

School Facilities Utilization and Teacher Effectiveness in Public Senior Secondary Schools in Sokoto State, Nigeria

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Abstract

The study examined the relationship between School facilities utilization and teacher effectiveness in public senior Secondary Schools in Sokoto State, Nigeria. Two research objectives, two research questions, and two hypotheses were used for the study. The study utilized a descriptive correlational survey research design. The population of the study consisted 3516 teachers from all public senior secondary schools in Sokoto state. A total sample of 347 teachers as recommended by research advisor (2006) table of sample size determination was used for the study. The instruments adapted for this study were; School Facilities' Utilization Questionnaire (SFUQ) and Teacher Effectiveness Assessment Questionnaire (TEAQ). The instruments were validated by the three expert form the department of educational management Sokoto state university and a validity index of 0.70 and 0.90 was obtained respectively. Pilot test was conducted in one of the secondary school parts of population but out of sample schools to determine reliability of the instruments. The reliability coefficient of 0.87 and 0.84 were also obtained respectively. Data were analyzed with the aid of SPSS 25.0 version. Mean and standard deviations were used to answer the research questions. While Pearson Product Moment Correlation Coefficient (PPMC) was used to test the null hypotheses at 0.05 level of significance. The findings of the study showed that, there was a significant relationship between library utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State. Also, the findings indicated there was no significant relationship between laboratory usage and teachers' classroom evaluation practices in public senior secondary schools in Sokoto State. Based on these findings, it was concluded that the effective utilization of certain school facilities, particularly library resources, contributes to teacher effectiveness and can support the achievement of educational goals in public senior secondary schools in Sokoto State.

Keywords: Secondary Schools, Facilities, Utilization, Teacher Effectiveness

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Introduction

Education is noted to be an effective instrument for affecting national and global development irrespective of the economic sector. It plays a veritable role in the communication process of its norms and values from one generation to another. Educationist and other well-meaning people have always maintained that education is the greatest legacy a nation can give to its citizens. There is therefore no better investment a nation could make than that in education, this is why one should not remain indifferent to the lapses on the educational system. The extent to which the students, teachers and schools measure show that their educational goals have been achieved refers to academic achievement. According to Yusuf et al. (2016), stated that academic achievement is a measurable and observable behaviour of a student within a specific period as it consists of scores obtained by a student in a class work, test, examination and so forth. School facilities and teacher's effectiveness form one of the notable factors that are anticipated to contribute to students' academic achievement in the school system.

Furthermore, School facilities play an important role in the students. Good school facilities support the educational enterprises. While factors such as student socio – economic status and parental involvement are among the most important predictors of students' academic achievement so also are school buildings district and state (Cotton, 2019). Hence, improving school facilities offers a feasible opportunity for improving academic achievement.

Moreover, School facilities form an integral part of the educational system and are observed as a potent factor to qualitative and quantitative education. Facilities enable the teachers and learners to develop problem-solving skills and scientific attitudes. Ajayi (2020) reiterated that when facilities are provided to meet relative needs of a school system, students will not only have access to the reference materials mentioned by the teacher, but individual students will also learn at their own paces. The net effect of this is increased overall academic performance of the entire students. School facilities form one of the potent factors that contribute to academic achievement in the school system. They include the school buildings, classrooms, accommodations, libraries, laboratories, furniture, recreational equipment, apparatus and other instructional materials. According to Usen (2019), availability, relevance and adequacy of school facilities contribute to academic achievement. He

however, quickly added that unattractive school buildings and overcrowded classrooms among others contribute to poor academic attainment. Describing where these facilities should be located, he ascribed that educational facilities should be located in appropriate places, while the needs of the users should be put into consideration. Ibrahim et al. (2017) stated that the utilization of the goals and objectives of education require the provision, maximum utilization, and appropriate management of the school facilities.

Facilities in schools are physical resources that facilitate efficient teaching and learning, since their availability, adequacy, and relevance affect efficiency and high production, from all indications. Nwuke, and Nwanguma (2024) stated that school facilities form an important pillar in the academic achievement of students. The authors further noted that availability, relevance, adequacy, and proper utilization of school facilities such as the entire school layout, playground and recreational equipment, buildings and accommodation, classrooms and furniture, libraries, laboratories, and their apparatus, and other instructional materials contribute to academic achievement. According to Abaidoo (2018), a weighty academic achievement of students is sometimes attributed to provision and utilization of educational facilities.

Comfor and Veronica (2016) stated that a close observation of the performance of secondary school students perhaps could be traced to lack of physical facilities and a motivating learning environment. Most schools seem to lack the necessary facilities that could enhance effective teaching and learning as a result little is expected from students in terms of academic performance. Experience shows that inadequate physical facilities have some adverse effect on students' interest to learn. Hence, this may invariably affect their academic performance. In a situation where students are not having access to normal facilities like library equipment and inadequate seats in the classroom it is observed that these could contribute to low performance of students. Experience shows that if physical facilities are available, students tend to have interest in learning; this will invariably lead to high academic achievement of the students. Therefore, the present study investigated the relationship between school facilities utilization and teacher effectiveness in public senior secondary schools in Sokoto State, Nigeria.

Statement of the Problem

Education is the cornerstone of national development, and the provision of adequate school facilities, coupled with teacher effectiveness, plays a pivotal

role educational system. Ideally, public senior secondary schools in Sokoto State, Nigeria, should have well-equipped libraries, functional laboratories, and Information Technology (IT) rooms for support effective learning and teaching. Moreover, teachers should possess a strong mastery of their subject areas, conduct proper classroom evaluations, and foster interactive learning environments to enhance student performance. These factors collectively contribute to the attainment of quality education and academic excellence.

However, the reality in many public senior secondary schools in Sokoto State is far from the ideal. Many schools lack sufficient library resources, well-maintained laboratories, and up-to-date Information Technology rooms, which are critical for fostering a conducive learning environment. Additionally, teacher effectiveness is often hindered by limited subject mastery, inadequate classroom evaluation practices, and poor teacher-student interaction, resulting in a learning environment that fails to inspire students or improve their academic performance. These deficiencies compromise students' ability to fully grasp concepts, think critically, and excel academically, leaving a gap in educational outcomes.

Given these challenges, this study seeks to find out the relationship between school facilities and teacher effectiveness in public senior secondary schools in Sokoto state, Nigeria. In view of that, this study seeks to investigate the relationship between school facilities (library, laboratory), teacher effectiveness (mastery of subject, classroom evaluation, and classroom interaction), in Public Senior Secondary Schools in Sokoto State, Nigeria.

Research Objectives

The purpose of this study is to examine the relationship between School facilities utilization and teacher effectiveness in public senior secondary schools in sokoto state, Nigeria. Specifically, the study aims to:

- i. Examine the relationship between library utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State.
- ii. Investigate the relationship between laboratory usage and teachers' classroom evaluation practices in public senior secondary schools in Sokoto State.

Research Questions

The study is set out to find the answers to the following questions;

1. What is the relationship between library utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State?
2. What is the relationship between laboratory usage and teachers' classroom evaluation practices in public senior secondary schools in Sokoto State?

1.4 Research Hypotheses

The following null hypotheses were formulated and will be tested at $\alpha=0.05$ level of significance;

H₀₁: There is no significant relationship between library utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State.

H₀₂: There is no relationship between laboratory usage and teachers' classroom evaluation practices in public senior secondary schools in Sokoto State.

Methodology

The study utilized a descriptive correlational survey research design. The study population consisted of 3,516 teachers from 147 public senior secondary schools located within the six educational zones of Sokoto State. Based on the sample size determination guidelines provided by Research Advisors (2006), a sample of 347 teachers was selected. The participants were drawn proportionately from the six educational zones and selected using simple random sampling techniques to ensure fair representation of the population. The instruments adapted for this study were; School Facilities' Utilization Questionnaire (SFUQ) and Teacher Effectiveness Assessment Questionnaire (TEAQ). The instruments were validated by the three expert form the department of educational management Sokoto state university using face and content validity based on the suitability of the items, suitability of the language, content coverage and any other consideration outside the one indicated. The rating of the validators yields a validity index of 0.70 and 0.90

respectively. Pilot test was conducted in one of the secondary school parts of population but out of sample schools to determine reliability of the instruments. The reliability coefficient of 0.87 and 0.84 were obtained respectively. The instruments were administered to the selected sample of 347 teachers, and all completed questionnaires were retrieved and found suitable for analysis, yielding a response rate of 100%. Descriptive statistics, comprising mean and standard deviation, were used to answer the research questions. The formulated null hypotheses were tested using the Pearson Product-Moment Correlation Coefficient (PPMC) at a 0.05 level of significance. The data collected through the instruments are presented here:

Research Question 1: What is the relationship between library utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State? Mean and standard deviation were used to answer the research question. The results are presented in Table 1.

Table 1: Mean and Standard Deviation of Teachers Materials Utilization and Effectiveness in Public Senior Secondary Schools in Sokoto State

Variables	N	Mean	Std.	MD
Library Materials Utilization	347	2.9477	.27650	0.1295
Teachers' mastery of subject content	347	3.0772	.26412	

Table 1 presents the mean and standard deviation of library materials utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State. The result shows that library materials utilization had a mean score of 2.9477 with a standard deviation of 0.27650, while teachers' mastery of subject content recorded a mean score of 3.0772 with a standard deviation of 0.26412. The mean difference between the two variables was 0.1295. The findings indicate that both library materials utilization and teachers' mastery of subject content were relatively high among public senior secondary schools in Sokoto State. The higher mean score recorded for teachers' mastery of subject content suggests that teachers were generally effective in carrying out their instructional responsibilities. The standard deviation values further indicate that respondents had similar views regarding library materials utilization and teachers' mastery of subject content.

Research Question 2: What is the relationship between laboratory usage and teachers' classroom evaluation practices in public senior secondary schools in

Sokoto State? Mean and standard deviation were used to answer the research question. The results are presented in Table 2.

Table 2: Mean and Standard Deviation of laboratory usage and teachers' classroom evaluation practices in public senior secondary schools in Sokoto State.

Variables	N	Mean	Std.	MD
laboratory usage	347	2.8253	.28038	0.0483
Teachers' Classroom Evaluation practices	347	2.7770	.38312	

Table 2 presents the mean and standard deviation of laboratory usage and teachers' classroom evaluation practices in public senior secondary schools in Sokoto State. The result shows that laboratory usage had a mean score of 2.8253 with a standard deviation of 0.28038, while teachers' classroom evaluation practices recorded a mean score of 2.7770 with a standard deviation of 0.38312. The mean difference between the two variables was 0.0483. The findings indicate that both laboratory usage and teachers' classroom evaluation practices were moderately high in public senior secondary schools in Sokoto State. The slightly higher mean score for laboratory usage suggests that laboratory facilities were utilized to a greater extent than classroom evaluation practices. The mean difference and standard deviation values indicate that respondents had relatively similar perceptions regarding laboratory usage and teachers' classroom evaluation practices.

H₀₁: There is no significant relationship between library utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State. Pearson Product moment Correlation Coefficient was used to test the null hypothesis. The results are presented in Table 3.

Table 3: Relationship between library utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State.

Variables	N	Mean	Std.	Df	r-value	P-value	Decision
Library Utilization	347	2.9477	.27650	345			H ₀₁
Teachers' mastery of subject content	347	3.0772	.26412		.064	.003	Rejected

Table 3 presents the relationship between library materials utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State. The result shows that library materials utilization had a mean score of 2.9477 with a standard deviation of 0.27650, while teachers' mastery of subject content recorded a mean score of 3.0772 with a standard deviation of 0.26412. The analysis yielded an r-value of 0.064 with 345 degrees of

freedom and a p-value of 0.003. Since the p-value (0.003) is less than the 0.05 level of significance, the null hypothesis (H_{01}) was rejected. This indicates that there is a statistically significant relationship between library materials utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State. However, the correlation coefficient ($r = 0.064$) suggests that the relationship is positive but very weak. Therefore, increased utilization of library materials is associated with a slight improvement in teachers' mastery of subject content.

H₀₂: There is no significant relationship between laboratory usage and teachers' classroom evaluation practices in public senior secondary schools in Sokoto State. Pearson Product moment Correlation Coefficient was used to test the null hypothesis. The results are presented in Table 4

Table 4: Relationship between Laboratory Equipment Utilization and Teachers' classroom evaluation practices in Public Senior Secondary School in Sokoto State

Variables		N	Mean	Std.	Df	r-value	P - value	Decision
School Utilization	Laboratory	347	2.8253	.28038	345	.014	.797	Ho4 Accepted
	Teachers' classroom evaluation practices	347	2.7770	.38312				

Table 4 presents the relationship between laboratory equipment utilization and teachers' classroom evaluation practices in public senior secondary schools in Sokoto State. The result shows that laboratory equipment utilization had a mean score of 2.8253 with a standard deviation of 0.28038, while teachers' classroom evaluation practices recorded a mean score of 2.7770 with a standard deviation of 0.38312. The analysis yielded an r-value of 0.014 with 345 degrees of freedom and a p-value of 0.797. Since the p-value (0.797) is greater than the 0.05 level of significance, the null hypothesis (H_{04}) was accepted. This indicates that there is no statistically significant relationship between laboratory equipment utilization and teachers' classroom evaluation practices in public senior secondary schools in Sokoto State. The very low correlation coefficient ($r = 0.014$) further suggests that the relationship between the two variables is negligible. Therefore, laboratory equipment utilization was not significantly associated with teacher effectiveness among the respondents.

Summary of the Major Findings

1. There was a significant relationship between library utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State.
2. There was no significant relationship between laboratory usage and teachers' classroom evaluation practices in public senior secondary schools in Sokoto State.

Discussion

The purpose of this study was to examine the relationship between school facilities utilization and teacher effectiveness in public senior secondary schools in Sokoto State, Nigeria. The findings of the study are discussed based on the research objectives and hypotheses tested.

The first finding revealed that there was a significant relationship between library utilization and teachers' mastery of subject content in public senior secondary schools in Sokoto State. This suggests that libraries materials were being utilized to support teaching and learning activities in the schools. This finding is consistent with the studies of Ayaz et al. (2017), Okpa (2022), and Aina and Ogundipe (2013), who reported that secondary schools utilized available educational facilities to enhance instructional delivery and improve learning outcomes. The finding also agrees with Ibrahim et al. (2017), who asserted that the achievement of educational goals depends largely on the provision and effective utilization of school facilities. Similarly, Ajayi (2020) noted that proper utilization of school facilities promotes effective teaching and learning by providing students and teachers with opportunities to access relevant instructional resources. However, this finding contradicts the studies of Comfor and Veronica (2016) and Abaidoo (2018), who found that many secondary schools lacked adequate facilities and that poor utilization of available facilities hindered effective teaching and learning.

The second finding showed that there was no significant relationship between laboratory usage and teachers' classroom evaluation practices in public senior secondary schools in Sokoto State. This implies that teachers may not be performing optimally in areas such as mastery of subject content, classroom evaluation practices, instructional delivery, and classroom management. This finding is in agreement with Nwuke and Nwanguma, (2024) that inadequacies

in educational resources and learning environments may negatively affect teachers' performance and effectiveness. Nevertheless, the finding disagrees with Usen (2019) who argued that the availability and proper utilization of educational facilities, particularly laboratories, contribute significantly to the quality of teaching and learning, including classroom assessment and evaluation processes.

Conclusion

This study examined the relationship between school facilities utilization and teacher effectiveness in public senior secondary schools in Sokoto State, Nigeria. The findings revealed that the level of school facilities utilization was high, while teacher effectiveness was moderate. The study further established a significant relationship between library utilization and teachers' mastery of subject content, indicating that effective use of library resources enhances teachers' professional competence. However, no significant relationship was found between laboratory usage and teachers' classroom evaluation practices. Based on these findings, it was concluded that the effective utilization of certain school facilities, particularly library resources, contributes to teacher effectiveness and can support the achievement of educational goals in public senior secondary schools in Sokoto State.

Implications of the Findings of the Study

The findings of this study have important implications for educational administrators, teachers, policymakers, and other stakeholders in secondary education.

1. The finding that there was a significant relationship between library utilization and teachers' mastery of subject content implies that effective use of library resources enhances teachers' professional knowledge and competence. This suggests that schools should strengthen library services and encourage teachers to regularly utilize library materials for lesson preparation, research, and professional development. Improved access to and utilization of library resources can contribute to better subject mastery and more effective teaching.
2. The finding that there was no significant relationship between laboratory usage and teachers' classroom evaluation practices implies

that the utilization of laboratory facilities alone may not be sufficient to improve teachers' assessment practices. This suggests that factors such as teachers' assessment skills, professional training, and knowledge of evaluation techniques may play a more important role in determining the quality of classroom evaluation. Therefore, school administrators and educational authorities should complement the provision and utilization of laboratory facilities with regular training and capacity-building programmes on effective classroom assessment practices.

In this note, the study implies that while the utilization of educational facilities is important, different facilities contribute differently to various aspects of teacher effectiveness. Therefore, efforts to improve educational quality should focus not only on providing and utilizing school facilities but also on enhancing teachers' professional competencies through continuous training and support.

Recommendations

Based on the findings and conclusions from this study the researcher recommends the following:

1. Teachers should intensify the uses of School library materials in order to improve their effectiveness and to meet up with current classroom challenges.
2. Principals should emphasize on the provision of update materials in the libraries to enable teachers obtain new knowledge and technological skills for imparting the correct knowledge and skills to the students.
3. Teachers should be encouraged to using School library materials for effective teachers' mastery of subject content. This will help increase the student's retention in the school.

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