

Teachers' Instructional Quality and Students' Academic Achievement in Public Senior Secondary Schools in Kwara State, Nigeria

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Abstract

Teachers' instructional quality played a critical factor towards students' participation in the lesson. Therefore, this study examined teachers' instructional quality and students' academic achievement in public senior secondary schools in Kwara State, Nigeria. A descriptive survey of correlational type was adopted for this study. Two hundred and ninety-nine respondents participated in the study. The Teachers' Instructional Quality and Students' Academic Achievement Questionnaire (TIQSAAQ) was used to collect data for this study. Descriptive statistics of frequency, mean, and ranking were used to answer the research questions raised. Inferential statistics, including PPMC and multiple regression analysis, were used to test the hypotheses at the 0.05 significance level. The findings revealed that the level of teachers' instructional quality was high in public senior secondary schools in Kwara State, Nigeria; the level of students' academic achievement was high in public senior secondary schools in Kwara State, Nigeria, and there was a significant relationship between teachers' instructional quality and students' academic achievement in public senior secondary schools in Kwara State, Nigeria. Based on this, it was recommended, among others, that educational authorities should sustain and further enhance the high level of teachers' instructional quality by providing continuous professional development programmes, regular training workshops, and access to modern teaching resources to ensure that teachers remain effective and up-to-date with best practices

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INTRODUCTION

Teachers are undeniably central to the academic success of students, with the quality of education in secondary schools heavily reliant on the professionalism of teachers, the instructional quality they deliver, and the overall learning environment they foster. In Nigeria, the urgency for continuous improvements in teacher professional development programmes has become more pronounced, as schools grapple with challenges concerning educational outcomes, notably students' academic achievement. In the dynamic and ever-evolving realm of education, the effectiveness of teaching and learning is shaped by the interplay of multiple factors. The relationships between teachers' professional development, instructional quality, and students' academic achievement are collectively profound factors that could influence educational outcomes. Teachers must possess the requisite knowledge, skills, and attitudes that serve as the foundation for effective teaching performance. The performance of teachers plays a pivotal role in ensuring effective learning, which, in turn, significantly influences student outcomes (Mihăescu & Andron, 2019). The professional teacher development programme is designed to enhance teachers' competence and pedagogical abilities (Ojo, 2018). These programmes provide teachers with the necessary training and resources to refine their teaching methods, ultimately improving student performance. Instructional quality, on the other hand, encompasses the effectiveness and efficiency of teaching strategies, lesson planning, student engagement, and assessment methods. Both teacher professionalism and instructional quality are critical factors influencing students' academic achievement (Nilsen et al., 2018). Teachers' Professional Development Program (TPDP) refers to a continuous process that aims to improve teachers' skills, knowledge, and competencies through diverse learning opportunities (Oluwole et al., 2023; Ingersoll, 2017). This aspect is closely tied to instructional quality, as effective professional development correlates positively with high-quality teaching. Engaging in ongoing professional development allows teachers to adopt innovative methodologies, embrace modern pedagogies, and adapt to evolving educational trends, which enhances their teaching practices and improves student outcomes (Olohundare & Shola, 2022). Moreover, access to quality professional development programmes contributes significantly to teachers' job satisfaction, thus creating a supportive environment conducive to effective teaching (Ayanwoye, 2023).

Instructional quality, defined as the degree of effectiveness in teaching methods, strategies, and delivery, plays a crucial role in fostering student understanding and mastery of content (Sims & Jerrim, 2020). The link between instructional quality and professional development is clear, with continuous learning positively impacting teaching practices, Organisation for Economic Co-operation and Development (OECD, 2021). Additionally, instructional quality is positively related to job satisfaction, as teachers who witness positive student outcomes, such as higher engagement and academic progress, are more likely to experience job satisfaction and a sense of professional fulfilment (Sutcher et al, 2019). The relationship between professional development, instructional quality, and students' academic achievement forms a dynamic and reciprocal cycle (Liu & Bellibas, 2018). This leads to improvements in instructional quality, which directly influences student achievement. However, challenges related to instructional quality often stem from issues such as large class sizes, varying student abilities, and limited access to resources and teaching tools (Adeoye et al., 2024; Darling-Hammond et al., 2017; Schleicher, 2016; Saiti & Papadopoulos, 2015). When teachers employ high-quality instructional strategies and methods, student engagement and

understanding are enhanced, leading to improved academic progress (Smet, 2022). The positive effects of effective instructional quality extend to teachers' job satisfaction, as teachers experience a sense of fulfilment and professional accomplishment when their students achieve academic success in public senior secondary schools in Kwara State, Nigeria (Oluwole et al., 2023; Sutchet et al., 2019; Sims & Jerrim, 2020).

Despite consistent efforts to enhance the quality of education in public senior secondary schools in Kwara State, Nigeria, significant concerns persist regarding the academic performance of students in public secondary schools. Several studies have suggested that the effectiveness of teachers in the classroom and the instructional quality they provide are vital determinants of students' academic outcomes. However, there remains a notable gap in research that directly links teachers' instructional quality to students' academic achievement in secondary schools in Kwara. The absence of a clear and robust understanding of this relationship presents a challenge to designing targeted educational interventions that could meaningfully enhance student learning outcomes (Kaur et al, 2019; Ogolo & Onukwu, 2019).

Purpose of the Study

The main purpose of this study was to examine the relationship between teachers' instructional quality and students' academic achievement in public senior secondary schools in Kwara State, Nigeria. Other purposes were to:

1. Identify the level of teachers' instructional quality in public senior secondary schools in Kwara State, Nigeria.
2. Determine the level of students' academic achievement in public senior secondary schools in Kwara State, Nigeria;
3. Examine the relationship between teachers' classroom management and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.
4. Investigate the relationship between teachers' emotional support and students' academic achievement in public senior secondary schools in Kwara State, Nigeria; and
5. Investigate the relationship between teachers' lesson plan preparation and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.

Research Questions

Two research questions were raised to guide the study

1. What is the level of teachers' instructional quality in public senior secondary schools in Kwara State, Nigeria?
2. What is the level of students' academic achievement in public senior secondary schools in Kwara State, Nigeria?

Research Hypotheses

The following research hypotheses were formulated to guide this study.

H0₁: There is no significant relationship between teachers' instructional quality and students' academic achievement in public senior secondary schools in Kwara State, Nigeria

H0₂: There is no significant relationship between teachers' classroom management and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.

H0₃: There is no significant relationship between teachers' emotional support and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.

H0₄: There is no significant relationship between teachers' lesson plan preparation and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.

Literature Review

Concept of Teachers' Instructional Quality

Instruction is the establishment of a situation conditioned to bring effective learning, and good teachers are the ones who are capable human engineers. On the other hand, quality is conceptualised as the degree of excellence or superiority of something. From these two definitions, instructional quality is defined in three basic ways. These include definitions in terms of teachers' personalities; teacher-pupil interactions; and teachers' impact on pupils' behaviour (Darling-Hammond et al., 2017). Ogolo and Onukwu (2019) referred to instructional quality as the competence and ability of a teacher to teach effectively. The author stated further that instructional quality involves a set of teaching behaviour which are specifically effective in bringing about desired changes in students' learning. In this regard, Mohammed and Jumare (2020) conceptualized that the concept of quality in instruction encompasses the following features: it involves tacit and explicit knowledge, cognitive and practical skills, as well as dispositions (motivation, beliefs, value orientations and emotions); it enables teachers to meet complex demands, by mobilising psycho-social resources in context, coherently deploying them; it empowers the teacher to act professionally and appropriately in a situation; it helps ensure teachers' undertaking of tasks effectively (achieving the desired outcome) and efficiently (optimizing resources and efforts) and it can be demonstrated to a certain level of achievement along a continuum. Morrison et al. (2019) observed that the variables of pedagogical effectiveness include effective teaching, lesson note preparation, effective use of the scheme of work, effective supervision, monitoring of students' work and disciplinary ability, which are virtues that teachers should uphold effectively in the school system. In this regard, the teachers' competency could be measured through an annual report of his/ her activities in terms of performance in teaching, lesson preparation and lesson presentation, and mastery of subject matter.

Students' Academic Achievement

Students' academic achievement has remained one of the most widely studied concepts in education due to its importance in determining educational progress, career opportunities, and national development. Academic achievement refers to the extent to which students attain educational goals through learning outcomes, examinations, tests, and continuous assessments. It is commonly measured through grades, Grade Point Average (GPA), examination performance, and other indicators of educational success (Anwar et al., 2024). Researchers have consistently emphasised that academic achievement is influenced by psychological, social, economic, environmental, and institutional factors. Academic achievement is considered an essential indicator of educational effectiveness because it reflects students' intellectual development, skill acquisition, and mastery of knowledge. According to Costa et al. (2024), academic achievement affects not only students' immediate educational opportunities but also their future employment and social outcomes. Consequently, understanding the determinants

of students' academic achievement has become a priority among educators, policymakers, and researchers worldwide. Academic achievement refers to the successful completion of educational tasks and attainment of learning objectives within an academic environment. It reflects students' performance in school subjects and educational activities over a specific period. Academic achievement may be measured objectively through test scores and grades or subjectively through students' perceived competence and satisfaction with learning (Costa et al., 2024).

Academic achievement is a multidimensional concept influenced by cognitive abilities, motivation, emotional stability, learning environment, and socio-economic background. Sarif and Vandana (2022) explained that academic achievement demonstrates students' mastery of knowledge and skills gained through formal education. The authors further argued that academic achievement serves as a predictor of future educational and occupational success. Academic achievement is often linked with academic success, educational attainment, and school performance. While some scholars use these concepts interchangeably, others distinguish them by emphasising that academic success includes psychological well-being, personal growth, and satisfaction beyond examination scores (Anwar et al., 2024).

RESEARCH METHOD

This study adopted a descriptive survey of the correlational type. The study was correlational because it sought to establish the relationship between teachers' instructional quality and students' academic achievement in public senior secondary schools in Kwara State, Nigeria. In this study, the target population of the study comprised 247 public senior secondary schools and 5,846 teachers in Kwara State. A proportionate sampling technique was used to select 152 public senior secondary schools and 361 teachers using Krejcie and Morgan's (1970) sample size table. The Teachers' Instructional Quality and Students' Academic Achievement Questionnaire (TIQSAAQ) was used to collect data for this study. The Teachers' Instructional Quality and Students' Academic Achievement Questionnaire (TIQSAAQ) was rated on a four (4) point Likert scale ranging from Strongly Disagree - 1, Disagree - 2, Agree - 3, and Strongly Agree - 4. The instrument was subjected to content and face validation by the researcher's supervisor and three experts for their observations and comments before producing the final copy for administration. Cronbach's alpha was used to determine the reliability of the instrument, and a coefficient of 0.69 was obtained. The instrument was reliable for data collection. Descriptive statistics of frequency, mean, and ranking were used to answer the research questions raised. Inferential statistics, including PPMC and multiple regression analysis, were used to test the hypotheses at the 0.05 significance level. The benchmark for the level of the items is 0.00-1.50 low, 1.51-2.49 moderate, and 2.50 and above high. Out of 361 copies of the questionnaire administered to the respondents, only 299 copies, representing 82.8 %, were retrieved and subjected to data analysis.

RESULTS AND DISCUSSION

Results

Out of 361 copies of the questionnaire administered to the respondents, only 299 copies, representing 82.8 %, were retrieved and subjected to data analysis.

Research Question 1: What is the level of teachers' instructional quality in public senior secondary schools in Kwara State, Nigeria?

Table 1
Level of Teachers' Instructional Quality in Public Senior Secondary Schools in Kwara State, Nigeria

Dimensions	N	Mean	Decision
Teachers' classroom management	299	2.99	High
Teachers' emotional support	299	3.02	High
Teachers' lesson plan preparation	299	3.74	High
Teachers' Instructional Quality		3.25	High

Table 1 indicates the level of teachers' instructional quality in public senior secondary schools in Kwara State, Nigeria. Each of the indices of teachers' instructional quality is high. The findings revealed that the level of teachers' instructional quality was high in public senior secondary schools in Kwara State, Nigeria, with an average mean score of 3.25.

Research Question 2: What is the level of students' academic achievement in public senior secondary schools in Kwara State, Nigeria?

Table 2
Level of Students' Academic Achievement in Public Senior Secondary Schools in Kwara State, Nigeria

Dimensions	N	Mean	Decision	Ranking
Assignment and Project Performance	299	3.65	High	2 nd
Class Participation and Engagement	299	3.90	High	1 st
Attendance and Consistency	299	3.45	High	3 rd
Students' Academic Achievement		3.67	High	High

Table 2 indicates the level of students' academic achievement in public senior secondary schools in Kwara State, Nigeria. Class participation and engagement were ranked 1st with the mean score of 3.90, assignment and project performance were ranked 2nd with the mean score of 3.65, while attendance and consistency were ranked 3rd with the mean score of 3.45, respectively. The finding revealed that the level of students' academic achievement was high in public senior secondary schools in Kwara State, Nigeria, with an average mean score of 3.67.

Research Hypotheses

H0₁: There is no significant relationship between teachers' instructional quality and students' academic achievement in public senior secondary schools in Kwara State, Nigeria

Table 3

Multiple Regression Showing Relationship between Teachers' Instructional Quality and Students' Academic Achievement in Public Senior Secondary Schools in Kwara State, Nigeria

Model Summary

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	0.52	.598	0.25	5.12

Table 3 presents the multiple regression coefficient (r) indicating the relationship between teachers' instructional quality and students' academic achievement in public senior secondary schools in Kwara State, Nigeria. The r- value of 0.598 indicates that teachers' classroom management, teachers' emotional support and teachers' lesson plan preparation were able to predict and jointly contributed 59.8% to students' academic achievement in public senior secondary schools in Kwara State, Nigeria. The remaining percentage of 40.2 was accounted for by other variables that this study did not emphasise.

Table 4**Analysis of Variance (ANOVA)**

Model	Sum of Squares	Df	Mean Squares	Cal. F-ratio	Sig.	Decision
Regression	320.45	3	106.817			H0 Rejected
Residual	865.55	295	2.934	36.41	.000	
Total	1186.00	298				

p < .05

The ANOVA shows that the indices of teachers' instructional quality on teachers' classroom management, teachers' emotional support, and teachers' lesson plan preparation statistically and significantly predict the students' academic achievement. The calculated F-ratio of 36.41 is greater than the critical F-value of 3.00 with a corresponding p-value of .000 which is less than the 0.05 alpha level of significance. The hypothesis, which states that there is no significant relationship between teachers' instructional quality and students' academic achievement in public senior secondary schools in Kwara State, Nigeria, was rejected. This shows that there is a significant relationship between teachers' instructional quality and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.

Table 5

Regression Coefficients of the Relationship between Teachers' Instructional Quality and Students' Academic Achievement in Public Senior Secondary Schools in Kwara State, Nigeria

Variables	B (Unstandardized)	Std. Error	Beta (β)	t	Sig.
Constant	25.40	3.20	—	7.94	0.000

Teachers' Classroom Management	0.452	0.076	.421	5.95	0.000
Teachers' Emotional Support	0.573	0.068	.402	8.43	0.000
Teachers' Lesson Plan Preparation	0.0324	0.012	.226	2.7	

Dependent Variable: Students' Academic Achievement

Table 5 expresses the result on the relative contribution of each index of teachers' instructional quality on students' academic achievement. Teachers' classroom management t-value = 5.95, p-value of $.000 < 0.05$, teachers' emotional support has t-value = 8.43, p-value of $.000 < 0.05$, and teachers' lesson plan preparation has t-value = 2.7, p-value of $.000 < 0.05$, respectively. Therefore, it could be seen that all the cal. t-values are greater than the critical t-value, and all the p-values are less than the significance level of 0.05, respectively.

H0₂: There is no significant relationship between teachers' classroom management and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.

Table 6

Teachers' Classroom Management and Students' Academic Achievement in Public Senior Secondary Schools in Kwara State, Nigeria

Variables	N	Mean	Df	Cal. r-value	p-value	Decision
Teachers' Classroom Management	299	2.99				
			297	.287	0.000	HO₁ Rejected
Students' Academic Achievement	299	3.87				

P<0.05

Table 6 showed that the p-value of 0.000 was less than the significance level at 0.05 for 297 degrees of freedom. Therefore, the null hypothesis was rejected. This suggests that there was a significant relationship between teachers' classroom management and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.

H0₃: There is no significant relationship between teachers' emotional support and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.

Table 7

Teachers' Emotional Support and Students' Academic Achievement in Public Senior Secondary Schools in Kwara State, Nigeria

Variables	N	Mean	Df	Cal. r-value	p-value	Decision
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Teachers' Emotional Support	299	3.02				
			297	.202	0.000	HO₂ Rejected
Students' Academic Achievement	299	3.87				

P<0.05

Table 7 showed that the p-value of 0.000 was less than the significance level at 0.05 for 297 degrees of freedom. Therefore, the null hypothesis, which states that there is no significant relationship between teachers' emotional support and students' academic achievement in public senior secondary schools in Kwara State, Nigeria, was rejected. This suggests that a significant relationship existed between teachers' emotional support and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.

H0₄: There is no significant relationship between teachers' lesson plan preparation and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.

Table 8

Teachers' Lesson Plan Preparation and Students' Academic Achievement in Public Senior Secondary Schools in Kwara State, Nigeria

Variables	N	Mean	Df	Cal. r-value	p-value	Decision
Teachers' Lesson Plan Preparation	299	3.74				
			297	.295	0.000	HO₃ Rejected
Students' Academic Achievement	299	3.87				

P<0.05

Table 8 showed that the p-value of 0.000 was less than the significance level at 0.05 for 297 degrees of freedom. Therefore, the null hypothesis was rejected. This suggests that a significant relationship existed between teachers' lesson plan preparation and students' academic achievement in public senior secondary schools in Kwara State, Nigeria.

Discussion of findings

The findings of research question one revealed that the level of teachers' instructional quality was high in public senior secondary schools in Kwara State, Nigeria. This finding is in line with the findings of Sims and Jerrim (2020) that instructional quality, which is the degree of effectiveness in teaching methods, strategies, and delivery, plays a crucial role in fostering students' understanding and mastery of content. Liu and Bellibas (2018) concluded that instructional quality has influenced the level of students' academic achievement. The result of research question two indicated that the level of students' academic achievement was high in public senior secondary schools in Kwara State, Nigeria. This finding corroborates the findings of Costa et al. (2024) that academic achievement affects not only students' immediate

educational opportunities but also their future employment and social outcomes. Sarif and Vandana (2022) explained that academic achievement demonstrates students' mastery of knowledge and skills gained through formal education. Findings of hypothesis one tested revealed that there was a significant relationship between teachers' classroom management and students' academic achievement in public senior secondary schools in Kwara State, Nigeria. The finding agrees with the findings of Kaur et al. (2019) that effective classroom management exposes teachers to requisite knowledge, skills, and attitudes that serve as the foundation for effective teaching performance. Findings of hypothesis two tested revealed that there was a significant relationship between teachers' emotional support and students' academic achievement in public senior secondary schools in Kwara State, Nigeria. Nilsen et al. (2018) concluded that teachers' emotional support is a critical factor influencing students' academic achievement. Findings of hypothesis three tested revealed that there was a significant relationship between teachers' lesson plan preparation and students' academic achievement in public senior secondary schools in Kwara State, Nigeria. The finding agrees with the view of Bamire (2021) that a learning outcome is the behaviour exhibited by a learner through effective lesson plan preparation, that is, demonstration of the knowledge acquired after one has undergone a stipulated programme in the school. Findings of hypotheses tested revealed that there was a significant relationship between teachers' instructional quality and students' academic achievement in public senior secondary schools in Kwara State, Nigeria. The finding is in line with the findings of Mihăescu and Andron (2019) that teachers' instructional quality plays a pivotal role in ensuring effective learning, which, in turn, significantly influences students' academic achievement. Olohundare and Shola (2022) found that teachers' instructional quality allows teachers to adopt innovative methodologies, embrace modern pedagogies, and adapt to evolving educational trends, which enhances their teaching practices and improves student outcomes. Ayeni and Jajua (2021) concluded that when teachers engage in professional growth activities, they become better equipped to implement innovative pedagogies, respond to diverse student needs, and stay up-to-date with modern educational practices through effective instructional quality.

CONCLUSION

This study concluded that there was a significant positive relationship between teachers' instructional quality and students' academic achievement in public senior secondary schools in Kwara State, Nigeria. This implies that the effectiveness of teachers' classroom management, emotional support, lesson plan preparation, as well as teaching practices, including lesson delivery, classroom management, and subject mastery, plays a crucial role in enhancing students' learning outcomes. Therefore, improving instructional quality should be a central focus for educational stakeholders aiming to boost academic achievement in secondary schools. Findings from the study revealed that higher levels of teachers' instructional quality are associated with better students' academic achievement among students in public senior secondary schools in Kwara State. This underscores the importance of competent, well-prepared, and pedagogically skilled teachers in the educational system. It can be concluded that efforts to strengthen teachers' instructional practices will likely yield meaningful improvements in students' academic success. The results of this study confirmed that teachers' instructional quality significantly influences students' academic achievement in Kwara State's public senior

secondary schools. This relationship highlights the critical role teachers play in shaping educational outcomes. Consequently, policies and interventions aimed at enhancing instructional quality, such as continuous professional development and effective supervision, are essential for improving overall student performance.

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