are repairable while 16.7% are not repairable. There is an improved case for Jibowu Junior High School, Yaba, Lagos, where the classrooms have 90.5% repairable state and 9.5% state of disrepair. Also, Junior and Senior High School, Alagbado, has 88.9% repairable state and 11.1% state of disrepair. The results show data of 100% for repairable states assembly spaces for Oba Moruf Ojoola Junior High School, Ayobo, Jibowu Junior High School, Yaba, Lagos, and Junior and Senior High School, Alagbado respectively. Laboratory recorded 100%, 50% and 60% repairable state for Oba Moruf Ojoola Junior High School, Ayobo, Jibowu Junior High School, Yaba, and Junior and Senior High School, Alagbado, while state of disrepair recorded are 0%, 50% and 40% respectively.

The library recorded 100% repairable state 0% state of disrepair for the three schools; furniture has repairable state of 51.5%, 78.2%, 76.6% and 48.5%, 21.8%, 23.4% state of disrepair, toilets have 66.7%, 80.0%, 66.7% repairable state and 33.3%, 20.0%, 33.3% state of disrepair for Oba Moruf Ojoola Junior High School, Ayobo, and Jibowu Junior High School, Yaba, Lagos, and Junior and Senior High School, Alagbado respectively. Table 4.4 indicates that maintenance done Lagos State public secondary school infrastructures are inadequate for items 1,2,3, 4 and 5 and adequate for item 6. Table 7 indicates that the arithmetic mean scores from the schools visited are above the critical mean value of 0.5 except items 4 and 6. Therefore, the factors responsible for depreciation of infrastructures are excess pressure mounted on available infrastructures, lack of maintenance of infrastructures, poor attitude towards maintenance, and delayed maintenance.

Table 8 reveals the roles of school administrators in the managing and maintaining of learning environment infrastructures on regularly, delegating of maintenance activities to other available capable hands, executing preventive and emergency maintenance, proper record keeping and solicit for community involvement in effective management and maintenance of school infrastructures.

VIII. CONCLUSION AND RECOMMENDATIONS

A. Conclusion

School infrastructures are effective for education of students and in meeting end goals. This study shows many public secondary schools – both junior and senior, in Lagos Mainland are in a variable state of usability. The results analyzed in this study explain that the infrastructural elements of school environment are impactful in the actualization of learning objectives. The following positive contributing factors to students' learning progress are revealed:

- Adequate natural lightings, ventilation, temperature and noise control.
- Age-oriented classrooms that offer flexible learning opportunities for personal development.
- Relationships between learning spaces that are easily accessible and provides more learning opportunities.
- Using colour, forms and visuals to create conducive ambience.
- Designs that consider site climatic and cultural conditions.

Learning becomes much meaningful to learners when the environment is deliberately made conducive and inspirational. These revelations create opportunities for remodeling and renovating of old schools, and construction of new ones to the finest designed details so as to promote the learning imperatives.

B. Recommendations

To successfully solve the infrastructural problems in public secondary schools, this study recommends that:

- Lagos State Government should endeavour to provide adequate modern infrastructures for public secondary schools so as to meeting the diverse needs of the large students admitted.
- Many infrastructures are either unavailable or in a poor state of usability. Therefore, the Ministry of Education and school administrators should have a comprehensive routine maintenance schedule for the components that have gone bad.
- School stakeholders should exhibit high-level of maintenance of school infrastructures as an integral part of the school culture.
- Due to high maintenance costs of school infrastructures, stakeholders in charge of budgeting and implementation should make adequate provisions for maintenance and management as well as technology deployment.
- Equal treatment should be given to all schools irrespective of their locations - whether rural or urban, for even school infrastructural development.
- Lack of maintenance deteriorates infrastructures faster than expected. Therefore, preventive maintenance measures should be put in-place by stakeholders designated to carry out such assignments.

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