

Relationship Between Quality of School Plant Management and of Unity Schools Effectiveness in North-west Zone, Nigeria

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ABSTRACT

This study looked the relationship between quality of school plant management, and unity schools effectiveness in North-west Zone. The study adopted correlational research design. Three objectives and three research questions were raised to guide the study. Three null hypotheses were also formulated and tested at $\alpha \leq 0.05$ levels of significance. Population of the study comprised of 1118 academic staff in Unity Schools in Northwest Zone from which a sample size of 291 respondents were determined and proportionately drawn from the sampled schools. Two instruments: School Plants Management Questionnaire (SPMQ) and Effectiveness of Unity School Questionnaire (EUSQ) were adapted. The instruments were validated by experts from the Faculty of Education and Extension Services, Usmanu Danfodiyo University, Sokoto. Using test and retest reliability method, the instruments exhibited reliability coefficients of 0.76 and 0.77. Null hypotheses were tested using Pearson Product Moment Correlation Coefficient. The findings of the study revealed a significant positive relationship between School Plant Management and Effectiveness of Federal Unity Schools in Northwest Zone, Nigeria. It was also found that provision of quality furniture and effectiveness of federal unity schools were positively related. considering these outcomes, it was recommended among other thing that governments and other educational bodies, philanthropists and PTA committee should contribute in the management of school plant to ensure effectiveness of Unity Schools in Northwest Zone, Nigeria. It was also recommended that all federal unity schools should introduce ways of maintaining furniture by generating income through exhibition of goods produced by students such as farm products.

Keywords: Quality School Plant, Effectiveness of Unity Schools, North West Zone, Portable Water Supply.

INTRODUCTION

The management of school plant is very crucial to the attainment of the goals of unity school, which in turn optimize the realization of educational outcome generally. The school plant according to Asiabaka (2019) includes school buildings, equipment, areas where sports and games are carried out, school landscape, school farms and gardens. School plant management is a process that lead schools towards the development of the human resources, physical sources, principles and concepts that help in achieving all the objectives of the school (Okeke, 2019). Management of school plant is very essential for the school growth (Uko, 2019). It include management of buildings such as classrooms, offices, laboratories, libraries, furniture, water supply system, and electricity supply system. Quality school management ensures that school buildings and grounds, equipment, materials, technical and other service systems, facilitate and support the provision of education by a school (National Open University,2023).

Effectiveness of unity school is the level of goal attainment of a school. Many factors combine to make each school what it is, and each school is unique. According to Levin (2019) a school is said to be effective when it connotes efficiency, quality, development and professionalism among others. Levin, (2019) opined that

whatever criterion is used, the ultimate measure of school effectiveness must be based on students' academic performance outcomes, popularly indicated by good performance in examinations. This appears to be a universal indicator by which government and society judge the effectiveness of a school. Arising from the above, this study seeks to investigate the relationship between quality of school plant management and effectiveness of unity schools in Northwest zone, Nigeria.

The Statement of the Problem

Teaching and learning in schools require adequate facilities both physical and instructional. The school plant makes environment of the school conducive for learning. Despite the importance of school plant, evidence abound revealed that the conditions under which the students learn in many unity schools particularly in Northwest Nigeria are unhealthy and deplorable. Most of our unity schools have very old and dilapidated buildings and deplorable environment. The classrooms are overcrowded which do not allow for personal attention of students by the teachers. The doors and windows in these schools are broken, some of the furniture are not in good condition, the chairs and tables are broken. The problem of portable water supply in most of the unity schools in North West zone is a serious problem that causes health problem to students. These are indications that school plant in unity schools seems to undergo no proper management or that indicated element of ineffectiveness of unity school management. Hence this study intends to investigate the relationship between quality of school plant management and effectiveness of unity schools in North West Zone, Nigeria.

Objectives of the study.

The objectives of this study are to examine:

1. the relationship between provision of quality classroom and effectiveness of unity school in North West zone, Nigeria.
2. the relationship between provision of quality furniture and effectiveness of unity school in North West zone, Nigeria.
3. the relationship between portable water supply and effectiveness of unity school in North West zone, Nigeria.

Research Questions

The following are the questions set for this study:

1. What is the relationship between provision of quality classroom and effectiveness of unity schools in North West zone, Nigeria?
2. What is the relationship between provision of quality furniture and effectiveness of unity schools in North West, Nigeria?
3. What is the relationship between portable water supply and effectiveness of Unity Schools in North West zone, Nigeria?

Null Hypotheses

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

H₀₁: There is no significant relationship between provision of quality classroom and effectiveness of unity schools in North West zone, Nigeria.

H₀₂: There is no significant relationship between provision of quality furniture and effectiveness of unity schools in North West zone, Nigeria.

H₀₃: There is no significant relationship between provision of portable water supply and effectiveness of unity schools in North West zone, Nigeria.

REVIEW OF RELATED LITERATURE

Some related literatures were reviewed in this section.

Conceptual Clarification

Quality Classroom: The word classroom is commonly used to refer to such a room at every level of education, including elementary school, high school, and college (Sowell, 2010). It can also be used in more general way to refer to any space where students are being taught by a teacher. (Earthman & Lemaster, 2020).

Quality Furniture: This refers to objects that can be moved such as chairs, tables, cupboards that are used in schools for students and teachers. Educational furniture should always be made of high-quality materials; because once they are made from such materials, they tend to endure all the damages and last over decades (Phil, 2021).

Portable Water Supply: Portable water is water which is free from disease. The term potable water is also sometimes used; 'potable' means safe to drink. UNICEF (2018) states that most safe health measures to be taken in schools should include ample-supply to safe drinking water. Safe water is water which is free from disease.

This study was anchored to System theory. Systems theory offers a way of interpreting organization as a system. A system by definition is a set of interrelated parts that operate as a whole to achieve common goals. The system approach as applied to organization analysis is essentially based on the work of Bertalanffy, a biologist and founder of general systems theory. (Inyang, 2019). The system approach to management views the school as a united, purposeful system composed of interrelating parts (Tnyans 2019). This approach gives administrators a way of looking at the school as a whole part of the larger external environment (Omengboji 2020). Systems theory tells us that the activity of any segment of a school affects in varying degrees the activities of every other segment. The point of the systems approach is that school plant cannot function wholly without effective management and environment. They must harmonize (Ile, 2018). No school can operate in a vacuum without effective management and environment. Therefore, this study is in line with systems theory as the basis through which effectiveness of school can be achieved through quality school plant since they are interrelated. A school cannot be effective without quality school plant. When all these are provided, the school will have an effective learning performance outcome.

Enwezor (2021) conducted research on school plant management effectiveness of secondary school principals in Anambra State. The aim of the study was to identify the factors needed for principal's effectiveness in the management of school plant. The study adopted a descriptive survey design method. Structured questionnaire was used for data collection. 400 respondents were drawn from a population of 1067 teachers. Reliability indices of 0.69 and 0.71 The findings of the study showed that the poor teaching and learning found in so many secondary schools today are as a result of inadequate provision, poor utilization, lack of maintenance and inspection of the school plants. The findings concluded that principals should pay more attention to the management of school plant. Enwezor's findings is related to the current study, as both studies conducted their researches on school plant management. The two studies differ in terms of methodology.

A study was conducted by Ajayi and Haastrup (2020) on factor determining the effectiveness of Secondary Schools in Nigeria. The study examined the factors determining the effectiveness of secondary schools in Nigeria. The population comprised all the teachers, principals as well as parents of students in public secondary schools in south west Nigeria. The sample comprised 1200 teachers, 300 parents and 60 principals from 60 secondary schools. Multi-stage random sampling technique was used to select the sample. Test-retest method of reliability was used for the two instruments while Pearson product moment correlation was used to determine their reliability coefficients, which stood at 0.87 and 0.82 for SSEQ and PISAQ

respectively. The reviewed study is highly related to the present study as both studies conducted their research on effectiveness of secondary schools. However, the two studies differ in methodology.

RESEARCH METHODOLOGY

This study adopted correlation research design in order to collect data on relationship between quality of school plant management and effectiveness of unity schools in North West Zone, Nigeria. This type of research design explains simple relationship between two or more variables as rightly posited by Creswell (2020) that; a correlational research design is a design in which the researcher is interested in the extent to which two variables (or more) co-vary, that is, where changes in one variable are reflected in changes in the other.

The population for the study comprised of all the teachers in unity schools in North West zone, Nigeria. There are twenty (20) unity schools in Northwest zone with a population of one thousand, one hundred and eighteen (1,118) teachers.

In this study, four states were selected at random these were: Sokoto State, Kano State, Kaduna State and Zamfara State. The researcher selected all the 11 unity schools in the four selected states. The researcher selected the four States because of security reasons, even though Zamfara is among the insecurity states, the schools are located along the road side of the state. Therefore, the schools are secured. Sample size of 291 teachers was drawn from the population of 760 based on the recommendation of Research Advisors (2006). Random sampling technique was used to determine the number of participants to be drawn from each school. Proportionate sampling technique was used to select the participants within each school. The study used two structured questionnaires for data collection these are:

1. Quality of School Plant Management Questionnaire (QSPMQ),
2. Effectiveness of Unity Schools Questionnaire (EUSQ).

The instruments were subjected to face and content validity by experts for their inputs and observation from different areas of specialization in the Department of Education as well as Faculty of Education and Extension Services, Usmanu Danfodiyo University, Sokoto. All observations, suggestions and corrections were corrected.

The reliability of the instruments was determined using test-retest method. The instruments were pilot tested in three unity schools that were not part of the sample schools. The instruments were administered to 30 teachers two times with an interval of three weeks. The two sets of data from the two different administrations were computed and analyzed using Pearson Product Moment Correlation Coefficient from SPSS version 20. The computed results produced reliability indices of 0.76 for the QSPMQ and 0.77 for EUSQ respectively.

The administration of the instrument was carried out on a total of 291 Teachers who constituted the sample for the study in their respective unity schools. Before the administration of the instruments, permission to conduct the study in the schools was sought from the school authorities. The researcher with the help of his research assistants administered the questionnaires on the respondents. The copies of the questionnaires were administered and collected through direct delivery and recovery method to enhance high return rate.

Descriptive and inferential statistics were employed to analyse the data collected. The descriptive statistics such as mean and percentage were used to answer the research questions, while, hypotheses were tested using Pearson Product Moment Correlation (PPMC).

Data Presentation and Analysis

The results of the analyses of the null hypotheses are presented below. Here, the responses for provision of quality classroom, quality furniture and portable water supply as they relate to the effectiveness of unity schools.

Hypothesis One

H0₁: There is no significant relationship between provision of quality classroom and effectiveness of unity schools in North West zone, Nigeria.

This hypothesis was tested using Pearson *r*-test analysis as shown in Table 2.

Table 2: Provision of Quality Classroom and Effectiveness of Unity Schools

Variables	N	Mean	S. Dev.	Df	<i>r</i> -Cal	<i>p</i> -Value	Decision
Provision of Classroom	283	4.33	0.868				
				281	0.839	0.000	Rejected
School Effectiveness	283	4.86	0.597				

From the result of table 2, provision of classroom and effectiveness of unity schools were positively related and significant, $r(283) = 0.839, p < 0.05$. This indicated significant relationship between provision of quality classroom and effectiveness of unity schools in North West zone, Nigeria because the *p*-value is less than the .05 level of significance. Therefore, H0₁ which states that there is no significant relationship between provision of quality classroom and effectiveness of unity schools in North West zone, Nigeria was rejected. By implication, provision of quality classrooms influences the effectiveness of unity schools in North West zone, Nigeria.

Results from hypothesis one showed that provision of quality classroom and effectiveness of unity schools were positively related and significant, $r(283) = 0.839, p < 0.05$. This indicated significant relationship between provision of quality classroom and effectiveness of unity schools in North West zone, Nigeria because the *p*-value is less than the .05 level of significance. Therefore, H0₁ which states that there is no significant relationship between provision of quality classroom and effectiveness of unity schools in North West zone, Nigeria was rejected. By implication, there was a significant and positive relation between sufficiency of quality classroom, well spacious classrooms, availability of facilities which facilitate learning and effectiveness of unity schools in the study area. The findings of this study agreed with findings of Ajayi and Haastrup (2020) on Factors Determining the Effectiveness of Secondary Schools in Nigeria. The study revealed that learning environment, monitoring of students' progress, school facilities and teachers' quality made significant contributions to school effectiveness. Learning environment was the best predictor of school effectiveness.

Hypothesis Two

H0₂: There is no significant relationship between provision of quality furniture and effectiveness of unity schools in North West zone, Nigeria.

This hypothesis was tested using Pearson *r*-test analysis as shown in Table 3

Table 3: Provision of Quality Furniture and Effectiveness of Federal Unity Schools

Variables	N	Mean	S.Dev.	Df	<i>r</i> -Cal	<i>p</i> -Value	Decision
Provision of Furniture	283	3.85	0.990				
					0.832	0.000	Rejected
School Effectiveness	283	4.86	0.597				

From the result of table 3, provision of quality furniture and effectiveness unity schools were positively related and significant, $r(283) = .832, p < .05$. This indicated significant relationship between provision of quality furniture and effectiveness of unity schools in North West zone, Nigeria. because the *p*-value is less

than the .05 level of significance. Therefore, H₀₂ which states that there is no significant relationship between provision of quality furniture and effectiveness of unity schools in North West Zone, Nigeria was rejected. This means that, provision of quality furniture in unity schools positively influence the effectiveness of unity schools in North West Zone.

The outcome from hypothesis two showed that provision of quality furniture and effectiveness of federal unity schools were positively related and significant, $r(283) = .832, p < .05$. This indicated significant relationship between provision of quality furniture and effectiveness of Federal unity schools in North West zone Nigeria, because the p -value is less than the .05 level of significance. Therefore, H₀₂ which states that there is no significant relationship between provision of quality furniture and effectiveness of unity schools in North West zone, Nigeria was rejected. This means that there is significant relationship between provision of quality furniture and effectiveness of federal unity school in North West Zone, Nigeria, that is to say, provision of sufficient quantity of furniture in unity schools, good and quality furniture significantly affect the effectiveness of unity schools in the study areas.

Hypothesis Three

H₀₃: There is no significant relationship between provision of portable water supply and effectiveness of unity schools in North West zone, Nigeria.

This hypothesis was tested using Pearson r -test analysis as shown in Table 4.

Table 4: Provision of Portable Water Supply and Effectiveness of Federal Unity Schools

Variables	N	Mean	S.Dev.	Df	r -Cal	p -Value	Decision
Provision of Furniture	283	4.16	0.766				
				281	0.728	0.000	Rejected
School Effectiveness	283	4.86	0.597				

From the result of table 4, Provision of portable water supply and effectiveness of Unity Schools were positively related and significant, $r(283) = .728, p < .05$. This indicated significant relationship between provision of portable water supply and effectiveness of unity schools in North West zone, Nigeria. Therefore, H₀₃ which states that there is no significant relationship between provision of portable water supply and effectiveness of unity schools in North West zone, Nigeria was rejected. This result implies that provision of portable water supply in unity schools helps its effectiveness.

The results hypothesis three showed that provision of portable water supply and effectiveness of Unity Schools were positively related and significant, $r(283) = .728, p < .05$. This indicated significant relationship between provision of portable water supply and effectiveness of unity schools in North West zone Nigeria, because the p -value is less than the .05 level of significance. Therefore, H₀₃ which states that there is no significant relationship between provision of portable water supply and effectiveness of unity schools in North West zone, Nigeria was rejected. The study was linked to systems theory because system approach to management views the school as a united, purposeful system composed of interrelating parts (Inyang, 2019). This approach gives administrators a way of looking at the school as a whole part of the larger external environment.

Summary of Findings

The results of the study show that:

1. Provision of portable water supply and effectiveness of Unity Schools were positively related.
2. Provision of quality furniture and effectiveness of federal unity schools were positively related.
3. Provision of quality classroom and effectiveness of unity schools were positively related.

CONCLUSION

This study examined the relationship between quality of school plant management and effectiveness of unity schools in North West Zone, Nigeria. The findings of the correlational analyses revealed that there are significant positive relationships between quality of school plant management and effectiveness of unity schools in North West Zone, Nigeria. This means school plant which includes: quality classroom, quality furniture and portable water supply influences the success of unity schools, that is when school plant is well managed, there will be effectiveness of Unity Schools in North West zone, Nigeria.

RECOMMENDATIONS

Based on the findings of this study, it is recommended that:

1. In order to improve and sustain the effectiveness of Federal Unity Schools in North West Zone, Nigeria, government and other educational bodies, philanthropists as well as PTA committee should contribute in the management of school plant
2. All federal unity schools should introduce ways of maintaining furniture by generating income through exhibition of goods produced by students such as farm products.
3. Government should consider effective supply of portable water sources to the federal unity schools in North West Zone, Nigeria.

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