

TEACHER QUALITY AND STUDENT'S ACADEMIC PERFORMANCE IN SECONDARY SCHOOLS IN BAYELSA STATE

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Abstract

The study investigated teacher quality and secondary school students' academic performance in Bayelsa State. Two research questions and two (2) null hypotheses guided the study. The design of the study was a correlational survey. The population of the study comprised all six thousand, eight hundred and ninety-three (6893) teachers and ninety-six thousand, eight hundred and ninety-three students (96893) in the 217 public senior secondary schools in Bayelsa State as of the time of the study. A sample of 1156 respondents comprising 499 teachers and 657 students was used in the study. The instruments used for data collection were the "Teacher Quality Checklist (TQC)", and the "Students Academic Performance Checklist" developed by the researcher and validated by experts. The reliability of the instrument was established using the Cronbach Alpha formula and the aggregate reliability coefficient for the Teacher Quality Checklist (TQC) was 0.85 and 0.81 for the Students Academic Performance Checklist. The research questions were answered using Pearson Product Moment Correlation (PPMC), while the hypotheses were tested using a z-test of the significance of the correlation coefficient at 0.05 level of significance. It was revealed that the extent to which teachers' instructional skills and knowledge of subject matter influenced students' academic performance in secondary schools was high. Hence the study concluded that without qualified competent teachers, it is impossible to build a high-quality education. Based on the conclusion, it was recommended that to provide a high-quality education, the Government should be committed to ensuring that every student has the opportunity to learn from a qualified and inspiring teacher.

Keywords: Teacher Quality, Academic Performance Instructional Delivery Skills, Knowledge of Subject

Introduction

Teacher quality is a critical factor influencing students' academic performance. The quality of instruction teachers provides and their depth of knowledge in the subject matter are two key dimensions often considered in assessing teacher quality. Effective instructional skills are fundamental to fostering students' learning outcomes. Teachers who employ diverse instructional strategies tailored to students' diverse learning styles are more likely to facilitate deeper understanding and higher academic achievement (Darling-Hammond, 2020). For instance, incorporating active learning techniques, such as group discussions, problem-solving activities, and hands-on experiments, enhances students' engagement and comprehension of the material (Hattie, 2009). Furthermore, providing timely and constructive feedback is essential in guiding students' learning progress and addressing their individual needs (Hattie, 2019).

In addition to instructional skills, teachers' knowledge of the subject matter plays a pivotal role in shaping students' academic performance. Pedagogical content knowledge (PCK), as proposed by Shulman (1986), emphasizes the importance of teachers' understanding of the subject matter and how to teach it effectively. Teachers with strong content knowledge can convey complex concepts with clarity, anticipate students' misconceptions, and provide appropriate scaffolding to support learning (Hill et al., 2015). Research has consistently demonstrated a positive correlation between teachers' subject matter expertise and student achievement in various academic domains (Hill et al., 2015). However, assessing teacher quality solely based on instructional skills and subject matter knowledge may oversimplify the complex dynamics of teaching and learning. Other factors, such as classroom management, interpersonal relationships, and cultural

competence, also contribute significantly to effective teaching. For instance, creating a positive classroom climate, fostering supportive teacher-student relationships, and promoting inclusive practices are essential for cultivating a conducive learning environment (Stronge et al., 2014). Moreover, teachers' ability to differentiate instruction and accommodate diverse student needs is crucial for ensuring equitable access to learning opportunities (Darling-Hammond, 2020).

Teacher quality, characterized by instructional skills and knowledge of subject matter, is a key determinant of students' academic performance in secondary schools. Effective teaching involves employing a variety of instructional strategies tailored to students' needs and possessing a deep understanding of the content being taught. However, it is imperative to recognize that teacher quality is multifaceted, encompassing various dimensions beyond instructional skills and content expertise. Future research and educational policies should adopt a comprehensive approach to teacher evaluation and professional development to optimize students' learning outcomes.

Statement of the Problem

In Bayelsa State, as in many other areas, the quality of teachers in secondary schools plays a crucial role in students' academic performance. However, several significant issues regarding teacher quality need to be addressed. Firstly, concerns exist about the adequacy of teachers' instructional skills in effectively delivering the curriculum. A study by Akomolafe et al. (2018) revealed that many teachers in Bayelsa State lack training in modern teaching methods and struggle to engage students in meaningful learning experiences. This shortfall can impede students' comprehension of the subject matter and ultimately impact their academic outcomes. Another area of concern is the level of subject matter knowledge among teachers in Bayelsa State secondary schools. Research by Ebele (2016) indicated that some teachers in the state possess insufficient content knowledge in the subjects they teach, leading to inaccuracies in information delivery and an inability to effectively address students' questions. Without a strong foundation in the subject matter, teachers may find it difficult to explain complex

concepts and provide the necessary guidance for students to succeed academically.

The challenges of teacher absenteeism and turnover further complicate the issue of maintaining teacher quality in Bayelsa State secondary schools. High rates of teacher absenteeism, as reported by Adodo (2019), disrupt instructional continuity and hinder students' learning progress. Frequent teacher turnover, driven by factors such as low morale, poor working conditions, and delayed salaries, further destabilizes the learning environment and hampers students' academic achievement. These issues collectively contribute to the complex challenge of teacher quality and its effect on students' academic performance in Bayelsa State secondary schools.

Aims and Objectives of the Study

The main objective of this study is to investigate teacher quality and students' academic performance in Bayelsa State. Specifically, this study achieved the following objectives:

1. Determine the extent to which teachers' instructional delivery skills influences the academic performance of secondary school students in Bayelsa State
2. Determine the extent to which a teacher's knowledge of a subject influences the academic performance of secondary school students in Bayelsa State.

Research Questions

The study provided answers to the following research questions:

1. To what extent does teachers' instructional delivery skills influence academic performance of secondary school students in Bayelsa State?
2. To what extent does teacher's knowledge of subject influence academic performance of secondary school students in Bayelsa State?

Research Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance.

1. H_{01} : Teachers' instructional delivery skills does not significantly influence academic performance of secondary school students in Bayelsa State.

2. H₀₂: Teachers' knowledge of the subject does not significantly influence the academic performance of secondary school students in Bayelsa State.

Methods

This study utilized a correlational survey design. According to Charles-Owaba (2019), a correlational survey is a method of research that involves gathering data to determine if a relationship exists between two or more measurable variables and the extent of that relationship. This design was chosen because it allowed for data collection to test hypotheses or answer questions about the current state of a phenomenon. Academic performance is influenced by several factors, and a study that identifies and examines these factors (independent or predictor variables) simultaneously to determine their presence, absence, and level of impact on the dependent variable can best be conducted using this design. The population of the study comprised all six thousand, eight hundred and ninety-three (6893) teachers and ninety-six thousand, eight hundred and ninety-three students (96893) in the 217 public senior secondary schools in Bayelsa State as of the time of the study. A sample of 1156 respondents comprising 499 teachers and 657 students was used in the study. Respondents were divided into strata corresponding to the three senatorial districts in the state. From each stratum, five schools were selected using simple random sampling. All the 499 teachers and 657 students from 15 schools formed the sample of the study.

The instruments used for data collection were the "Teacher Quality Checklist (TQC)", and "Students Academic Performance Checklist" developed by the researcher. The TQC was administered to the teachers in the sampled schools, while the SAPC was used to determine the student's academic performance from the 2018-2023 Senior School Certificate Examination (WAEC) results in the sampled schools. These items in the TQC are classified into 3 sub-sections namely, A, B, and C. Section A measured the demographic

information of the respondents, while, section B and C, measured, instructional delivery skills and teachers' knowledge of subject matter respectively. Sections B and C were structured in a four-point rating Scale in which the respondents were required to respond by indicating one option ranging from Very High Extent (VHE), High Extent (HE), Low Extent (LE) to Very Low Extent (VLE). The content and face validity of the instrument were assessed by one expert in Measurement and Evaluation and two experts in Education Management. Their corrections and suggestions resulted in the final draft used in the study. The instrument was trial tested using twenty (20) teachers who did not participate in the research but possess the same characteristics as the population of interest. The reliability co-efficient of 0.84 was obtained using Cronbach Alpha formula which was considered appropriate for this study. The researcher administered the questionnaire to the respondents during school hours, in all, a 100% return rate was achieved. The research questions were answered using Pearson Product Moment Correlation (PPMC), while the hypotheses were tested using a z-test of the significant of the correlation coefficient at 0.05 level of significance.

The extent of estimation is determined by the following rules:

0.01 – 0.40 = very low extent (VLE)

0.41 – 0.60 =Low Extent (LE)

0.61 – 0.80 =High Extent (HE)

0.81 – 1.00 =Very High Extent (VHE)

For the hypotheses, the null hypothesis should be rejected if the calculated z-value exceeds the critical z-value. If not, the null hypothesis should be accepted.

Analysis of Data

Research Questions

Research Question1: To what extent do teachers' instructional delivery skills influence the academic performance of secondary school students in Bayelsa State?

Table 1: Coefficient of determination of teachers' instructional delivery skills and academic performance of secondary school students

n	r	R	SEE
1156	.88	.77	1.56

Presented in Table 1 is the extent to which teachers' instructional delivery skills influenced the academic performance of secondary school students. The correlation coefficient (r) between teachers' instructional delivery skills and the academic performance of secondary school students is .88. The coefficient falls into the range of .81–1.00 for the very high extent of the relationship, indicating that the extent of the relationship between teachers' instructional delivery skills and academic performance of secondary school students is very high. This indicated that teachers' instructional delivery skills to a very

high extent influenced the academic performance of secondary school students. The coefficient of determination of 0.7744 indicates that only 77.44% of the variation in the academic performance of secondary school students is accounted for or explained by teachers' instructional delivery skills.

Research Questions 2

To what extent does a teacher's knowledge of the subject matter influence the academic performance of secondary school students in Bayelsa State?

Table 2: Coefficient of teacher's knowledge of subject matter and academic performance of secondary school students

n	r	R	SEE
1156	.93	.8649	1.23

Presented in Table 2 is the extent to which teacher's knowledge of subject matter influenced the academic performance of secondary school students. The correlation coefficient (r) between a teacher's knowledge of the subject matter and the academic performance of secondary school students is .93. The coefficient falls in into the range .81–1.00 for very high extent of relationship, indicating that the extent of relationship between academic performance of secondary school students and teacher's knowledge of

subject matter. The coefficient of determination of 0.8649 indicates that 86.49% of the variation in the academic performance of secondary school students is accounted for or explained by the teacher's knowledge of the subject matter.

Hypotheses

H₀₁: Teachers' instructional delivery skills do not significantly influence the academic performance of secondary school students in Bayelsa State.

Table: Z-test analysis of teachers' instructional delivery skills *estimate and* academic performance of secondary school students

n	r	Z	p	Z	α	Decision
1156	.88	41.35	0.000	1.96	0.05	Reject H₀₁

Table 3 provides the correlation coefficient r and z-test analysis on the extent of teachers' instructional delivery skills and academic performance of secondary school students. The calculated z-value of 41.35 is greater than the critical z-value of 1.96 and the p-value of 0.000 is less than the significant value of 0.05. Since the calculated z-value is greater than the critical z-value of 1.96 and the p-value is less than 0.05 alpha level, the null hypothesis is not accepted.

Hence, teachers' instructional delivery skills significantly influence the academic performance of secondary school students in Bayelsa State.

H₀₂: Teachers' knowledge of the subject does not significantly influence the academic performance of secondary school students in Bayelsa State

Table 4: Z-test analysis of teachers' knowledge of subject matter estimate and academic performance of secondary school students

n	r	Z	p	Z	α	Decision
1156	.93	56.46	0.000	1.96	0.05	Reject H₀₂

Table 4 provides the correlation coefficient *r* and z-test analysis on the extent of teachers' knowledge of subject matter and academic performance of secondary school students. The calculated z-value of 56.46 is greater than the critical z-value of 1.96 and the p-value of 0.000 is less than the significant value of 0.05. Since the calculated z-value is greater than the critical z-value of 1.96 and the value is less than 0.05 alpha level, the null hypothesis is not accepted. Hence, teachers' knowledge of subject matter significantly influences the academic performance of secondary school students in Bayelsa State.

Discussion

The result revealed that the extent to which teachers' instructional skills influenced secondary school students' academic performance was high. Also, the study revealed that teachers' instructional delivery skills significantly influenced the academic performance of secondary school students in Bayelsa State. This meant that a teacher's instructional skill significant influence on student's academic performance in secondary schools in Bayelsa State. On this finding, there has been evidence that students' performance can be impacted either positively or negatively by the instructional skill adopted by the teacher. This further shows that a quality teacher can adopt varying instructional skills to ensure that it fits the instructional needs of the students. The extent to which teachers' knowledge of the subject influenced the academic performance of secondary school students in Bayelsa State is high. Teachers' knowledge of the subject significantly influenced the academic performance of secondary school students in Bayelsa State. This finding is in agreement with the findings of Ebiringa (2012) who found that both teachers and students of accounting agreed that the teachers are competent in the content/subject matter of accounting. Studies by Udeinya (2018) and Okafor (2016) also are in agreement with the findings of the present study. These studies indicated that to a large extent, knowledge of the subject matter is very crucial in implementing educational

programmes. Therefore, for a subject like Government, which deals majorly with the state, how it is governed and the political structure of the state, teachers of government must be conversant with the content.

Conclusion

Teachers' quality is the keyword for ensuring the quality of education that is indicated by the quality of output and outcome. Without qualified competent teachers, it is impossible to build a high-quality education. The study has established that the extent to which teachers' instructional skills and knowledge of subject matter influenced students' academic performance is high. Also, teachers' instructional skill and knowledge of subject matter skill significantly influence the academic performance of secondary school students in Bayelsa State.

Recommendations

Based on the conclusion, the following recommendations were given:

1. To provide a high-quality education, the Government should be committed to ensuring that every student has the opportunity to learn from a qualified and inspiring teacher.
2. The government and other stakeholders should ensure that teachers are encouraged to search for and develop for necessary instructional skills and suitable instructional materials that can appeal to the senses of learners, arouse their interest, encourage their participation, make learning more meaningful, and promote academic standards.
3. The study recommends that government should employ only qualified teachers with at least B.Ed certificate and are considerably vast in knowledge of the subject.

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