

PERCEIVED INFLUENCE OF PRINCIPALS' ADMINISTRATIVE STRATEGIES ON SCHOOL PLANT MAINTENANCE IN SECONDARY SCHOOLS IN BENUE STATE OF NIGERIA

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Abstract: Secondary education is very important level of education in Nigeria where solid foundation for higher education and useful living is laid. The study investigated influence of Principals' administrative strategies on school plant maintenance in Secondary schools in Benue State, Nigeria. Seven specific objectives with corresponding research questions guided the study while seven hypotheses were formulated and tested at 0.05 level of significance. Survey research design was adopted and a population of 618 Principals and Vice principals from 309 public Secondary schools in Benue State was used. The sample size was the entire population which was effectively managed by the researcher. The instrument for data collection was a structured questionnaire titled 'Influence of Principals' Administrative Strategies on School Plant Maintenance Questionnaire (IPASSPMQ)'. It was validated by experts and its reliability was established using Cronbach Alpha Method which yielded a coefficient of 0.82. Data collected for the study were analysed using Means and Standard deviation to answer the research questions while Chi-square was used to test the hypotheses at 0.05 level of significance. The findings of the study revealed that Principals' planning, organizing, staffing, directing, coordinating, reporting and budgeting strategies have significant positive influence on school plant maintenance in public secondary schools in Benue State, Nigeria. Based on these findings, the researcher recommended among others, that Principals should apply strategies of planning, organizing, staffing, maintenance, directing, coordinating, reporting and budgeting to effectively maintain secondary school plants in Benue State, Nigeria.

Keywords: Principals, Secondary school, School plant, Maintenance.

1. INTRODUCTION

Education is the process by which students acquire the relevant knowledge, skills, and values to ensure proper intellectual and character development of individuals for self-reliance and responsible citizenship. Consequently, in Nigeria today there are two types of education namely: formal and informal education. While informal education can take place anywhere outside the school system, formal education only takes place in classroom at the three levels of Education namely primary, secondary and the tertiary education.

Secondary education is a very important level of education in Nigeria where solid foundation for higher education and useful living is laid. According to the Federal Republic of Nigeria (FRN, 2013), secondary education is the form of education children receive after primary education and before tertiary stage. Specifically, the secondary education should

provide an increasing number of primary school leavers with the opportunity for education of a higher quality irrespective of sex, or social, religious and ethnic background. It attempts to instill in the students respect for the views and feelings of others, respect for dignity of labour and appreciate those values specified under the broad national aims while living as good citizens of the nation. By this, Nigerian unity will be fostered with an emphasis on the common ties that unite the various diversities of her people, inspire its students with a desire for achievement and self-improvement both at school and in later life (FRN, 2013).

The task of effectively managing secondary schools in Nigeria lie in the hands of Principals, as schools' chief executives. They are expected to coordinate the school system in attaining the desired set objectives. As administrators of secondary schools in Nigeria, they are equally expected to be leaders, controllers, and custodians of both academic and extra-curricular activities of the schools; ie, providing instructional leadership by coordinating curricular, co-curricular programmes on the one hand and the general administration of secondary school on the other hand (Agu & Okoli 2021).

Administration is essential in every human organization ranging from industrial firms, hospital organizations, business enterprises, churches and educational institutions for the achievement of stated objectives. School as an organization cannot achieve its goals without proper and effective administration of its human and material resources. According to Agoha (2008), administration as a component part of management is concerned with facilitating the accomplishment of the objectives of an organization through systematic management of constraints and careful utilization of the available limited resources. Principals perform the administrative functions and the day-to-day activities/programmes and policies of the schools (Achimugu, 2008), depending on the Principals' administrative, supervisory, and organizational styles/strategies.

Secondary school administration is expected to provide education in an environment that will enhance effective teaching and learning. It is the expectation of the government, parents and even students that quality education is received by students in Nigeria's secondary schools through the adoption of appropriate administrative strategies by the principals, to ensure that the available school plant is kept in its original state of utility as much as possible through supervision, monitoring, assessment, evaluation and dissemination of current information on management and academic techniques to teachers leading to effective teaching and learning process. The importance of proper, timely and adequate maintenance of school plant cannot be under-estimated, in view of the huge cost of procurement of new materials. School plant maintenance involves all the activities carried out to sustain the use and value of school facilities, due to the continuous utilization of buildings, grounds and facilities result in their wear and tear. Maintenance of school plant involves, keeping grounds, buildings and equipment in their original condition of completeness or efficiency (Uduak (2018). The Principal, as the executive head of the school, makes decisions and implements policies as well as programmes (administrative strategies) (Achimugu, 2008) with a view of maintaining the school plant.

Administrative strategies can be described as well-planned series of actions or ways through which the available resources are managed and utilized for the achievement of stated objectives (Amanchukwu & Ololube, 2015); or the sum of the various processes of planning, organizing, stimulating, coordinating, staffing, budgeting, communicating and evaluating (Ogbonnaya, Oboegbulem, Onwura & Enyi 2013). According to Ochai (2012), the basic elements for administrative strategies adopted by school principals in school plant maintenance are represented in an acronym called POSDCORB (planning, organizing, staffing, directing, coordinating, reporting and budgeting). Owing to the importance of administration in the day to day effective maintenance of secondary schools, this study was therefore designed to investigate the influence of principals' administrative strategies of planning, organizing, staffing, directing, coordinating, reporting and budgeting on school plant maintenance in secondary school in Benue state.

Research Design

A survey research design was employed for the study. All six hundred and eighteen (618) Principals and Vice principals of 309 public Senior Secondary Schools in Benue State (Benue State Ministry of Education, Makurdi, 2022) were recruited for the study. They were administered a 61 items self-structured questionnaire tagged "Influence of Principals' Administrative Strategies on School Plant Maintenance Questionnaire" (IPASSPMQ)". The questionnaire was arranged in 7 clusters with cluster 1 having 11 items and the remaining 6 clusters having 10 items in each. cluster 1 seeks information on Planning, cluster 2 on Organizing, cluster 3 on Staffing and cluster 4 on Directing. Clusters 5, 6 and 7 are on Coordinating, Reporting and Budgeting respectively on school plant maintenance in Benue State, Nigeria. The response to the items in the questionnaire was scored on a four-point rating scale as: Very High Influence (VHI)-4, High Influence (HI)-3, Low Influence (LI)-2 and Very Low Influence (VLI)-1. The instrument was earlier subjected to face and

content validation by three experts from the Department of Educational Foundations and General Studies, Joseph Sarwuan Tarka University, Makurdi; two of whom are from Educational Administration and Planning while one is from Measurement and Evaluation.

To ensure the reliability of the instrument, 40 copies of the instrument were trial-tested on 20 public school Principals, and their Vices in Lafia L.G.A of Nasarawa State which is not part of the sample, but have similar characteristics to test the internal consistency of the instrument. The data collected were analyzed using Cronbach Alpha Statistic to compute the reliability estimate. The result showed a mean reliability co-efficient of 0.82. the direct delivery and retrieval method was employed in the administration of the questionnaire as this ensured a high return of distributed copies of the questionnaire at the end of the exercise.

Research Questions

The study was designed to provide answer to the 7 research questions and the corresponding null hypothesis as given below:

1. How does principals’ planning strategy influence school plant maintenance in secondary schools in Benue State?
2. How does principals’ organizing strategy influence the school plant maintenance in secondary school?
3. How does principals staffing strategy influence school plant maintenance in secondary schools?
4. How does principals directing strategy influence the school plant maintenance in secondary schools?
5. How does principals coordinating strategy influence school plant maintenance in secondary schools?
6. How does principals reporting strategy influence school plant maintenance in secondary schools?
7. How does principals budgeting strategy influence the school plant maintenance in secondary schools?

2. DATA ANALYSIS

The data collected was analyzed using the mean and standard deviation to answer the research questions while chi-square statistics was used to test the null hypotheses. The cut-off points of 2.50 was used for decision making such that any item with a mean score of 2.50 and above was agreement with the item and considered “*High Influence*” while a mean score below 2.50 was disagreement to the item and considered “*Low Influence*”. Acceptance or rejection of hypotheses was based on the p-value and alpha value. A hypothesis of no significant influence was not rejected for any cluster of items whose p-value was equal to or greater than alpha value of 0.05($p \geq 0.05$) while it was rejected for any cluster of items whose p-value is less than alpha value of 0.05 ($p < 0.05$).

3. RESULT

The result of the study on the ‘Perceived influence of Principals’ administrative strategies on school plant maintenance in secondary schools in Benue state of Nigeria’, being answers given by the respondents in answering the 7 research questions and the hypotheses are presented in table 1 and tables 2-8 respectively.

Table 1. Cluster index score with mean and standard deviation of Principals’ administrative strategies

Strategy	VHI	HI	LI	VLI	Mean	Std	Remarks
Planning	274	227	79	38	3.19	0.86	HI
Organizing	185	300	124	9	3.07	0.74	HI
Staffing	256	260	92	10	3.23	0.73	HI
Directing	248	245	100	25	3.16	0.82	HI
Coordinating	279	217	109	13	3.23	0.79	HI
Reporting	240	248	104	26	3.14	0.82	HI
Budgeting	350	135	113	20	3.32	0.82	HI

n= Number of Respondents; Std = Standard Deviation; VHI = Very High Influence; HI=High Influence; LI =Low Influence and VLI= Very Low Influence

Table 1 showed the cluster index with mean scores and standard deviation on influence of Principals’ planning, organizing, staffing, directing, coordinating, reporting and budgeting strategies on the school plant maintenance in secondary schools in Benue State. The result showed a respective mean score of 3.19, 3.07, 3.23, 3.16, 3.23, 3.14 and 3.32

and 3.41 with corresponding standard deviations of 0.86, 0.74, 0.73, 0.82, 0.79, 0.82 and 0.82. These mean scores were all greater than the cut-off point of mean 2.50 on a four-point scale, implying that all the Principals' planning, organizing, staffing, directing, coordinating, reporting and budgeting strategies have high influence on school plant maintenance in secondary schools in Benue State.

The test of Hypotheses using Chi-square (χ^2) at 0.05 level of significance were outlined in tables 2-8.

Table 2: Chi-Square Test of Goodness-of-Fit Analysis of the Influence of Principal's Planning Strategy on School Plant Maintenance in Secondary Schools in Benue State

Response Options	Fo	Fe	Alpha Level	Df	χ^2	Asymp. Sig.	C	Remark
Very Low Influence	38	154.5						
Low Influence	79	154.5						
High Influence	227	154.5	0.05	3	251.191 ^a	0.000	0.5376	S, R
Very High Influence	274	154.5						
Total(N)	618							

N= Total number of respondents, Fo =Observed frequency, Fe= Expected frequency Df= degree of freedom, χ^2 = chi-square calculated value, Asymp. Sig. = Asymptotic significance value (P-value) under Chi-square test of goodness-of fit analysis (P<0.05), C= coefficient of contingency (effect size), S= Significant, R= rejected

The result in Table 2 shows a p-value of .000 which was less than the alpha value of 0.05 at 3 degrees of freedom (i.e .000 < 0.05; df = 3). This indicates that the test is statistically significant therefore, the null hypothesis is rejected implying that Principals' planning strategy has significant positive influence on school plant maintenance in secondary schools in Benue State Nigeria.

Table 3: Chi-Square Test of Goodness-of-Fit Analysis of the Influence of Principal's Organizing Strategy on School Plant Maintenance in Secondary Schools in Benue State

Response Options	Fo	Fe	Alpha Level	Df	χ^2	Asymp. Sig.	C	Remark
Very Low Influence	9	154.5						
Low Influence	124	154.5						
High Influence	300	154.5	0.05	3	286.091 ^a	0.000	0.5625	S, R
Very High Influence	185	154.5						
Total(N)	618							

N= Total number of respondents, Fo =Observed frequency, Fe= Expected frequency Df= degree of freedom, χ^2 = chi-square calculated value, Asymp. Sig. = Asymptotic significance value(P-value) under Chi-square test of goodness-o-f fit analysis(P<0.05), C= coefficient of contingency (effect size), S= Significant, R= rejected

The result in Table 3 shows a p-value of .000 which was less than the alpha value of 0.05 at 3 degrees of freedom (i.e .000 < 0.05; df = 3). This indicates that the test is statistically significant therefore, the null hypothesis is rejected implying that Principals' organizing strategy has significant positive influence on school plant maintenance in secondary schools in Benue State Nigeria.

Table 4: Chi-Square Test of Goodness-of-Fit Analysis of the Influence of Principal's Staffing Strategy on School Plant Maintenance in Secondary Schools in Benue State

Response Options	Fo	Fe	Alpha Level	Df	χ^2	Asymp. Sig.	C	Remark
Very Low Influence	10	154.5						
Low Influence	92	154.5						
High Influence	260	154.5	0.05	3	299.152 ^a	0.000	0.5711	S, R
Very High Influence	256	154.5						
Total(N)	618							

N= Total number of respondents, Fo =Observed frequency, Fe= Expected frequency Df= degree of freedom, χ^2 = chi-square calculated value, Asymp. Sig. = Asymptotic significance value(P-value) under Chi-square test of goodness-o-f fit analysis(P<0.05), C= coefficient of contingency (effect size), S= Significant, R= rejected

The result in Table 4 shows a p-value of .000 which was less than the alpha value of 0.05 at 3 degrees of freedom (i.e .000 < 0.05; df = 3). This indicates that the test is statistically significant therefore, the null hypothesis is rejected implying that Principals' staffing strategy has significant positive influence on school plant maintenance in secondary schools in Benue State Nigeria.

Table 5: Chi-Square Test of Goodness-of-Fit Analysis of the Influence of Principal's Directing Strategy on School Plant Maintenance in Secondary Schools in Benue State

Response Options	Fo	Fe	Alpha Level	Df	χ^2	Asymp. Sig.	C	Remark
Very Low Influence	25	154.5						
Low Influence	100	154.5						
High Influence	245	154.5	0.05	3	237.366 ^a	0.000	0.5268	S, R
Very High Influence	248	154.5						
Total(N)	618							

N= Total number of respondents, Fo =Observed frequency, Fe= Expected frequency Df = degree of freedom, χ^2 = chi-square calculated value, Asymp. Sig. = Asymptotic significance value(P-value) under Chi-square test of goodness-o-f fit analysis(P<0.05), C= coefficient of contingency (effect size), S= Significant, R= rejected

The result in Table 5 shows a p-value of .000 which was less than the alpha value of 0.05 at 3 degrees of freedom (i.e .000 < 0.05; df = 3). This indicates that the test is statistically significant therefore, the null hypothesis is rejected implying that Principals' directing Strategy has significant positive influence on school plant maintenance in secondary schools in Benue State Nigeria.

Table 6: Chi-Square Test of Goodness-of-Fit Analysis of the Influence of Principal's Coordinating Strategy on School Plant Maintenance in Secondary Schools in Benue State

Response Options	Fo	Fe	Alpha Level	Df	χ^2	Asymp. Sig.	C	Remark
Very Low Influence	13	154.5						
Low Influence	109	154.5						
High Influence	217	154.5	0.05	3	268.602 ^a	0.000	0.5504	S, R
Very High Influence	279	154.5						
Total(N)	618							

N= Total number of respondents, Fo =Observed frequency, Fe= Expected frequency Df = degree of freedom, χ^2 = chi-square calculated value, Asymp. Sig. = Asymptotic significance value(P-value) under Chi-square test of goodness-o-f fit analysis(P<0.05), C= coefficient of contingency (effect size), S= Significant, R= rejected

The result in Table 6 shows a p-value of .000 which was less than the alpha value of 0.05 at 3 degrees of freedom (i.e .000 < 0.05; df = 3). This indicates that the test is statistically significant therefore, the null hypothesis is rejected implying that Principals' Coordinating Strategy has significant positive influence on school plant maintenance in secondary schools in Benue State Nigeria.

Table 7: Chi-Square Test of Goodness-of-Fit Analysis of the Influence of Principal's Reporting Strategy on School Plant Maintenance in Secondary Schools in Benue State

Response Options	Fo	Fe	Alpha Level	Df	χ^2	Asymp. Sig.	C	Remark
Very Low Influence	26	154.5						
Low Influence	104	154.5						
High Influence	248	154.5	0.05	3	227.282 ^a	0.000	0.5185	S, R
Very High Influence	240	154.5						
Total(N)	618							

N= Total number of respondents, Fo =Observed frequency, Fe= Expected frequency Df = degree of freedom, χ^2 = chi-square calculated value, Asymp. Sig. = Asymptotic significance value(P-value) under Chi-square test of goodness-o-f fit analysis(P<0.05), C= coefficient of contingency (effect size), S= Significant, R= rejected

The result in Table 7 shows a p-value of .000 which was less than the alpha value of 0.05 at 3 degrees of freedom (i.e .000 < 0.05; df = 3). This indicates that the test is statistically significant hence, the null hypothesis is rejected implying that Principals' reporting strategy has significant positive influence on school plant maintenance in secondary schools in Benue State Nigeria.

Table 8: Chi-Square Test of Goodness-of-Fit Analysis of the Influence of Principal's Budgeting Strategy on School Plant Maintenance in Secondary Schools in Benue State

Response Options	Fo	Fe	Alpha Level	Df	χ^2_{α}	Asymp. Sig.	C	Remark
Very Low Influence	20	154.5						
Low Influence	113	154.5						
High Influence	135	154.5	0.05	3	378.078 ^a	0.000	0.6160	S, R
Very High Influence	350	154.5						
Total(N)	618							

N = Total number of respondents, *Fo* = Observed frequency, *Fe* = Expected frequency *Df* = degree of freedom, χ^2_{α} = chi-square calculated value, *Asymp. Sig.* = Asymptotic significance value (P-value) under Chi-square test of goodness-of-fit analysis (P < 0.05), *C* = coefficient of contingency (effect size), *S* = Significant, *R* = rejected

The result in Table 8 shows a p-value of .000 which was less than the alpha value of 0.05 at 3 degrees of freedom (i.e .000 < 0.05; df = 3). This indicates that the test is statistically significant, thereby rejecting the null hypothesis. This implies that Principals' budgeting strategy has significant positive influence on school plant maintenance in secondary schools in Benue State Nigeria.

4. DISCUSSION

The findings of this study have shown that Principals' planning, organizing, staffing, directing, coordinating, reporting and budgeting strategies have significant positive influence on school plant maintenance in secondary schools in Benue State Nigeria.

School plant planning is an important and valuable asset that influences the effective maintenance of school building, ICT facilities, school furniture school laboratory facilities, and properties in the school surroundings. Planning equally influences renovation of the school plant as at when due and influences the Staff in keeping a proactive maintenance culture. In this context, school plant maintenance has to be on preventive and predictive, ongoing or continuous basis (due to breakdowns or corrective adjustments). This finding is in line with the finding of Adeleke (2018) which revealed that there is a significant relationship between University plant planning and effectiveness in North-central Nigeria. The authors therefrom, concluded that the level of effectiveness in North-central public universities was low which may not be unconnected with the inadequacy of the university plant planning in terms of location, aesthetic, building design, building size, students and employees safety. Thus, the more adequate the university plant planning, the more the universities in North-central Nigeria are effective. The finding also agrees with that of Ijekpa and Mkpa (2020) which found that PTA executives and Principals' agree on the need to apply the strategies of restitution for damages, setting aside equipment fee, and effective monitoring of school plant.

In maintenance of the school plant, it is also important that Principals adopt good organizing strategy because organizing influences proper arrangement of, timely, adequate resource mobilization for school plant maintenance. It also influences the arrangement of school building and other physical facilities for maintenance which may be preventive and predictive, running and corrective. This finding is supported by that of Okeke (2021) which revealed that teachers agreed on the principals' organizing strategy for school plant maintenance in secondary schools in Awka Education Zone. Their finding also revealed that there is no significant difference in the mean ratings of male and female principals on organizing strategies for school plant maintenance in secondary schools in Awka Education Zone.

Staffing is a very important aspect of school plant maintenance as it deals with the human resource of secondary schools. Similarly, staffing is crucial influencing corrective, preventive, timely, maintenance of school plant, while equally influencing resources for, arrangement of maintenance and suitability of physical facilities. This finding is supported by the finding of Arinze (2015) which revealed that secondary schools do not hire qualified personnel nor organize for

capacity building of their personnel for maintenance of physical facilities. The success or failure of the school maintenance strategies by the secondary school Principals is heavily dependent on the disposition of the staff since the principals may not be able to implement the seven-fold strategies solely.

The provision of guidance and accurate direction by the head of any organization is a key contributory factor to the attainment of set objectives. The present study has shown that Principals' directing strategy has significant positive influence on school plant maintenance in secondary schools in Benue State. The responsibility of leaders is to provide direction and guide to the staff in the implementation of set objectives and goals through assigning of task and responsibility to persons. The Principal, as the head of the school influences the proper arrangement of, timely maintenance of, availability of resources for, arrangement of school building for, arrangement of physical facility for, preventive and predictive, running, break down, latest and corrective maintenance of school plant. The finding of Osujl and Young-Arny (2019) which revealed that there is no significant difference between male and female teachers' perceptions of school plant planning and maintenance as a management practice in public secondary schools in Rivers State lends support to the finding of this study as given above.

The coordination provided by school principals as a strategy has been shown to offer significant positive influence on all aspects of school plant maintenance in secondary schools in Benue State. Coordination is the organization of the different elements of a complex body or activity to enable them to work together effectively. It is an important managerial task that cannot be estimated in the face scarce resources to avoid wastage. According to Izobo-Martins (2014), most school structures, especially classrooms in public secondary schools investigated were in the state of disrepair, and that there was no coordinating strategy taken by the leadership of the schools to address the situation. The findings of the study also showed that there is majorly no maintenance documentation in terms of maintenance manual or computers in the public secondary school buildings.

Feedback by way of reporting and budgeting (which is a functional aspect of planning) is core to the success of functional operation of any institution. This study has shown that both Principals' reporting and budgeting strategies significantly influences of the maintenance of secondary school plant in Benue state. Thus, it is important that the Principals provide a communication channel between himself/herself and the staff on the one hand, and the proprietor of the school on the hand for ease of implementation of policies that will enhance the maintenance of school plant.

Budgeting helps in the appropriate distribution of available resources in the face of competing needs, considering the degree of timeliness and urgency of need in the school plant. Budgeting is crucial in proper arrangement of the physical facilities and timely maintenance (which may be running, preventive or predictive type). There is therefore the need for Principals of school plants in Benue state to implement budgeting as an effective school plant maintenance strategy. This need was highlighted by Edo, Mbo and Abiye (2015) which revealed that principals need adequate planning and procurement for effective utilization of school plant. In other words, a well-planned school plant produces expected outcomes of education for the students. Hence, principals need to plan for the allocation and utilization of the available school plant for effective usage.

5. CONCLUSION

The present study has established that Principals' Planning, Organizing, Staffing, Directing, Coordinating, Reporting and Budgeting strategies have significant positive influence on school plant maintenance in secondary schools in Benue State, Nigeria. It is therefore concluded that these Principals' administrative strategies have significant positive influence on school plant maintenance in secondary schools in Benue State, Nigeria.

6. RECOMMENDATION

Consequently, it is recommended that Principals of secondary schools should be well acquainted with these maintenance strategies and actively implement same for effective running of their schools.

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Conflict of Interest

There is none to declare.

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