

## Effective Practices in Management of School Plants in Public Secondary Schools in Rivers State

**Allagoa, Inara**

Department of Education Management,  
Faculty of Technical and Science Education,  
Rivers State University  
kelechiwokocha@yahoo.ca

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### **Abstract**

*The study examined effective practices in management of school plants in public secondary schools in Rivers State. The research adopted a descriptive survey design. Three research questions and three hypotheses were posed to guide the study. The population for the study was 3926 male teachers and 3693 female teachers drawn from public secondary schools across the 23 local government areas in Rivers State, Nigeria. Thus, the total population for the study consisted of 7619 teachers. The Taro Yamen's formula was used to derive a sample size of 381 respondents that was used for the study. The Instrument used for data collection was a structured questionnaire titled "Effective Practices in Management of School Plants Questionnaire" (EPMSPQ). The reliability of the research instrument was obtained by application of the test-retest method using Pearson Product Moment Correlation to establish a reliability coefficient of .74. The instrument was validated by two experts from the Department of Educational Management and Measurement and Evaluation, all of Faculty of Technical and Science Education, Rivers State University. 351 copies of the questionnaire only, were retrieved and analyzed using mean for the research questions and t-test for the hypothesis at .05 level of significance. The results obtained indicated that effective practices in management of school plants in public secondary schools in Rivers State are very low and faced with challenges. Thus, the study recommended that government and relevant stakeholders should adequately fund secondary education to encourage principals in supervision and maintenance of available school plants.*

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**Keywords:** *Effective Practices, Management, School Plants and Secondary School.*

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### **Introduction**

School plant refers to the school site, the building, the playground ground, the equipment and other materials provided for effective teaching and learning (Onwurah, 2004). He stressed further that school plant is the space interpretation of the curriculum, noting that the programmes of the school are expressed through the site, the building, play grounds, the arrangement and design of the school buildings. According to Emenalo (2007), school plant is the entire scope of physical infrastructural facilities which are provided in the school for the school for the purpose of educating the child. In the same vein, Asiabaka (2008) maintained that school plant consist of all types of buildings, areas for sports and games, landscape, farms and gardens including trees and paths. Others include furniture and toilet facilities, storage facilities, transportation, Information and Communication Technology (I.C.T.), and food services among others. Ajayi (2007) and Yusuf (2008) maintained that school plants comprise the machinery which in turn includes machines and tools used in the workshop, in addition to duplicating machines. They also pointed out that school site, which is the landscape on which the school's permanent/non-permanent structures are built, buildings, equipment, furniture, vehicles of various types, electrical fittings, books, water

supply infrastructure, and accessories like playgrounds, lawns, parks and farm are all part of school plant. The school plant in this study are the school facilities which enhance teaching and learning such as classrooms, staff offices, compound, laboratories and libraries. Our major concern is the effective practices in management of these facilities in achieving the set educational objectives.

Facilities management is the practice of co-ordination of the physical workplace with the people and the work of the organization (International Facilities Management Association, 2002). According to Fenker (2004), facilities management is a process that ensures that buildings and other technical systems support the operations of an organization. Asiabaka (2008) therefore viewed school facilities management as the application of scientific methods in the planning, organizing, decision-making, co-ordination and controlling of the physical environment of learning for the actualization of the educational goals and objectives. Lawson and Gede (2011) viewed;

*School facilities management as a systematic process of rationalizing the provision, use and maintenance of these facilities within an educational institution to ensure their optimal utilization and achievement of educational objectives both in the immediate and in the future given the available resources. They say it is a process that involves rationally: determining which facilities are required to achieve school goals, providing such facilities most advantageously in terms of resource use, monitoring to ensure optimal use of educational facilities so provided, maintaining the facilities regularly to ensure their longevity and reviewing the provision of these facilities to ensure that it continues to meet both the changing educational needs in the advantageous manner (p. 501).*

Nwokike (2012) asserted that management is the live-wire of any educational establishment for the achievement of school policies and objectives and that school plant management involves effective maintenance of the school structures as well as its facilities and equipment to ensure effective teaching/learning. Also, Asiyai (2012) opined that school facilities management involves keeping records of the facilities, supervising the facilities, planning for the facilities, motivating students and teachers to participate in facilities maintenance and evaluating the available facilities. According to Ogie (2015, p. 27);

*Management of secondary school facilities involves proper storage and security, ensuring that they are kept in good condition after usage. There should be regular repairs and maintenance, replacement of faulty ones and protection from internal and external vandalisation. It also involves general maintenance of the whole school environment, including trees, foot paths, garden, school land, building and other physical infrastructures.*

Thus, school plant management in secondary schools should involve effective practices such as planning for facilities, supervision and maintenance of the facilities as well as evaluation of available facilities. The management of human resources and material resources (school plants) is the primary assignment of the principal with the assistants of other stakeholders. However, Ogie (2015) revealed in his study that school principals pay less attention to the management of secondary school facilities and will not want classroom teachers to assist them in managing these facilities.

Secondary school is the post primary education that leads to the attainment of the required qualification for gaining admission into tertiary institutions. According to FRN (2004), the broad goal of secondary education shall be to prepare the individual for; Useful living within the society and Higher education. Thus, it is required that the necessary school facilities are put in place and adequately managed in order to attain the set objectives.

### **Statement of the Problem**

Management of school plant in secondary schools is an important requirement for the effective implementation of educational programmes. Nwagwu (1978) and Ogunsaju (1980 as cited in Asiabaka, 2008, p. 10) in agreement with the above statement maintained that the quality of education that children receive bears a direct relevance to the availability or lack of physical facilities and overall atmosphere in which learning takes place. Ogie (2015) asserted that one major responsibility of the school principals is to ensure efficient and effective management of the resources/ facilities of the school entrusted in their care. Yet, our educational sector continues to record challenges in terms of management of available school plants. This, according to Asiyai (2012) is as a result of school facilities not been maintained by school administrators. He stressed further that the administrators appears to spend much time on instructional planning, curriculum development, personnel development and community relations claiming that the management and maintenance of school facilities is the sole preserves of the government. Nwokike (2012) opined that the conditions under which students learn in many schools are unhealthy and deplorable; most of our schools have very old and dilapidated buildings, and deplorable environments. Accordingly, Amanchukwu and Ololube (2015) asserted that there is actual lack of educational facilities and the few available ones are in a terrible state. Specifically, Ogie (2015) revealed the rapid decay of school facilities in Rivers State which has resulted to lack of these facilities in our schools. Asiyai (2012) reported that inadequate fund allocated and disbursed to schools appears to have not allowed for proper maintenance of available facilities. This leaves the researcher pondering on the actually practices applied by principals for effective management of school plants. Thus, the researcher investigated the effective practices in management of school plants in public secondary schools in Rivers State.

### **Purpose of the Study**

The purpose of this study was to investigate the effective practices in management of school plants in public secondary schools in Rivers State.

Specifically the study sought to:

1. Determine the extent to which maintenance as effective practice is applied in management of school plants in public secondary schools in Rivers State.
2. Determine the extent to which supervision as effective practice is applied in management of school plants in public secondary schools in Rivers State.
3. Determine the challenges confronting effective practices in management of school plants in public secondary schools in Rivers State.

### **Research Questions**

The following research questions were answered:

1. To what extent is maintenance as an effective practice applied in management of school plants in public secondary schools in Rivers State?
2. To what extent is supervision as an effective practice applied in management of

school plants in public secondary schools in Rivers State?

3. What are the challenges confronting effective practices in management of school plants in public secondary schools in Rivers State?

### **Hypotheses**

The following null hypotheses were tested:

1. There is no significant difference in the mean ratings of the respondents on extent to which maintenance as an effective practice is applied in management of school plants in public secondary schools in Rivers State.
2. There is no significant difference in the mean ratings of the respondents on extent to which supervision as an effective practice is applied in management of school plants in public secondary schools in Rivers State.
3. There is no significant difference in the mean ratings of the respondents on the challenges confronting effective practices in management of school plants in public secondary schools in Rivers State.

### **Methodology**

The descriptive survey research design was adopted for this study. The population for the study was 3926 male teachers and 3693 female teachers drawn from public secondary schools across the 23 local government areas in Rivers State, Nigeria. Thus, the total population for the study consisted of 7619 teachers (*Source: Rivers State Ministry of Education, 2017*). The Taro Yamen's formula was used to derive a sample size of 381 respondents that was used for the study. The instrument used for data collection was a structured questionnaire titled "Effective Practices in Management of School Plants Questionnaire" (EPMSPQ). The instrument provided response to the three research questions with 15 items; Items 1-10 answering research question one and research question two in a 4-point rating scale weighted, "Very High Extent" (VHE) – 4 points, "High Extent" (HE) – 3 points, "Low Extent" (LE) – 2 points and "Very Low Extent" (VLE) – 1 point, while items 11 – 15 answered research question 3 in a 4-point rating scale weighted, "Strongly Agreed" (SA) – 4 points, "Agreed" (A) – 3 points, "Disagreed" (D) – 2 points and "Strongly Disagreed" (SD) – 1 point. To establish the validity of the instrument, the questionnaire was subjected to face and content validity by two experts from the Department of Educational Management and Measurement and Evaluation, all of Faculty of Technical and Science Education in Rivers State University. To ensure the consistency of the instrument, the test-retest method was adopted using Pearson Product Moment Correlation to establish a reliability coefficient of .74. 351 copies of the questionnaire only, were retrieved and used for the study. This represents 92 per cent of the total distributed. The data analysis was done using the mean to analyze the research questions while t-test was used to test the hypothesis. The mean was obtained by the summation of all responses as assigned to a rating scale in an item divided by the total number of responses:  $4+3+2+1/4 = 2.50$ . The mean score of 2.50 and above was accepted, while those below 2.50 were rejected.

### **Results**

#### **Research Question 1**

To what extent is maintenance as an effective practice applied in management of school plants in public secondary schools in Rivers State?

**Table 1: Mean Rating on Extent to which Maintenance as an Effective Practice is applied to Management of School Plants in Public Secondary Schools in Rivers State.**

| S/n                  | Statements   | Male<br>(N=202) |             |      | Female<br>(N=179) |             |           |
|----------------------|--|-----------------|-------------|------|-------------------|-------------|-----------|
|                      |  | $\bar{X}$       | SD          | Dec. | $\bar{X}$         | SD          | Dec.      |
| 1.                   | Principals ensure that buildings are renovated yearly or at the beginning of term. | 1.74            | 1.01        | LE   | 1.73              | 0.94        | LE        |
| 2.                   | Broken furniture's are sorted and repaired immediately.                            | 1.68            | 1.05        | LE   | 1.66              | 0.91        | LE        |
| 3.                   | Principals ensure daily cleaning of school surroundings.                           | 1.56            | 0.98        | LE   | 1.73              | 0.97        | LE        |
| 4.                   | School vehicles and other equipment's are serviced routinely.                      | 1.07            | 0.13        | LE   | 1.34              | 0.47        | LE        |
| 5.                   | Maintenance reports are reviewed and sent to appropriate quarters as at when due.  | 1.39            | 0.76        | LE   | 1.56              | 0.92        | LE        |
| <b>Total mean/SD</b> |  | <b>7.44</b>     | <b>4.11</b> |      | <b>8.02</b>       | <b>4.21</b> |           |
| <b>Grand mean/SD</b> |  | <b>1.48</b>     | <b>0.82</b> |      | <b>1.60</b>       | <b>0.84</b> | <b>LE</b> |

**Source:** *Survey Data, 2017*

The data in Table 1 shows that the respondents rated the 5 items in the table low in terms of principals' application of maintenance as effective practices in management of school plants. Thus, it indicates that building renovation, furniture's repair, daily cleaning of surroundings, repair of school vehicles and maintenance reports are poorly handled by principals in public secondary schools in Rivers State. The grand mean of 1.48 for male teachers and 1.60 for female teachers is a clear indication that maintenance as an effective practice in management of school plants is poorly applied in public secondary schools in Rivers State as rated by the respondents.

### **Research Question 2**

To what extent is supervision as an effective practice applied in management of school plants in public secondary schools in Rivers State?

**Table 2: Mean Rating on Extent to which Supervision as an Effective Practice is applied to Management of School Plants in Public Secondary Schools in Rivers State.**

| S/n | Statements  | Male<br>(N=202) |             |      | Female<br>(N=179) |             |           |
|-----|---|-----------------|-------------|------|-------------------|-------------|-----------|
|     |   | $\bar{X}$       | SD          | Dec. | $\bar{X}$         | SD          | Dec.      |
| 6.  | Principals daily inspect school facilities to ascertain their condition.                                    | 1.45            | 0.86        | LE   | 1.63              | 0.94        | LE        |
| 7.  | Principals assign academic/non-academic staff to be in charge of various school plants.                     | 1.74            | 1.01        | LE   | 1.82              | 1.05        | LE        |
| 8.  | The use of any school plants is properly scheduled.   | 1.39            | 0.76        | LE   | 1.14              | 0.34        | LE        |
| 9.  | Principals keep adequate records of school plants that show both functional and non-functional equipment's. | 1.41            | 0.81        | LE   | 1.95              | 1.14        | LE        |
| 10. | Principals ensure and receive regular reports on conditions of school plants.                               | 1.72            | 1.16        | LE   | 1.93              | 1.15        | LE        |
|     | <b>Total mean/SD</b>  | <b>7.71</b>     | <b>4.6</b>  |      | <b>8.47</b>       | <b>4.62</b> |           |
|     | <b>Grand mean/SD</b>  | <b>1.54</b>     | <b>0.92</b> |      | <b>1.69</b>       | <b>0.92</b> | <b>LE</b> |

**Source:** Survey Data, 2017

The data in Table 2 shows that the respondents rated the 5 items in the table low in terms of principals' application of supervision as effective practices in management of school plants. Thus, it indicates that daily inspection of facilities, delegation of academic/non-academic staff to man facilities, schedule for use of school plants, record keeping of functional/non-functional equipment's and ensuring regular report writing on school plants are poorly handled by principals in public secondary schools in Rivers State. The grand mean of 1.54 for male teachers and 1.69 for female teachers is a clear indication that supervision as an effective practice in management of school plants is poorly applied in public secondary schools in Rivers State as rated by the respondents.

### Research Question 3

What are the challenges confronting effective practices in management of school plants in public secondary schools in Rivers State?

**Table 2: Mean Rating on Challenges confronting Effective Practices in Management of School Plants in Public Secondary Schools in Rivers State.**

| S/n                  | Statements   | Male<br>(N=202) |             |      | Female<br>(N=179) |             |          |
|----------------------|--|-----------------|-------------|------|-------------------|-------------|----------|
|                      |  | $\bar{X}$       | SD          | Dec. | $\bar{X}$         | SD          | Dec.     |
| 11.                  | Poor funding of public secondary schools.                | 3.68            | 0.67        | SA   | 3.50              | 0.86        | SA       |
| 12.                  | Government neglect of public secondary schools.          | 3.87            | 0.37        | SA   | 3.36              | 0.94        | A        |
| 13.                  | Lackadaisical attitude of principals.                    | 3.74            | 0.49        | SA   | 3.28              | 1.00        | A        |
| 14.                  | The “not my business” syndrome.                          | 3.54            | 0.88        | SA   | 3.16              | 1.06        | A        |
| 15.                  | Poorsupervision of principal’s by relevant stakeholders. | 3.51            | 0.95        | SA   | 3.18              | 1.05        | A        |
| <b>Total mean/SD</b> |  | <b>18.84</b>    | <b>3.36</b> |      | <b>16.48</b>      | <b>4.91</b> |          |
| <b>Grand mean/SD</b> |  | <b>3.66</b>     | <b>0.67</b> |      | <b>3.29</b>       | <b>0.98</b> | <b>A</b> |

Source: Survey Data, 2017

The data in Table 3 shows that the respondents rated the 5 items in the table high in terms of challenges confronting effective practices in management of school plants. Thus, it indicates that poor funding of secondary schools, government neglect of secondary schools, lackadaisical attitude of principals, “not my business” syndrome and poor supervision of principals are all major problems confronting effective practices in management of school plants in public secondary schools in Rivers State. The grand mean of 3.66 for male teachers and 3.29 for female teachers is a clear indication that the above mentioned challenges hinders effective practices in management of school plants in public secondary schools in Rivers State as rated by the respondents.

### Hypothesis 1

There is no significant difference in the mean ratings of the respondents on extent to which maintenance as an effective practice is applied in management of school plants in public secondary schools in Rivers State.

**Table 4: t-test result of the difference in mean ratings of the respondents on extent to which maintenance as an effective practice is applied in management of school plants in public secondary schools in Rivers State.**

| Group  | N   | Mean | SD   | Df  | L/Significance | t-cal | t-tab | Decision |
|--------|-----|------|------|-----|----------------|-------|-------|----------|
| Male   | 202 | 1.48 | 0.82 | 379 | .05            | 1.24  | 1.96  | Accepted |
| Female | 179 | 1.60 | 0.84 |     |                |       |       |          |

Source: Survey Data, 2017

The data in Table 4 shows that at 5% level of significance with 379 degree of freedom, the calculated t value of 1.24 is less than the table value of 1.96. Hence, the null hypothesis is accepted, meaning that there is no significant difference in the mean ratings of the respondents on extent to which maintenance as an effective practice is applied in management of school plants in public secondary schools in Rivers State.

### Hypothesis 2

There is no significant difference in the mean ratings of the respondents on extent to which supervision as an effective practice is applied in management of school plants in public secondary schools in Rivers State.

**Table 5: t-test result of the difference in mean ratings of the respondents on extent to which supervision as an effective practice is applied in management of school plants in public secondary schools in Rivers State.**

| Group  | N   | Mean | SD   | Df  | L/Significance | t-cal | t-tab | Decision |
|--------|-----|------|------|-----|----------------|-------|-------|----------|
| Male   | 202 | 1.54 | 0.92 | 379 | .05            | 1.73  | 1.96  | Accepted |
| Female | 179 | 1.69 | 0.92 |     |                |       |       |          |

**Source:** Survey Data, 2017

The data in Table 5 shows that at 5% level of significance with 379 degree of freedom, the calculated t value of 1.73 is less than the table value of 1.96. Hence, the null hypothesis is accepted, meaning that there is no significant difference in the mean ratings of the respondents on extent to which supervision as an effective practice is applied in management of school plants in public secondary schools in Rivers State.

### Hypothesis 3

There is no significant difference in the mean ratings of the respondents on the challenges confronting effective practices in management of school plants in public secondary schools in Rivers State.

**Table 6: t-test result of the difference in mean ratings of the respondents on challenges confronting effective practices in management of school plants in public secondary schools in Rivers State.**

| Group  | N   | Mean | SD   | Df  | L/Significance | t-cal | t-tab | Decision |
|--------|-----|------|------|-----|----------------|-------|-------|----------|
| Male   | 202 | 3.66 | 0.67 | 398 | .05            | -7.10 | 1.96  | Accepted |
| Female | 179 | 3.29 | 0.98 |     |                |       |       |          |

**Source:** Survey Data, 2017

The data in Table 6 shows that at 5% level of significance with 379 degree of freedom, the calculated t value of -7.10 is less than the table value of 1.96. Hence, the null hypothesis is accepted, meaning that there is no significant difference in the mean ratings of the respondents on the challenges confronting effective practices in management of school plants in public secondary schools in Rivers State.

### **Discussion of Findings**

One of the findings of this study was that principals' application of maintenance as effective practices in management of school plants is low which indicates that building renovation, furniture's repair, daily cleaning of surroundings, repair of school vehicles and maintenance reports are poorly handled by principals in public secondary schools in Rivers State. This finding aligned with that of Nwokike (2012) who revealed that the conditions under which students learn in many schools are unhealthy and deplorable; most of our schools have very old and dilapidated buildings, and deplorable environments. This finding also agreed with Asiyai (2012) who asserted that school facilities are not been maintained by school administrators and that the administrators appears to spend much time on instructional planning, curriculum development, personnel development and community relations claiming that the management and maintenance of school facilities is the sole preserves of the government. It also in line with Ogie (2015) who revealed the rapid decay of school facilities in Rivers State which has resulted to lack of these facilities in our schools. This is a clear evidence of the absence of effective practices in terms of maintenance which has brought about the deplorable state. The study also revealed that principals' application of supervision as effective practices in management of school plants is low which indicates that daily inspection of facilities, delegation of academic/non-academic staff to man facilities, schedule for use of school plants, record keeping of functional/non-functional equipment's and ensuring regular report writing on school plants are poorly handled by principals in public secondary schools in Rivers State. This finding is in line with that of Ogie (2015) who revealed in his study that school principals pay less attention to the management of secondary school facilities and will not want classroom teachers to assist them in managing these facilities. It also agrees with Amanchukwu and Ololube (2015) who opined that there is actual lack of educational facilities and the few available ones are in a terrible state; also, resulting from poor supervision. Finally, the study revealed that poor funding of secondary schools, government neglect of secondary schools, lackadaisical attitude of principals, "not my business" syndrome and poor supervision of principals are all major problems confronting effective practices in management of school plants in public secondary schools in Rivers State. This finding is in agreement with Asiyai (2012) who reported that inadequate fund allocated and disbursed to schools appears to have not allowed for proper maintenance of available facilities.

### **Conclusion**

The study revealed that school plants are essential for effective teaching and learning. Its provision and maintenance cannot be overemphasized. However, principals have not shown much zeal in supervision and maintenance of school plants in public secondary schools in Rivers State as a result of certain challenges confronting its utilization. This is as a result of the challenges confronting effective management of school plants.

### **Recommendations**

Based on the findings of this study, the following recommendations were made;

1. Principals should conduct routine maintenance in order to sustain the lifespan of available school plants.
2. Principals should delegate other academic/non-academic staff under strict supervision to assist in management of available school plants.
3. Government and other stakeholders should ensure adequate funding and supervision of public secondary school.

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