UNIJERPS
Unizik Journal of Educational Research and Policy Studies VOL.13 (1);
https://unijerps.org
2021 Impact Factor: 5.641; 2020 Impact Factor: 5.355.
January-June, 2022
Indexing and Impact Factor URL: http://sjifactor.com/passport.php?id=21363

SUPERVISORY STRATEGIES FOR SCHOOL PLANT MAINTENANCE IN SECONDARY SCHOOLS IN ANAMBRA STATE

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ABSTRACT
The purpose of this study was to investigate principals' instructional supervisory strategies for school plant maintenance in secondary schools. On research question and two null hypotheses guided the study. It was conducted in secondary schools in Anambra State. The descriptive survey research design was adopted. All the 257 public secondary schools in all the 6 education zones in the state were studied. Thus, the entire population constituted the sample. The instrument for data collection was a researcher-developed questionnaire titled "Principals' School Plant Maintenance Supervision Questionnaire" (PSPMSQ). The face and content validity of the instrument was established by three experts. Cronbach's alpha method was used to obtain correlation co-efficient of 0.85 for the instrument. The researcher collected the data from the respondents. The research question was answered using mean while t-test and ANOVA were used to test the hypotheses at.05 level of significance. Findings indicated that teachers agreed on principals' supervision strategies for school plant maintenance in secondary schools in Anambra State. It was among others recommended that principals should be strictly monitored by the Ministry of Education so as to ensure that they continue to maintain effective instructional supervision because of its role in effective management in secondary schools.

Keywords: Principals; Instructional Supervision; Strategy; School Plant; Maintenance.

Introduction

Education is an indispensable instrument for human empowerment and progress of a nation. It is a tool for developing individuals' potentials which enable them contribute meaningfully to the betterment of their selves, families and society at large. Formal education takes place in learning institutions such as primary, secondary and tertiary. Secondary school which is the focus of this study is offered in two categories of schools namely: public and private secondary schools. The focus of this study was on public secondary schools. School plant is the major consideration.

School plant has been conceptualized in various ways. For instance, Ohia (2019) defined school plant as all the facilities, instructional, administrative, recreational, and residential including all equipment used for the effective learning of students. The physical facilities in the school are known as school plant. Salami (2021) also defined school plant as all the equipment, tools and consumables that enable effective teaching and learning to take place. It is any resources aside from human and funds in the learning environment. According to Iheanyichukwu, Nwosu, Gomma, Ekanem and Edet (2018), school plant consists of the buildings within the school, the equipment and all the durable and temporary facilities for proper teaching and learning. The durable facilities are the school buildings while the non-durable facilities are furniture, laboratory apparatus and electrically fixtures. Contextually, school plant is all the physical facilities and material resources in the learning environment which promote instructional delivery.

Experience has shown that one major reason why students embark on unrest is because of inadequate school infrastructural maintenance. Students do not perform well academically when they embark on frequent strikes to protest dilapidated infrastructure. This means that adequate maintenance of school infrastructure makes learning pleasant to students and enhances the effectiveness of the teacher. For example, a well-maintained blackboard makes teachers' writing to be clear and visible to students. Similarly, a well maintained school library supports classroom activities and helps in the academic success of students.

Adeboyeye (2010) submitted that plant maintenance enhances performance and durability and so prevents wastage. The value of plant maintenance to school successes are too numerous to be overlooked. Ajayi (2014) have summarized the relevance of school plant maintenance to include:

1. It ensures that buildings and facilities are kept safe and well protected
2. It preserves the aesthetic and beauty of the school environment
3. It ensures that facilities are constantly functioning in good working condition
4. It helps to slow down the rate of degradation of facilities and extends their life span.
5. It helps to reduce the rate of repairs or breakdown of school equipment
6. Effective maintenance protects capital investment
7. Good maintenance of school facilities provides a favourable environment for teaching and learning
8. It provides adequate care and security to the facilities;
9. It protects the facilities against possible fire outbreak, vandalism, building collapse, theft or other types of damage
10. It reduces health hazards and provides safety to both teachers and students
11. It ensures high standard of cleanliness and neatness in the school. Thus having a positive effect on the student in both classroom and out of classroom activities
12. School facilities and equipment that are well maintained can be used with less expense of energy. Prompt attention to minor repairs will result in savings over the long run
13. Maintenance needs are imperative for the buildings to support contemporary instructional practices
14. Effective facilities maintenance extends the life of older facilities and maximizes the useful life of newer facilities

National Centre for Education Statistics (2003) further noted that although, plant maintenance cost money, but unlike other investment, the return on the expenditure may not result in increased revenue. However, in the long run, it produces savings by:

1. Decreasing equipment costs over time
2. Decreasing renovation cost because fewer large-scale repair jobs are needed
3. Decreasing overhead cost because of increased system efficiency
4. Maintenance of school plant protects the investment
5. It facilitates the delivery of effective and response services by school staff to students, community members and other people and agencies.

Similarly, Xaba (2012, p. 7) noted that it is evident that maintenance work at school is "unsystematic, uncoordinated and not holistic". It is a common sight in our school environment to see dilapidated buildings, broken tables and chairs, unkempt school compound, abandoned broken down school vehicles and so on. There has been reported cases of building walls collapsing and killing both staff and pupils in some parts of Nigeria (Ibeh, 2017). A study by Asiyat (2012) revealed that facilities in public schools were generally in a state of disrepair due to inadequate maintenance. This therefore necessitates the need to solve this problem in order

to meet the expectations of the 21st century learners. One important administrative strategy for school plant maintenance is instructional supervision.

Instructional supervision refers to the degree at which principals show competence in their ability, attitudes, and skills to appropriately monitor, inspect, and evaluate the performance of his or her subordinates especially those within his or her jurisdiction, and to ensure that such subordinates perform their duties according to prescribe standards expected of them. Onocha (2020) highlighted that instructional supervision of school programmes includes; curricula and extra curricula activities (allocation of schedule of duty or subjects, school time table, school organization, etc.), making sure that teachers use varieties of teaching methods, monitoring of students' learning through consistent and more practical assessment procedures. For any school administrator to be considered as being supervisory competent, such characteristics as communication, conflict resolution, leadership, critical thinking, interpersonal skills, time and priority management, diversity and generational differences in the workplace and problem solving needs to be present (Brinich, 2016).

The principal as a supervisor assesses and records the performance of teachers, their ability and consistency in carrying out the classroom activities. The activities of the principal as the supervisor include: inspecting, monitoring, rating, assisting, recommending etc. All these activities if carried out professionally will aim at improving teachers' productivity in instructional delivery. Teachers' efficiency reflects on the interactive skills and knowledge adopted in the process of teaching and learning. Efficient teachers know what to teach and how to teach as they have very wide teaching skills and the ability to use them in a timely manner (Shechtman and Leichtentritt, 2014). Teachers' efficiency equally generates good attitude and behaviour that ease learning difficulties among the students. In other words, teachers that have the creative ability always enable the students to work effectively and proactively through adequate supervision.

This has equally necessitated the involvement of school principals in the supervision of the teachers for the achievement of the expected outcomes. Principals' supervision in the modern era centers on the improvement of the teaching-learning situation to the benefits of both the teachers and learners. This is because it helps in the identification of areas of strengths and weaknesses of teachers. This implies a follow-up activity that is equally directed at the improvement of identified areas of teachers' weaknesses thus create a cordial working atmosphere based on good human relations. Common experiences revealed that principals' supervision constitutes the leverage point for instructional improvement, teacher's competence and efficiency of the educational system while an unsupervised instruction may mar the standard of education. Thus, principals as a catalyst facilitates the implementation of the various sets of instructional activities geared towards an effective, viable, vibrant and qualitative educational system that will improve the teaching-learning situation. As expressed by this scholar, it is directed towards sustaining and ameliorating the teaching-learning process in the educational system, as education plays essential roles in the growth and development of any nation socially, politically and economically.

Supervision by the principals implies to direct, oversee, guide or to make sure that expected standards are met. This reflects on the principles, rules, regulations and methods prescribed for purposes of implementing and achieving the objectives of education. The principals therefore use expert knowledge and experiences to oversee, evaluate and coordinate the process of improving teaching and learning activities in schools. As revealed by Nwakpa (2014) the targets of supervision are:

i. To make sure that minimum standards are adhered to. The intention of this being to provide relative equal educational opportunity for all children by ensuring that set school standards are maintained.
ii. To provide a forum through which purposeful and constructive advice can be rendered for the sake of improving the quality of teaching in school through improvement of educational facilities.
iii. To make sure that prudence is maintained in the way and manner that public funds are spent in running the schools.
iv. To make available to the appropriate authorities true position of human and material resources as they concern the schools through reports. Some of the issues under review here include: availability of space, size of classes, state of facilities, staff strength and appropriateness of teaching qualification of teachers as well as the perceptions of the other numerous difficulties that the school has to contend with.
v. To stimulate and provide guidance in the display of desirable education practices while noting the various negative education practices.
vi. To provide a verifiable foundation upon which various courses of action can be initiated by the teachers and principal locally within the school, and the inspectors and government on a larger scale.

Ngeripaka, Nkporbu and Acheya (2019) observed that the principal as a member of the institution oversees the activities of the school which include: studying the backgrounds, capacities and interest of the school teachers. This supervisor's role will help both teacher and the student in carrying out duties and responsibilities assigned. It is further revealed that principals offer helping hands and utilize opportunity to evaluate the performance of the teachers and learners with the sole aim of improving the academic performance. In the view of Okibe (2018) the teachers also play an internal supervisory role that helps the school head to achieve the goals and objective of the school. It is the duty of the teacher to shape the moral conduct of the learners and to also guide their behavioral pattern as it concerns the wellbeing of the students.

In another development, the principals supervise the cooperation that existed between the school and parent teachers association (PTA) on maintaining healthy relationship with parents and guardian. Thus, Parents' Teacher Association provides the principals an easy avenue for achieving supervisory objectives. It is the duty of the principals as an internal supervisor to meet problems that are connected with students' welfare, progress and short coming. The principals as an internal supervisor also play the role of organization of workshops to update teachers' knowledge and competence. In the view of Daniel and Jackline (2016) inexperience teachers need to be assisted and helped to improve the instruction and teachers teaching abilities.

Gender and experience can be an influencing factor on the opinion of teachers on the administrative strategies for school plant maintenance. Gender refers to the varied socially and culturally constructed roles, qualities, and behaviours that are ascribed to women and men in different societies. It is important to note that the opinion of male teachers may differ from their female counterpart regarding administrative strategies. Obaseki (2018) and Nwafukwa and Odey (2018) found that male teachers responded that principals perform better in administrative strategies such as supervision and planning. Another important variable considered in this study is administrative experience. In this study administrative experience is categorized into two: experienced and less experienced. School administrators who have spent ten years and above on the job are said to be experienced. On the other hand, those who have put in nine years and below

are categorized as less experienced. Nwankwo, Nwokafor, Ogunsanwo, and Ighalo (2015) noted that experienced principals are effective and efficient in internal supervision strategies, financial management strategies, conflict management strategies when compared to less experienced principals.

Statement of the Problem

It is the duty of the principal as the custodian of school plant to ensure that the school facilities are ready for use as at when due and that they are correctly used for the purpose of which they are meant for. School plant is bound to depreciate as they are often put into use. However, in some secondary schools in Anambra State, there seems to be cases of chairs and tables littered all around the school premises, broken windows and doors, dilapidated buildings and exposed electrical fittings. Negligence in the maintenance of school plant has many adverse consequences such as a collapse of school building, breakdown, and shortages of relevant facilities for effective teaching and learning. Some of the school plant such as furniture, building roofs, sporting equipment and other facilities vandalized during Herdsmen-farmers clashes in communities around secondary schools in Anambra State and effects of political rallies in those schools are still in despair condition.

Research Question: What are principals' instructional supervisory strategies for school plant maintenance in secondary schools in Anambra State?

Hypothesis1: There is no significant difference in the mean ratings of male and female principals' instructional supervisory strategies for school plant maintenance in secondary schools in Anambra State.

Hypothesis2: There is no significant difference in the mean ratings of principals on supervision strategies for school plant maintenance in secondary schools in Anambra State based on years of experience.

Research Method

This study was conducted in secondary schools in Anambra State. The descriptive survey research design was adopted. All the public secondary schools in all the 6 education zones in the state which include Aguata, Awka, Nnewi, Ogidi, Onitsha and Otuocha were studied. There are 257 public secondary schools in the 6 education zones. The population of the study comprised the 257 principals in the six education zones. The entire population was studied. Thus, the entire population constituted the sample. The instrument for data collection was a researcher-developed questionnaire titled "Principals' School Plant Maintenance Supervision Questionnaire" (PSPMSQ). PSPMSQ is a 4-point scale type, structured thus: Strongly Agree (SA) = 4points; Agree (A) = 3points; Disagree (D) = 2points; and Strongly Disagree (SD) = 1 point. The face and content validity of the instrument was established by three experts: two in educational administration and planning and one in measurement and evaluation; all in the Faculty of Education, Chukwuemeka Odumegwu Ojukwu University, Anambra State. The reliability of the instrument was determined using the split-half method. This was done by administering copies of the instrument to 20 principals from public secondary schools in Enugu state. Cronbach's alpha method was used to obtain correlation co-efficient of 0.85 for the instrument. The researcher collected the data from the respondents. The research question was answered using mean ratings and the t- test and analysis of variance (ANOVA) were used to test the hypotheses at.05 level of significance.

Presentation of Results

Research Question: What are principals' instructional supervisory strategies for school plant maintenance in secondary schools in Anambra State?

Table 1: Mean and Standard Deviation Ratings of supervision strategies for school plant maintenance (N= 1490)

S/N	As a Principal of my school, I:	X	SD	Remarks
1	ensure all teachers activities are always monitored in order to aid their commitment towards effective instructional delivery	3.59	0.49	Agree
2	ensure constant classroom visitations are paid to teachers in order to observe their teaching methodologies	3.38	0.61	Agree
3	make use of constructive criticisms in order to correct teachers while supervising classroom instructions	3.39	0.58	Agree
4	frequently encourage teachers to conduct continuous revisions of the lessons taught in the classroom in order to meet students' needs	3.58	0.51	Agree
5	regularly supervise teachers' lesson notes to ensure that they meet up to the standard that will promote teaching and learning	3.54	0.50	Agree
6	make use of different supervisory techniques to promote teachers' commitment in their daily teaching tasks	2.07	0.49	Disagree
7	ensure that teachers demonstrate teaching that can be highly utilized as a way of improving instructions in the classroom	2.39	0.56	Disagree
8	regularly take attendance of teachers to ensure their commitment to their job	3.35	0.49	Agree
9	evaluate the performance of both teachers and students	3.44	0.55	Agree
10	increase the behavioural pattern of teachers' teaching and learning	3.41	0.51	Agree
11	discuss new trends in the school with both teaching and non-teaching staff	3.42	0.45	Agree
	Cluster Mean	**2.96**		**Agree**

Data presented in Table 1 show the item by item analysis of supervision strategies for school plant maintenance in secondary schools in Anambra State. The result revealed that items 1, 2, 3, 4, 5, 8, 9, 10 and 11 with mean scores 3.59, 3.38, 3.39, 3.58, 3.54, 3.35, 3.44, 3.41 and 3.42 were rated agreed by the respondents. On the other hand, items 6 and 7 with mean scores 2.07, 2.39 were rated disagreed by the respondents. The cluster mean of 2.96 summarized that respondents agreed on supervision strategies for school plant maintenance in secondary schools in Anambra State. The standard deviation scores ranging from 0.45 – 0.61 show that teachers do not vary too much in their ratings on supervision strategies for school plant maintenance.

Hypothesis1: There is no significant difference in the mean ratings of male and female principals' instructional supervisory strategies for school plant maintenance in secondary schools in Anambra State.

Table 2: t-Test Significance in the Mean Ratings of Male and Female Principals on Supervision Strategies for School Plant Maintenance in Secondary Schools

Variables	N	$\overline{X}$	SD	df	t-cal	p-value	α-value	Remark
Male	153	33.69	4.43					
				255	0.599	0.55	0.05	Not significant
Female	104	33.93	4.51					

Data presented in Table 2 revealed that at 0.05 level of significance, the t-cal value is 0.599 with 1488df and p-value of 0.55. The result shows that the p-value of 0.55 is greater than 0.05 ($p > 0.05$) at 0.05, this means that the null hypothesis is therefore not rejected. Thus, there is no significant difference in the mean ratings of male and female principals on supervision strategies for school plant maintenance in secondary schools in Anambra State.

Hypothesis2: There is no significant difference in the mean ratings of principals on supervision strategies for school plant maintenance in secondary schools in Anambra State based on years of experience.

Table 3: ANOVA Test of Significant Difference in the Mean Ratings of Principals on Supervision Strategies for School Plant Maintenance

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	15.105	2	7.553	2.406	.011
Within Groups	2545.309	255	3.138		
Total	**2560.414**	**257**			

The data presented in Table 3 revealed 0.05 alpha level, F-value of 2.406 with 255 df and *p*-value of 0.011. The result revealed that the p-value of 0.011 is less than the alpha level of 0.05 ($p<0.05$), the null hypothesis is rejected. This means that there is a significant difference in the mean ratings of principals on supervision strategies for school plant maintenance in secondary schools in Anambra State based on years of experience.

Summary of Findings

From the analysis, the following findings were made:

1. Teachers agreed on principals' supervision strategies for school plant maintenance in secondary schools in Anambra State
2. There is no significant difference in the mean ratings of male and female principals on supervision strategies for school plant maintenance in secondary schools in Anambra State.
3. There is no significant difference in the mean ratings of principals on supervision strategies for school plant maintenance in secondary schools in Anambra State based on years of experience.

Discussion of Findings

The finding revealed that teachers agreed on principals' supervision strategies for school plant maintenance in secondary schools in Anambra State. This means that principals ensures that teachers are always monitored, teachers are constantly visited in their classes in order to observe teaching methods, make constructive criticisms while supervising. This finding was in line with the finding of Enaohwo, and Eferekeya (2019) that supervision improves teaching and learning through a deliberate emphasis on ways and means of instilling excellence in the quality instruction as it strives to stimulate greater effectiveness or productivity. Samoei (2014) agreed with the

finding that principals' orient new teaching staff supervise curriculum timetabling and monitor students' academic progress.

The finding also revealed that there is no significant difference in the mean ratings of male and female principals on supervision strategies for school plant maintenance in secondary schools in Anambra State. This finding opposed the finding of Samoei (2014) that there was a significant difference in the mean ratings of male and female teachers on instructional supervisory role of principals and its influence on students' academic achievement. The difference in both findings could be as a result of varying opinions of respondents and geographical location.

The finding also revealed that there is no significant difference in the mean ratings of principals on supervision strategies for school plant maintenance in secondary schools in Anambra State based on years of experience. This finding disagreed with the finding of Samoei (2014) that there was a significant difference in the years of experience of teachers on principals' use of monitoring techniques and its influence on students' academic achievement. The difference in both findings could be as a result of varying opinions of respondents and geographical location.

Conclusion

From the findings, it was concluded that teachers agreed on the supervision strategies for school plant maintenance in secondary schools in Anambra State. The finding also revealed that there is no significant difference in the mean ratings of male and female principals on supervision strategies for school plant maintenance in secondary schools in Anambra State.

Recommendations

The following recommendations were made:

1. Government should provide opportunity for principals to attend conferences, workshops, seminars and colloquiums on supervisory techniques at least once a year both nationally and internationally for more acquisition of skills and knowledge for effective instructional supervision in order to keep them at par with their foreign counterparts.
2. Principals should be strictly monitored by the Ministry of Education so as to ensure that they continue to maintain effective instructional supervision because of its role in effective management in secondary schools.

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