

The Perceived Factors Influencing the Maintenance of School Infrastructures in a Depressed Economy among Secondary School Principals in Ogun State, Nigeria

Ibe-Moses, Kelechi C.

Dike, Ebube Olivia

Ogbonna, Enyichukwu Ogbonna

Akinsanya, Rebecca

Olalekan Toyin

Abstract: Maintaining public school infrastructures in a depressed economy is critical because these institutions operate in a highly competitive environment where their reputation is tied to academic performance and the quality of their facilities. This study investigated the perceived factors influencing the maintenance of school infrastructures in a depressed economy among secondary school principals in Ogun State, Nigeria. A cross-sectional descriptive research design was adopted. One hundred and thirty-one (131) respondents were estimated and participated in this study. All questionnaires were distributed, adequately filled and used in the analysis. Proportionate sampling method was employed for the select sample size from the population of the study. The information collected from the respondents were sorted, coded, and entered in data sheet created in the Statistical Package for the Social Sciences (SPSS). Descriptive statistics of frequency distribution mean and standard deviation and multiple regression were used to analyze the data. The study revealed that preventive maintenance ($B = .346$, $t = 4.195$, $p = .000 < .05$), administrative advocacy ($B = .251$, $t = 3.806$, $p = .007 < .05$), resources mobilization ($B = .213$, $t = 3.009$, $p = .000 < .05$), and inventory management ($B = .199$, $t = 2.808$, $p = .011 < .05$) have significant positive influence on the maintenance of school infrastructures. Additionally, 33.8% of changes in the maintenance of school infrastructures were explained by the combined effect of preventive maintenance, inventory management, resources mobilization, administrative advocacy ($R^2 = .340$, $\text{Adj.}R^2 = .338$, $F(4,127) = 6.556$, $p < 0.05$). The study concluded that both the government and stakeholders must join hands to ensure the sustenance of school plant maintenance operations in public secondary schools in Nigeria.

INTRODUCTION

The dissemination of quality knowledge by educational institutions is critical to national competitiveness. It is only quality education that can sharpen the minds of the individual and help transform the society economically, socially, and politically. Quality and functional labor development through education is seen as a primary tool for national development. This is because graduates and undergraduates who are properly exposed by the institutions they attended, to quality education often contribute meaningfully to the development of the society at large.

The provision of quality and functional education enables the citizens to acquire skills and techniques which are ploughed into human productivity, creativity, competence, initiative, innovation, and inventiveness (Akinbode et al., 2023). Attainment of quality in higher education requires adequate teaching and non-teaching staff to match the growing admissions. It is the task of quality and functional education to address critical issues like the dignity of labour, quality leadership and committed citizenship, industrial harmony, political stability, religious tolerance, self-reliance, and security (Nwosu & Ayodele, 2013, Romina, 2013). This is in relation to the fact that citizens who are exposed to such education are well refined in cognitive, affective, and psychomotor aspects of learning. This makes them more balanced in taking up individual, business, and societal responsibilities.

A crucial instrument for achieving secondary school goals is the proper management of school facilities. In this depressed economy of Nigeria, high-quality educational development is greatly aided by the efficient and successful administration of school facilities. According to Olujide (2001), qualified and dedicated principals are necessary to achieve successful facilities management. The land, buildings, tangible equipment, leisure areas, and publications used to accomplish educational goals are all considered school facilities (Oluchukwu, 2002). When school facilities are properly managed, high educational levels are attained. This occurs when students live in hygienic, appealing, and comfortable learning environments, have well-equipped laboratories, libraries, and workshops, and classrooms and dorms that are conducive to productive learning (Onu & Ibe-Chiemeke, 2022).

Ogbonnaya (2013) referred to the principal as “the Chief Executive of secondary schools in Nigeria”. This simply means that the principal has the responsibility of ensuring that school buildings, facilities and total school environment are properly managed in order to ensure effective instructional delivery in the school. Their duties include organizing routine inspections, managing maintenance budgets, overseeing repair work, and implementing policies that protect school property. Effective maintenance directly influences the learning environment and academic performance. Therefore, the management of school facility rests squarely on the principal who is an administrator and an instructional leader of the school (Akinbode et al., 2023).

Principals of secondary schools play very vital roles in the realization of educational goals. The Federal Republic of Nigeria (FRN) 2013 in National Policy

on Education outlined the objectives of secondary school education to include among others to inspire students with the desire for self-improvement and achievement of excellence. In order to achieve these laudable goals and objectives, secondary schools need effective management and leadership. They need school administrators (principals) who can mobilize parents, teachers, students and other stakeholders to get involved meaningfully in the school system. One of the primary functions of secondary school principals is management and maintenance of school facility because the success or failure of the educational system depends on the judicious management of schools by the principals (Onu & Ibe-Chiemeke, 2022; Eziuzo & Idoko, 2005).

Management is the process of utilizing human and material resources to achieve specified goals and objectives. Additionally, management is the utilization of physical and human resources through cooperative efforts and it is accomplished by performing the function of planning, organizing, staffing, directing and controlling of the day to day running of an organization (Akinbode et al., 2023; Babarinde, 2002). Maintenance of school facilities is the keeping of the school facilities as near their original state conditions to meet the requirements of the educational programmes, (Obi, 2019; Ofojebe, 2013).

The routine administrative duties of school heads should include the management and upkeep of the school's facilities. Since the government and the school have committed a significant amount of funds in the procurement and it is a crucial responsibility that should not be disregarded. The role of a secondary school principal in facility management is a multifaceted administrative responsibility. To ensure school infrastructure remains safe, functional, and conducive to learning, principals are expected to execute several core strategies such as preventive and routine maintenance, record keeping and inventory management, resource and personnel mobilization, as well as administrative advocacy and funding.

Schools with regular upkeep are more administratively effective. A well-maintained environment increases teaching and learning, boosting student performance and staff productivity (Akinnubi et al., 2024; Ohia, 2020). School administrators may focus on strategic management and educational results when buildings are in excellent shape rather than upkeep. More efficient and effective management boosts school achievement (Ogbuka, 2019). Inventory management serves as the foundation for secondary school principals to effectively maintain school facilities. By meticulously tracking assets from classroom furniture and laboratory apparatus to sports equipment— principals can prevent resource shortages, quickly identify damages, and justify budget allocations for routine and emergency repairs

Preventive maintenance is a proactive approach focused on scheduled inspections, routine servicing, and timely repairs to prevent school equipment and buildings from breaking down. This maintenance involves regular inspection, servicing, and upkeep of equipment, structures, and systems to prevent potential failures or malfunctions before they occur (Stephens, 2010). It aims to create a safe, comfortable, and conducive learning environment for students and staff by

reducing the risk of sudden breakdowns or costly repairs (Olaifa et al., 2024). Secondary school principals play a critical administrative role in keeping school facilities safe, functional, and conducive to learning by enforcing structured maintenance systems.

Resource mobilization is the process of acquiring and managing essential human, financial, and material assets to achieve school goals. It directly drives school effectiveness by ensuring teachers have adequate teaching materials, creating supportive learning environments, and optimizing the delivery of the curriculum. In educational settings with limited resources, resource mobilization has emerged as a vital addition to public finance (Kinyanjui, 2024). Principals play a key role in organizing local funding and support from parents, business owners, religious institutions, and alumni (Okumu, 2021). The total amount of money raised annually, the number of successful fundraising events, and the degree of community stakeholder engagement are all indicators of this strategy. In order to mobilize the community around school development objectives, administrators must possess good communication, event planning, and trust-building abilities (Kamau et al., 2022).

Principals' administrative advocacy and resource management are critical competencies that shape school effectiveness, student achievement, and overall institutional productivity (Akinbode et al., 2023). According to Ololube (2019), effective administrative practices by principals create an enabling environment that promotes teaching and learning, fosters collaboration, and ensures accountability within the school system. The principal's ability to balance these responsibilities significantly influences the overall functioning of the school. Thus, by actively securing resources, forging community partnerships, and prudently managing school funds, principals directly optimize the teaching and learning environment. Levina et al. (2025) reported that in process approach, desired result is achieved more efficiently as the various activities and related resources are managed as a process. This implies that when inputs are of good state, well-managed, and the desired outcome would be made manifest.

In many public institutions of learning, students are found standing outside the classrooms receiving lectures because their population has outstripped the classroom space that are available. The implication of this is that output from this investment process in education cannot actually achieve the goals that were set for it. There is widespread shortage of qualified teachers, classrooms, furniture, and a dearth of required funds for teaching materials and textbooks. All these have combined with frequent teachers' strikes and absenteeism, inadequate facilities and resources in recent years to weaken the capacity of the institutions to deliver sound education. It is against this background that this study investigated the factors influencing the maintenance of school infrastructures in a depressed economy as perceived by public secondary school principals in Ogun State, Nigeria.

OBJECTIVES

The main objective of this study was to investigate the factors (preventive maintenance, inventory management, resources mobilization, administrative advocacy) influencing the maintenance of school infrastructures in a depressed economy as perceived by public secondary school principals in Ogun State, Nigeria. Specifically, this study will:

1. investigate patterns of school infrastructure maintenance in schools in a depressed economy
2. assess the influence of preventive maintenance, inventory management, resources mobilization, administrative advocacy on the maintenance of school infrastructures?

METHODOLOGY

Research Design: This study adopted the cross-sectional descriptive research design to investigate the factors associated with the maintenance of school infrastructures in a depressed economy by public secondary school principals in Ogun State, Nigeria

Population: The population consisted of three hundred and thirty-four (334) school principals in public senior secondary schools in Ogun State (Ogun State Teaching Service Commission, 2023).

Sample and Sampling Techniques: One hundred and thirty-one (131) public senior secondary school principals constituted the sample of the study. This study adopted proportionate sampling method. The principals were selected from disarticulated public senior secondary schools and combined public senior secondary schools in the three senatorial districts comprising of four (4) major divisions namely: Remo, Ijebu, Yewa, and Egba (RIYE) in Ogun State.

Instrumentation: A self-developed instrument was used for data collection. The scale is titled “factors associated with the maintenance of school infrastructures in a depressed economy” and consisted of 28 items. The items are measured using a multi-phased response. It was subjected to pilot testing in secondary schools which the current study did not cover in the study sample, hence the reliability co-efficient of 0.834 was calculated showing that the questionnaire is consistent in measuring what it is supposed to measure.

Procedure for the Administration of Instruments: The researchers and four other research assistants employed and trained for the purpose of this study visited all the selected public secondary schools in Ogun State to administer the instrument.

Method for Data Analysis: The data collected was analyzed using both descriptive statistics (frequency counts and simple percentages) and inferential statistics (logistic Regression Analysis) for the hypotheses fixed at the 0.5 level of significance.

RESULTS

Table 1: Information of the Maintenance of School Infrastructures (N = 131)

		Freq.	Percent
What is the present state of infrastructure in your school?	Very Poor	29	22.1
	Poor	14	10.7
	Average	73	55.7
	Good	15	11.5
	Excellent	-	-
How often do you carry out routine maintenance of school infrastructure?	No Scheduled	30	22.9
	Emergencies only	-	-
	Whenever we have fund	72	55.0
	Every Year	15	11.5
	Every term	14	10.7
Which of these reasons best describe the reason for the frequency of infrastructure maintenance?	No fund is allocated	75	57.3
	Little fund allocated	16	12.2
	Insufficient fund allocated	27	20.6
	Enough fund	13	9.9

Table 1 shows the information pertaining to the maintenance of the school infrastructure, the result from the table is largely skewed towards the state of infrastructure in the school been average (55.7%), with some infrastructure in the school been in a very poor condition (22.1%) while there were no structures in the school in excellent condition. In the aspect of routine maintenance, the result shows that routine maintenance on majority of the infrastructure were done when there is provision of funds (55%) while maintenance on some of the infrastructure is carried out impromptu (22.9%). Additionally, the reason best describe the reason for the frequency of infrastructure maintenance is attributed to lack of fund allocated to the schools (57.3%).

Table 2: Information of the Factors that may affect Maintenance of School Infrastructures (N = 131)

		Freq.	Percent
What is the official channel of getting fund for maintenance of school facilities	Parents / PTA	30	22.9
	Government	45	34.4
	Old Student	56	42.7
	Philanthropists	-	-
	Learners' Development fund	-	-
How often do you get the needed fund from the officially approved channel for facility maintenance?	Never	-	-
	Rarely	131	100.0
	Regularly	-	-
	Always	-	-
How adequate is the fund from the official channel for the maintenance of school facility	Insufficient	131	100.0
	Sufficient	-	-
	Adequate	-	-

	More than enough	-	-
What do you think accounts for Insufficient Fund for maintenance of school facilities?	Poor fund management	14	10.7
	Misappropriation	-	-
	Economic meltdown	73	55.7
	Irregular release of fund	44	33.6
How much in your estimate would be required for maintenance of school facilities every year?	N50,000 to N200,000	28	21.4
	N200,000 to N400,000	15	11.5
	N400,000 to N600,000	-	-
	N600,000 to N800,000	14	10.7
	N800,000 to 1,000,000	29	22.1
	Above N1,000,000	45	34.4
What is the average amount of money released for maintenance of school facilities annually?	N50,000 to N200,000	87	66.4
	N200,000 to N400,000	16	12.2
	N400,000 to N600,000	-	-
	N600,000 to N800,000	-	-
	N800,000 to 1,000,000	28	21.4
	Above N1,000,000	-	-
How often do you enjoy support from the PTA for infrastructure maintenance?	Never	31	23.7
	Rarely	14	10.7
	Occasionally	72	55.0
	Often	14	10.7
	Always	-	-
How often do you enjoy support from old students for infrastructure maintenance?	Never	15	11.5
	Rarely	16	12.2
	Occasionally	86	65.6
	Often	14	10.7
	Always	-	-

Table 2 shows the information on the factors concerning maintenance of school infrastructure, the result show that the school uses the old students as the major channel for getting funds for the maintenance of school facilities (42.7%), then followed by the intervention of the government (34.4%), then the parents through PTA (22.9%). The results also point that the funds that are gotten from the official channel for maintenance of the school facilities are rarely provided and insufficient. Administrators interviewed indicated that the major reason for insufficient funds been provided for the maintenance of school facilities is due to the economic meltdown (55.7%) in the country, followed by irregular release of those funds (33.6%) and then lastly poor mismanagement of funds (10.7%). The Result shows that most administrators estimate a budget of over 1,000,000 would be required for the maintenance of the school facilities annually (34.4%), there was a fair percentage distribution amongst administrators that estimate a budget of 50,000-200,000 (21.4%) and 800,000-1,000,000 (22.1%), with a few administrators estimating a budget of 200,000-400,000 will suffice for maintenance.

Table 3: Influence of preventive maintenance, inventory management,

resources mobilization, administrative advocacy on the maintenance of school infrastructures

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	41.038	4.881		7.998	.000
	Preventive maintenance	.501	.190	.346	4.195	.000
	Inventory management	.385	.116	.199	2.808	.011
	Resources mobilization	.403	.109	.213	3.009	.000
	Administrative advocacy	.461	.114	.251	3.806	.007
Model	Sum of Squares	Df	Mean Square	F	Sig.	
	Regression	327.932	4	81.983	6.556	.000b
	Residual	1588.135	127	12.505		
	Total	1916.067	131			
R = .583; R ² = .340; Adj. R ² = .338; SE = 4.881						
a. Dependent Variable: Maintenance of School Infrastructures						
b. Predictors: (Constant), preventive maintenance, inventory management, resources mobilization, administrative advocacy						

The result in Table 3 revealed that preventive maintenance ($B = .346$, $t = 4.195$, $p = .000 < .05$), administrative advocacy ($B = .251$, $t = 3.806$, $p = .007 < .05$), resources mobilization ($B = .213$, $t = 3.009$, $p = .000 < .05$), and inventory management ($B = .199$, $t = 2.808$, $p = .011 < .05$) have significant positive influence on the maintenance of school infrastructures. This implies that preventive maintenance, inventory management, resources mobilization, administrative advocacy are good predictors of maintenance of school infrastructures by the principals. This implies that an increase in preventive maintenance, inventory management, resources mobilization, administrative advocacy will lead to an increase in maintenance of school infrastructures by the principals in secondary schools.

Additionally, when preventive maintenance, inventory management, resources mobilization, and administrative advocacy entered into the regression model at once, a significant combined influence was found on the maintenance of school infrastructures by the principals in secondary schools ($F_{(4,127)} = 6.556$, $p < 0.05$). Since the p-value (.000) is less than 0.05, the null hypothesis was rejected. This implies that preventive maintenance, inventory management, resources mobilization, administrative advocacy jointly and significantly predicted the maintenance of school infrastructures by the principals.

The model further showed that the four predictor variables jointly accounted for 34% of the variance in the maintenance of school infrastructures ($R^2 = .340$), while the adjusted contribution was 33.8% ($\text{Adj. } R^2 = .338$). This indicates that 33.8% of changes in the maintenance of school infrastructures were explained by the combined effect of preventive maintenance, inventory management, resources mobilization, administrative advocacy, while the remaining 66% was explained by other factors outside the model.

The outcome of this study revealed that one third of the improvement in the maintenance of school infrastructures were explained by the combined influence of preventive maintenance, inventory management, resources mobilization, administrative advocacy. For instance, it was found that resource mobilization was a good predictor in this study, which shows that when principals look beyond basic government grants and actively employ creative strategies to secure resources, educational goals will be achieved and resources management are made easy. This alignment demonstrates that community fundraising is acknowledged and practised by various stakeholders. The active involvement of communities in school fundraising aligns with Smith (2025), who found that effective school leadership encourages community engagement in educational fundraising. Additionally, Adeyemi et al. (2024) noted that mobilising community resources improves schools' ability to create supportive learning environments.

Administrative advocacy was found to be a potent factor in predicting maintenance of school infrastructures by the school principal. This is because administrative advocacy is embedded in a process approach, which is viewed as a method of investing the available resources towards achieving efficient result or outcome by ensuring certain control measures in order to meet the set goals and objectives of education. This finding is in tandem with Levina et al. (2025) findings that in process approach, desired result is achieved more efficiently as the various activities and related resources are managed as a process.

CONCLUSION

School facilities constitute a very critical input for the maintenance of objectives of secondary education in Africa. There is a serious need to ensure that the school plant entrusted to school administrators is properly maintained to ensure a clean and conducive environment for effective teaching and learning. Both the government and stakeholders must join hands to ensure the sustenance of school plant maintenance operations in public secondary schools in Nigeria.

RECOMMENDATION

In order to entrench maintenance culture and ensure efficient performance of school plant maintenance activities, the following strategies are hereby recommended:

1. Adequate tools should be provided to make it possible and easier to perform various tasks on school plant maintenance.
2. There should be increased budgetary allocations so as to provide adequate finances to purchase necessary tools required for effective execution of maintenance operations and to pay for maintenance services of hired staff.
3. School administrators need to prudently manage their limited funds and explore other sources of funding so as to ensure sustainable school facilities maintenance.
4. There should be regular inspection of school facilities so as to detect damaged equipment, furniture or infrastructure for prompt repairs.

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