



Assessment of School Facilities Maintenance for Effective Instructional Delivery in Public Senior Secondary Schools in Bauchi State, Nigeria

Mohammad Hassan GARBA, Alhaji Adamu ABDULLAHI, Isah Khalid MOHAMMAD, Ramatu Bature MOHAMMAD, Amina Garba ALIYU
Adamu Tafawa Balewa College of Kangere, Bauchi State, Nigeria

ABSTRACT

This study assessed the maintenance of school facilities for effective teaching process in public senior secondary schools in Bauchi state. Four research questions were formulated to guide the study. Design of the study was a descriptive survey design with a study population 5121 teachers. Simple random sampling technique was adopted in selecting the respondents for the study. Instrument used for data collection was a 31-item structured questionnaire. Mean and standard derivation was used to answer the research questions Findings of the study revealed that school facilities maintenance is a catalyst for effective instructional delivery in Public Senior Secondary Schools and success of any educational programmes and there is urgent need for government and the various stakeholders to intensify effort to acquaint themselves with the identified strategies for achieving effective facilities maintenance of schools for effective instructional delivery in secondary schools. As a result of the findings, the study recommended that teachers should be encouraged to utilize preventive maintenance and work closely with the utility office for necessary guidance, ministry of education should organized an award winning event on school facilities maintenance in order to motivate the teachers toward maintenance culture of school facilities, secondary schools administrators should use some part of their internally generated revenue to support periodic maintenance in their respective schools and ministry of Education should monitor and supervise schools on regular basis to ensure that schools put in practice the preventive, replacement, periodic and emergency maintenance approach for effective instructional delivery in secondary school,

INTRODUCTION

School facilities are vital instruments for implementing educational programmes. Akinfolarin (2008) identified school facilities as a major factor contributing to the teaching and learning process in the school system. School facilities include classroom, furniture and recreational facilities among others. He further categorized school facilities into three major components: Infrastructural facilities, instructional facilities and school physical environment. Infrastructural facilities include: buildings such as administrative block, which comprises the

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principals' office, staff room, classroom, laboratory, stores, record office, school shop, library, music room, cafeteria, Introductory technology laboratory, security post, staff quarters and school farm as well as storage house, electricity, water supply, sport field among others. A well maintained school facilities will gear up expected outcomes of educational programmes that will facilitate social, political and economic emancipation.

Facilities Management Association (2014) highlighted that maintenance is the act of keeping something in good condition by checking or repairing it regularly. This involves an act of taking proper care of equipment by strictly being



guided by specific regulations governing the use of such facilities. Furthermore, maintenance of facilities implies an activity put in place to restore the physical conditions of facilities. Facility maintenance is an issue that concerns all levels of the educational institutions ranging from the pre-kindergarten to the tertiary levels. Ejeh (2010) stated that development of functional school facilities has been one of the major problems confronting educational institutions. He added that different types of maintenance serve different specific purposes in school facilities management, they are all necessary for keeping school facilities in its original state. Abdulkareem (2011) maintained that in order to fulfill educational objectives, educational facilities are required and should be central to the extent that teachers and other personnel will enjoy their functions. The school curriculum would be meaningful and functional if the required facilities provided are maintained properly (Adeogu, 2008). If school facilities are poorly maintained, this could lead to poor health and sanitary condition. Oladipo and Oni (2010) stated that educational programme bears many evidences of the influence of school facilities.

However, due to poor maintenance culture of school facilities in Nigeria secondary schools, this is one of the reason why secondary education system is deteriorating (Ejeh, 2010). Therefore, the general objective of this study was to assess the school facilities maintenance for effective instructional delivery in Public Senior Secondary Schools in Bauchi State.

The major problem that is likely facing teaching and learning process is that, facilities are not properly managed and maintained. The physical appearance of most school facilities proves and speaks. Isaac and Musibau, (2010) opined that poorly maintained buildings, untidy walls, leaking roofs, over grown compounds are common features of secondary schools in Nigeria. The current issue of facilities maintenance in public senior secondary schools in Bauchi state is that, school administrators, teachers and students are lacking necessary knowledge require on when, how and what condition warrant the use of preventive, periodic, replacement and emergency maintenance of facilities in their respective schools (Adeogu, 2008). This affects the teaching

and learning process. The present study was aimed at addressing the current phenomena in Bauchi state secondary schools which is a serious concern to many people and it deserves prompt attention. Therefore, this study is out to assess the school facilities maintenance for effective instructional delivery in Public Senior Secondary Schools in Bauchi State.

Research Questions

The following research questions guided the study:

1. What are the preventive maintenance of school facilities for effective instructional delivery in Public Senior Secondary Schools in Bauchi State?
2. What are the replacement maintenance of school facilities for effective instructional delivery in Public Senior Secondary Schools in Bauchi State?
3. What are the periodic maintenance of school facilities for effective instructional delivery in Public Senior Secondary Schools in Bauchi State?
4. What are the emergency maintenance of school facilities for effective instructional delivery in Public Senior Secondary Schools in Bauchi State?

METHODOLOGY

The research design for this study was descriptive survey. The design was considered suitable because it enables the researchers to understand the school facilities maintenance for effective instructional delivery in Secondary Schools from the participants' perspective. The population of the study constituted all the 191 principals and 4930 teachers of public senior secondary schools in Bauchi state which was totaling to 5121 respondents. Simple random sampling technique was adopted in selecting the respondents for the study. Four-points rating scale questionnaire was used for data collection. The questionnaire was tagged school facilities maintenance Questionnaire (SFMQ). The questionnaire was structured Strongly Agreed 4 points, Agreed 3 points, Disagreed 1 point and Strongly Disagreed 1 point. The instrument was subjected to validation from four experts from Abubakar Tafawa Balewa University Bauchi and



Adamu Tafawa Balewa College of Education Kangere, Bauchi State. The content validity of the instrument was ascertained and corrections of expert were incorporated into the final copy of the instrument. The instrument was subjected to pilot test aimed at determining the reliability of the instrument. The data collected from pilot study were subjected to Cronbach Alpha analysis. A reliability Coefficient of 0.87 was obtained. Data collected from the study were coded into

Statistical Package of Social Science version 23. The data collected was analyzed using mean and standard deviation for all the research questions. In answering the research questions, strongly agreed and agreed were classified as agreed while disagreed and strongly disagreed were considered as disagreed. A mean score of 2.50 and above was used as index score.

RESULTS

Table 1: Respondents Opinion on Preventive Maintenance of School Facilities for Effective Instructional Delivery in Public Senior Secondary Schools

S/No.	Item	Mean	S.D.	Remark
1.	There is utilization of periodic equipment cleaning/inspection system in place that identifies potential problems before they become downtime issues	3.71	1.04	Agreed
2.	Equipment listing and procedure are current and accurate	3.45	1.12	Agreed
3.	Inspections are always carried out exactly as specified and when specified	3.47	1.18	Agreed
4.	Preventive maintenance work has the highest priority in the school	3.50	1.18	Agreed
5.	There are procedures in place to make sure that preventive maintenance procedures, which do not happen as scheduled, are not forgotten and still get done	3.40	1.30	Agreed
6.	Potential problems are identified and work orders are entered to correct them	3.32	1.36	Agreed
7.	The majority of repair work orders are generated from preventive maintenance inspections	3.62	1.09	Agreed
8.	The essential principle of "clean to inspect" is well understood by those performing preventive maintenance work	3.69	1.14	Agreed
9.	When a breakdown occurs, preventive maintenance procedure are reviewed and adjusted as necessary to prevent the problem from re-occurring	3.52	1.24	Agreed
10.	Preventive maintenance procedures are reviewed and updated when there are changes in equipment or practices	3.41	1.37	Agreed
11.	There is a lubrication program that makes sure equipment is lubricated routinely and properly with the proper lubricant	3.29	1.39	Agreed
12.	Lubricants and lubrication equipment are stored and maintained properly, to avoid contamination.	3.38	1.38	Agreed
13.	There are measures in place to monitor the performance and the result of the preventive maintenance process in the school	3.42	1.35	Agreed



S/No.	Item	Mean	S.D.	Remark
14.	Operating personnel have most of the responsibility for preventive maintenance work that is done when equipment is running	3.29	1.25	Agreed
15.	There is an ongoing review process involving operators and maintenance personnel to move as much preventive maintenance from a downtime to a routine activity	3.26	1.35	Agreed

Source: Field work, 2020

Table 1 answered Research Question 1 which revealed that all the items were agreed by the respondents as preventive maintenance of school facilities for effective instructional delivery

in Public Senior Secondary Schools in Bauchi State having the highest mean of 3.71 and standard deviation of 1.04 while the least mean of 3.32 and standard deviation of 1.36.

Table 2: Respondent's Opinion on the Replacement Maintenance of School Facilities for Effective Instructional Delivery in Public Senior Secondary Schools in Bauchi State

S/No.	Items	Mean	S.D.	Remark
1.	Equipment or parts are regularly renovated, replaced and used when due	3.62	1.27	Agreed
2.	Some machine and vehicle parts and some plumbing fixtures are regularly replaced before they brakes down	3.24	1.28	Agreed
3.	Regular replacement of an item of equipment or machine before it become completely unusable	3.32	1.41	Agreed
4.	Expenses are budgeted during the school year for equipment replacement	3.26	1.34	Agreed

Source: Field work, 2020

Table 2 answered Research Question 2 which revealed that all the items were agreed by the respondents as replacement maintenance of school facilities for effective instructional delivery

in Public Senior Secondary Schools in Bauchi State having the highest mean of 3.62 and standard deviation of 1.27 while the least mean of 3.24 and standard deviation of 1.28.

Table 3: Respondents Opinion on Periodic Maintenance of School Facilities for Effective Instructional Delivery in Public Senior Secondary Schools in Bauchi State

S/No.	Items	Mean	SD	Remark
1.	Periodic work is applied and done on regular intervals of time yearly or biennially	3.50	1.13	Agreed
2.	Work were done on contract basis at predetermined times	3.13	1.29	Agreed
3.	Adequate servicing of offices, laboratory, workshop and other equipment in the school periodically.	3.05	1.35	Agreed



S/No.	Items	Mean	SD	Remark
4.	Adequate painting and repair of leaking roofs periodically as building continue ageing daily	2.91	1.55	Agreed

Source: Field work, 2020

Table 3 answered Research Question 3 which revealed that all the items were agreed by the respondents as the periodic maintenance of school facilities for effective instructional delivery in Public Senior Secondary Schools in Bauchi State having the highest mean of 3.50 and standard deviation of 1.13 while the least mean of 2.91 and standard deviation of 1.55.

Table 4: Respondents Opinion on Emergency Maintenance of School Facilities for Effective Instructional Delivery in Public Senior Secondary Schools in Bauchi State

S/No.	Items	Mean	S.D.	Remark
1.	Consideration for emergency work done when a system or an item unexpectedly breaks down	3.36	1.18	Agreed
2.	Provision for planned programme adhered to unforeseen or unexpected emergencies	3.13	1.28	Agreed
3.	Consideration for emergency work when part of building collapses due to natural disaster and other reasons	3.54	2.02	Agreed
4.	Operational emergency maintenance programmes were incorporated in the school system	3.96	1.24	Agreed
5.	Safety and health are the first concern of the occupants of the facility involved	3.43	1.20	Agreed
6.	All school staff and students are given adequate instructions on what to do what not to do in emergency situations	3.46	1.33	Agreed

Source: (Field work) 2018

Table 4 answered Research Question 4 which revealed that all the items were agreed by the respondents as emergency maintenance of school facilities for effective instructional delivery in Public Senior Secondary Schools in Bauchi State having the highest mean of 3.96 and standard deviation of 1.24 while the least mean of 3.13 and standard deviation of 1.28.

CONCLUSION

From the extensive facts seen from the literature reviewed, school facilities maintenance is a catalyst for effective instructional delivery in Public Senior Secondary Schools and success of any educational programmes. Therefore, there is need for school facilities maintenance in Public Senior Secondary Schools in Bauchi state. Hence all stakeholders and schools should put up

concerted efforts towards school facilities maintenance culture in order to ensure effective instructional delivery in Secondary Schools. Therefore, there is urgent need for government and the various stakeholders to intensify effort to acquaint themselves with the identified strategies for achieving effective facilities maintenance of schools for effective instructional delivery in secondary schools.

RECOMMENDATIONS

On the basis of the findings and conclusions of the study, the following recommendations were made:

1. The study recommended that teachers should be encouraged to utilize preventive maintenance and work closely with the utility office for necessary guidance.



2. The study recommended that ministry of education should organized an award winning event on school facilities maintenance in order to motivate the teachers toward maintenance culture of school facilities
3. It is also recommended that secondary schools administrators should use some part of their internally generated revenue to support periodic maintenance in their respective schools.
4. Ministry of Education should monitor and supervise schools on regular basis to ensure that schools put in practice the preventive, replacement, periodic and emergency maintenance approach for effective instructional delivery in secondary schools'.

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