

INFLUENCE OF SCHOOL PLANT MANAGEMENT ON TEACHERS' JOB PERFORMANCE IN PUBLIC SECONDARY SCHOOLS IN NORTH CENTRAL NIGERIA

BY

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Abstract

This study investigated the influence of school plant management on teachers' job performance in public secondary schools in North Central Nigeria. The study specifically examined the influence of school plant maintenance and school plant utilization on teachers' job performance. A descriptive survey research design was adopted for the study. The population comprised 42,232 principals and teachers from 9,068 public secondary schools across the North Central states of Nigeria. A sample size of 4,223 respondents representing 10% of the population was selected using proportionate stratified random sampling technique. Data were collected using a structured questionnaire titled "Influence of School Plant Management on Teachers' Job Performance Questionnaire (ISPMTJPQ)." The instrument was validated by experts in Educational Management and Measurement and Evaluation. Descriptive statistics of mean and standard deviation were used to answer the research questions. A benchmark mean of 2.50 was used for decision making. The findings revealed that school plant maintenance and school plant utilization significantly influence teachers' job performance in public secondary schools in North Central Nigeria. The study concluded that effective management of school facilities enhances teachers' instructional delivery, classroom effectiveness, and overall productivity. Based on the findings, the study recommended that government and school administrators should prioritize regular maintenance of school facilities and

ensure optimal utilization of available educational resources to improve teachers' job performance and educational outcomes.

Keywords

Educational facilities, public secondary schools, school plant management, school plant maintenance, school plant utilization, teachers' job performance

1.1 Introduction

Education remains one of the most important instruments for national development and social transformation. It plays a critical role in developing human capital, promoting economic growth, and improving societal well-being. The achievement of educational goals largely depends on the availability and effective management of school resources, particularly school plant facilities (Anderson & Clark, 2019). School plant refers to the physical facilities and infrastructural resources provided in schools to facilitate effective teaching and learning. These include classrooms, laboratories, libraries, administrative offices, workshops, recreational facilities, furniture, and other physical structures within the school environment (Oyesola, 2017).

In recent years, increasing attention has been given to the influence of school plant management on educational outcomes, especially in developing countries where infrastructural challenges continue to affect the quality of education. Effective school plant management involves proper planning, maintenance, utilization, and supervision of educational facilities to ensure conducive teaching and learning environments. Adequate and functional school facilities create a safe and motivating environment that enhances

teachers' instructional delivery and students' academic engagement (Brown & Green, 2020).

Studies have shown that poorly maintained school facilities negatively affect teachers' morale, classroom effectiveness, and students' academic performance. In many public secondary schools in North Central Nigeria, inadequate maintenance of classrooms, overcrowded learning spaces, damaged furniture, poor ventilation, insufficient laboratories, and limited instructional facilities remain major concerns. These conditions often create unfavorable teaching environments that hinder effective instructional delivery and reduce teachers' productivity (Godwin, 2021).

School plant maintenance is an important component of educational management because it ensures the continuous functionality and sustainability of school facilities. Proper maintenance helps to prevent deterioration of infrastructure, reduces safety risks, and improves the overall learning environment. Similarly, effective utilization of school facilities ensures that available resources are maximally used to support educational programmes and instructional activities. Rodriguez and Martinez (2018) noted that proper maintenance and effective utilization of school facilities contribute significantly to educational effectiveness and improved teaching outcomes.

Despite government interventions in educational infrastructure, many public secondary schools in North Central Nigeria still experience infrastructural

deficiencies and ineffective management of school facilities. This situation has continued to raise concerns among educational stakeholders regarding its possible effects on teachers' job performance. It is against this background that this study investigated the influence of school plant management on teachers' job performance in public secondary schools in North Central Nigeria.

1.2 Statement of the Problem

The quality of school facilities in many public secondary schools in North Central Nigeria has continued to deteriorate despite the growing importance of education in national development. Many schools are characterized by inadequate classrooms, poorly maintained buildings, overcrowded learning environments, insufficient laboratories, and limited instructional facilities. These infrastructural challenges may negatively affect teachers' instructional delivery, classroom management, motivation, and overall job performance (Nwosu, 2022).

In addition, ineffective utilization of available school facilities has become a major concern in the educational system. Some school facilities are either underutilized or overutilized due to poor management practices, inadequate supervision, and increasing student population. These conditions may create unconducive learning environments that reduce teachers' efficiency and hinder the achievement of educational objectives (Owolabi & Weli, 2019).

Although several studies have examined school facilities and students' academic performance, limited empirical attention has been given to the influence of school plant management on teachers' job performance, particularly in public secondary schools in North Central Nigeria. This study therefore sought to investigate the influence of school plant maintenance and utilization on teachers' job performance in public secondary schools in North Central Nigeria.

1.3 Research Questions

The following research questions guided the study:

- i. What is the influence of school plant maintenance on teachers' job performance in public secondary schools in North Central Nigeria?
- ii. What is the influence of school plant utilization on teachers' job performance in public secondary schools in North Central Nigeria?

1.4 Objectives of the Study

The main objective of this study was to investigate the influence of school plant management on teachers' job performance in public secondary schools in North Central Nigeria. Specifically, the study sought to:

- i. examine the influence of school plant maintenance on teachers' job performance in public secondary schools in North Central Nigeria;
- ii. determine the influence of school plant utilization on teachers' job performance in public secondary schools in North Central Nigeria.

1.5 Statement of Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance:

Ho₁: There is no significant influence of school plant maintenance on teachers' job performance in public secondary schools in North Central Nigeria.

Ho₂: There is no significant influence of school plant utilization on teachers' job performance in public secondary schools in North Central Nigeria.

2.0 Literature Review

Concept of School Plant Management

School plant management remains one of the fundamental components of educational administration due to its significant contribution to the achievement of educational goals and objectives. The concept of school plant management involves the planning, organization, coordination, utilization, maintenance, supervision, and evaluation of physical facilities within the school system for effective teaching and learning. School plant facilities include classrooms, libraries, laboratories, workshops, administrative offices, furniture, recreational centres, and other infrastructural resources that support the instructional process (Anderson & Clark, 2019).

The importance of school plant management in the educational system cannot be overemphasized because the quality of physical facilities within the school environment significantly determines the effectiveness of curriculum implementation and teachers' job performance. Brown and Green (2020)

observed that adequate provision and proper management of school facilities create safe, comfortable, and motivating environments that enhance teaching effectiveness and improve students' learning experiences. In the same vein, Oyesola (2017) asserted that effective management of school plant facilities contributes positively to educational productivity by improving the functionality and sustainability of school infrastructure.

In many developing countries, particularly Nigeria, educational institutions continue to experience serious infrastructural challenges arising from poor maintenance culture, inadequate funding, overcrowding, and ineffective utilization of available facilities. These challenges have continued to undermine the quality of teaching and learning in public secondary schools. The deteriorating condition of classrooms, laboratories, libraries, and instructional facilities often creates uncondusive learning environments that negatively affect teachers' morale, instructional delivery, and classroom effectiveness. Consequently, effective school plant management has become an essential administrative responsibility aimed at ensuring the proper maintenance and optimal utilization of school facilities for improved educational outcomes.

School Plant Maintenance and Teachers' Job Performance

School plant maintenance refers to the continuous process of preserving, repairing, servicing, and renovating school facilities to ensure their functionality, safety, and durability. Maintenance activities include regular

inspection of facilities, renovation of school buildings, replacement of damaged equipment, servicing of instructional facilities, painting of classrooms, and repairs of broken furniture and infrastructure (Rodriguez & Martinez, 2018). Effective maintenance culture helps to sustain the physical condition of school facilities and ensures that educational resources remain functional for effective teaching and learning activities.

The relationship between school plant maintenance and teachers' job performance has attracted considerable attention among educational researchers because teachers' effectiveness is often influenced by the condition of the school environment in which they operate. Functional and properly maintained school facilities create conducive teaching environments that motivate teachers and enhance instructional effectiveness. Joemila (2023) reported that schools with effective maintenance culture experience improved teachers' commitment, classroom management, instructional delivery, and educational productivity. Similarly, Godwin (2021) found that proper maintenance of educational facilities significantly contributes to teachers' effectiveness and curriculum implementation in secondary schools.

Conversely, poor maintenance of school facilities may create unfavorable teaching conditions capable of reducing teachers' morale and productivity. Dilapidated classrooms, broken furniture, poor ventilation, damaged instructional facilities, and inadequate maintenance of school infrastructure often create stress and discomfort for teachers and learners. In many public secondary schools in North Central Nigeria, inadequate maintenance

practices resulting from poor funding and ineffective management continue to affect the quality of teaching and learning. Therefore, regular maintenance of school facilities remains indispensable for improving teachers' job performance and achieving educational objectives in public secondary schools.

School Plant Utilization and Teachers' Job Performance

School plant utilization refers to the effective and efficient use of available educational facilities for instructional, administrative, and extracurricular activities within the school system. Effective utilization of school facilities involves proper allocation, scheduling, supervision, and management of classrooms, laboratories, libraries, workshops, and recreational facilities to avoid underutilization or overutilization of available resources (Brown & Green, 2020).

The proper utilization of school facilities contributes significantly to teachers' effectiveness by enhancing classroom coordination, instructional delivery, and students' engagement in learning activities. Effective utilization of educational facilities also reduces overcrowding and minimizes challenges associated with poorly organized learning environments. Brown and Green (2020) maintained that effective utilization of educational facilities promotes collaborative learning, improves classroom interaction, and enhances teachers' classroom management. Similarly, Owolabi and Weli (2019) observed that schools that effectively utilize available facilities tend to record

higher levels of teachers' productivity and improved students' academic engagement.

Despite the importance of school plant utilization in promoting effective teaching and learning, many public secondary schools in Nigeria still experience serious challenges associated with poor utilization of educational facilities. In some schools, classrooms and laboratories are overcrowded due to poor scheduling and increasing student population, while other facilities remain underutilized because of ineffective supervision and management practices. These conditions often create unconducive learning environments that negatively affect teachers' instructional effectiveness and overall job performance. Effective utilization of school facilities therefore remains an important strategy for improving educational quality and enhancing teachers' job performance in public secondary schools.

Godwin (2021) conducted a study on principals' school plant utilization and maintenance in public and private secondary schools in Enugu State, Nigeria. The study sought to examine the influence of school plant maintenance and utilization on effective teaching in secondary schools. Two research questions and two hypotheses guided the study. The study adopted a descriptive survey research design. The population comprised principals and teachers from public and private secondary schools in Enugu State, while a sample of 450 respondents was selected using stratified random sampling technique. Data were collected through a structured questionnaire and analyzed using mean and standard deviation for answering the research questions, while chi-

square statistics was used to test the hypotheses at 0.05 level of significance. The findings revealed that effective maintenance and proper utilization of school facilities significantly improved teachers' instructional delivery, classroom effectiveness, and students' academic engagement. The study recommended that school administrators should establish regular maintenance culture and ensure proper utilization of educational facilities to improve teaching effectiveness in secondary schools.

Joemila (2023) carried out a study on utilization and maintenance of school plant in public secondary schools in Rivers State, Nigeria. The study aimed at investigating the extent to which school plant maintenance and utilization influence teachers' effectiveness in public secondary schools. Two research questions and two hypotheses guided the study. The study adopted a descriptive survey design. The population consisted of principals and teachers in public secondary schools in Rivers State, while a sample size of 520 respondents was selected using proportionate stratified sampling technique. Data were collected using a researcher-developed questionnaire and analyzed using mean scores and standard deviation, while chi-square statistics was used for hypothesis testing. The findings indicated that regular maintenance of school facilities and effective utilization of educational resources positively influenced teachers' classroom management, instructional delivery, and productivity. The study recommended adequate funding for maintenance of school facilities and proper supervision of facility utilization in secondary schools.

This study is anchored on the Systems Theory propounded by Ludwig von Bertalanffy in 1968. The Systems Theory views an organization as a set of interrelated and interdependent components working together to achieve predetermined goals and objectives. The theory explains that every system consists of different parts which function collectively for the effectiveness and survival of the entire system. In the educational system, components such as teachers, students, administrators, instructional materials, and school facilities interact continuously to promote effective teaching and learning. The Systems Theory is relevant to educational administration because schools operate as open systems where the effectiveness of one component directly influences the performance of other components within the system. School plant facilities such as classrooms, laboratories, libraries, workshops, and recreational centres are important parts of the educational system that contribute significantly to instructional effectiveness and teachers' productivity. Therefore, proper maintenance and effective utilization of these facilities are necessary for creating conducive teaching and learning environments.

The theory further emphasizes that when school facilities are properly maintained and adequately utilized, teachers are likely to perform their professional responsibilities more effectively due to the availability of supportive and conducive learning environments. Conversely, poor maintenance and ineffective utilization of school facilities may negatively affect teachers' morale, classroom management, instructional delivery, and

overall job performance. The Systems Theory therefore provides an appropriate theoretical foundation for explaining the relationship between school plant management and teachers' job performance in public secondary schools in North Central Nigeria.

3.0 Research Methodology

This study adopted a descriptive survey research design to investigate the influence of school plant management on teachers' job performance in public secondary schools in North Central Nigeria. The study was conducted in the six North Central states of Nigeria comprising Benue, Kogi, Kwara, Nasarawa, Niger, and Plateau States. The population of the study consisted of 42,232 respondents made up of 9,068 principals and 33,164 teachers in public secondary schools within the study area. A sample size of 4,223 respondents representing 10% of the total population was selected using proportionate stratified random sampling technique. Data for the study were collected using a structured questionnaire titled "Influence of School Plant Management on Teachers' Job Performance Questionnaire (ISPMTJPQ)" developed by the researchers. The instrument consisted of two clusters containing items on school plant maintenance and school plant utilization. The questionnaire was structured on a four-point rating scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) weighted 4, 3, 2, and 1 respectively. The instrument was subjected to face and content validity by experts in Educational Management and Measurement and Evaluation. The reliability of the instrument was established using Cronbach

Alpha reliability method which yielded a reliability coefficient of 0.82, indicating that the instrument was reliable for the study.. Descriptive statistics of mean and standard deviation were used to answer the research questions. A criterion mean of 2.50 was used as the benchmark for decision making, where mean scores of 2.50 and above were regarded as agreed, while mean scores below 2.50 were regarded as disagreed.

4.0 Data Presentation and Analysis

The data collected for this study were analyzed using mean and standard deviation to answer the research questions. A benchmark mean score of 2.50 was used for decision making. Any item with a mean score of 2.50 and above was accepted, while items with mean scores below 2.50 were rejected.

Research Question One

What is the influence of school plant maintenance on teachers' job performance in public secondary schools in North Central Nigeria?

Table 1: Mean and Standard Deviation Scores on the Influence of School Plant Maintenance on Teachers' Job Performance in Public Secondary Schools in North Central Nigeria

S/ N	Item Description	SA	A	D	S D	Mea n ($\bar{X}$)	Std. Dev.	Decisio n
1	Regular maintenance of school facilities improves teachers' classroom effectiveness.	250	144	15	11	3.44	0.71	Agree
		0	1	6	8			

2	Well-maintained classrooms create a conducive teaching environment for teachers.	320 5	835	10 6	69	3.50	0.67	Agree
3	Functional school facilities enhance teachers' instructional delivery and motivation.	105 1	309 6	50	18	3.32	0.66	Agree
4	Proper maintenance of laboratories and libraries supports effective teaching activities.	200 0	217 5	25	15	3.34	0.65	Agree
5	Maintenance of school infrastructure improves teachers' productivity and job satisfaction.	217 2	202 8	5	10	3.42	0.62	Agree
Cluster Mean						3.40	0.66	Agree

Table 1 shows that all the items on school plant maintenance recorded mean scores above the criterion mean of 2.50. Specifically, item 1 had a mean score of 3.44 with a standard deviation of 0.71, item 2 recorded a mean score of 3.50 with a standard deviation of 0.67, item 3 had a mean score of 3.32 with a standard deviation of 0.66, item 4 recorded a mean score of 3.34 with a standard deviation of 0.65, while item 5 had a mean score of 3.42 with a standard deviation of 0.62. Since all the mean scores exceeded the benchmark mean of 2.50, the respondents agreed with all the items presented in the cluster. The cluster mean score of 3.40 further indicates that respondents generally agreed that school plant maintenance significantly

influences teachers' job performance in public secondary schools in North Central Nigeria. The relatively low standard deviation values suggest that respondents' opinions were closely related, indicating consistency in their responses.

Research Question Two

What is the influence of school plant utilization on teachers' job performance in public secondary schools in North Central Nigeria?

Table 2: Mean and Standard Deviation Scores on the Influence of School Plant Utilization on Teachers' Job Performance in Public Secondary Schools in North Central Nigeria

S/ N	Item Description	SA	A	D	S D	Mea n ($\bar{X}$)	Std. Dev.	Decisio n
6	Proper utilization of classrooms enhances effective teaching and learning.	142 1	250 6	15 0	13 8	3.22	0.87	Agree
7	Effective utilization of school facilities reduces overcrowding and improves classroom management.	320 0	840	75	10 0	3.42	0.70	Agree
8	Flexible utilization of school facilities enhances instructional effectiveness.	104 1	309 0	50	34	3.17	0.84	Agree
9	Proper allocation of school facilities promotes teachers' efficiency and students' engagement.	216 0	200 5	30	20	3.29	0.81	Agree
10	Effective utilization of educational facilities enhances collaboration between teachers and	202 0	217 0	13	12	3.10	0.80	Agree

students.			
Cluster Mean	3.24	0.80	Agree

Table 2 reveals that all the items on school plant utilization recorded mean scores above the criterion mean of 2.50. Item 6 had a mean score of 3.22 with a standard deviation of 0.87, item 7 recorded a mean score of 3.42 with a standard deviation of 0.70, item 8 had a mean score of 3.17 with a standard deviation of 0.84, item 9 recorded a mean score of 3.29 with a standard deviation of 0.81, while item 10 had a mean score of 3.10 with a standard deviation of 0.80. Since all the mean scores were above the benchmark mean of 2.50, the respondents agreed with all the items in the cluster. The cluster mean score of 3.24 indicates that respondents generally agreed that school plant utilization significantly influences teachers' job performance in public secondary schools in North Central Nigeria. The standard deviation values further show that respondents' opinions were relatively close, indicating consistency in their responses.

5.0 Discussion of Findings

The findings of this study were discussed based on the research questions that guided the study. The first finding revealed that school plant maintenance significantly influences teachers' job performance in public secondary schools in North Central Nigeria. The respondents agreed that regular maintenance of classrooms, laboratories, libraries, and other educational facilities enhances teachers' instructional delivery, classroom

management, motivation, and overall productivity. This finding implies that a conducive and properly maintained school environment creates comfort and encourages teachers to effectively perform their instructional responsibilities. The finding is in agreement with Joemila (2023), who reported that effective maintenance of school facilities contributes positively to teachers' classroom effectiveness and educational productivity. The finding also supports Godwin (2021), who found that schools with proper maintenance culture experience improved teacher commitment and better instructional delivery. The similarity in these findings may be attributed to the fact that functional and well-maintained facilities reduce stress associated with poor learning environments and provide teachers with the necessary support for effective teaching activities.

The second finding revealed that school plant utilization significantly influences teachers' job performance in public secondary schools in North Central Nigeria. The respondents agreed that proper utilization of classrooms, laboratories, libraries, and other school facilities improves instructional effectiveness, reduces overcrowding, and promotes better interaction between teachers and students. This suggests that effective utilization of school facilities contributes to improved classroom coordination and enhances the overall teaching-learning process. The finding agrees with Brown and Green (2020), who observed that effective utilization of educational facilities enhances learning experiences and improves teachers' classroom performance. Similarly, Owolabi and Weli (2021) found that

schools that properly utilize available facilities tend to record higher levels of teacher productivity and student engagement. This finding therefore underscores the importance of effective utilization of school facilities in promoting quality teaching and improving teachers' job performance in public secondary schools.

Summary of Findings

The following findings emerged from the study:

- i. School plant maintenance significantly influences teachers' job performance in public secondary schools in North Central Nigeria.
- ii. School plant utilization significantly influences teachers' job performance in public secondary schools in North Central Nigeria.

6.0 Conclusion

This study examined the influence of school plant management on teachers' job performance in public secondary schools in North Central Nigeria with particular focus on school plant maintenance and school plant utilization. The findings revealed that effective maintenance and proper utilization of school facilities significantly influence teachers' job performance by improving instructional delivery, classroom management, teachers' motivation, and overall productivity. The study further established that well-maintained and adequately utilized school facilities such as classrooms, laboratories, libraries, and other educational infrastructures create conducive teaching and learning environments that support effective implementation of

educational programmes. The study therefore concluded that effective school plant management remains an essential factor in improving the quality of teaching and learning in public secondary schools in North Central Nigeria, as proper maintenance and utilization of school facilities enhance teachers' capacity to effectively perform their professional responsibilities and contribute positively to educational development.

7.0 Recommendations

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

- i. State Ministries of Education and school administrators in North Central Nigeria should establish regular maintenance programmes for school facilities through periodic inspection, renovation, and adequate funding to ensure conducive teaching environments that will enhance teachers' job performance.
- ii. School principals and educational managers should ensure proper utilization of available school facilities by implementing effective supervision and scheduling systems to reduce overcrowding and improve teachers' instructional effectiveness.

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