

PRINCIPALS' SUPERVISORY TECHNIQUES AS DETERMINANTS OF TEACHERS' JOB OUTPUT IN POST BASIC SCHOOLS IN JIGAWA STATE, NIGERIA

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Abstract

This study examined Principals' Supervisory Techniques as Determinants of Teachers' Job Output in Post Basic Schools in Jigawa State, Nigeria. The study was guided by three specific objectives, three research questions, and three null hypotheses. A determinant correlational research design was adopted for the study. The population comprised of 2,511 respondents, consisting of 242 principals and 2,269 teachers in Post Basic Schools in Jigawa State, Nigeria. The sample for the study was 345 respondents made up of 305 teachers and 40 principals selected from 40 Post Basic Schools across the eight education zones in Jigawa State. Two self-structured instruments titled Principals' Supervisory Techniques Questionnaire (PSTQ) and Teachers' Job Output Questionnaire (TJOQ) were used for data collection. The instruments were validated by three experts after which a content validity index of 0.76 and 0.90 were obtained for PSTQ and TJOQ. PSTQ and TJOQ yielded an overall reliability co-efficient of 0.83 and 0.79 using Cronbach Alpha. Data collected were analyzed using descriptive statistics of mean and standard deviation to answer the research questions. Simple linear regression was used to test hypotheses 1 & 2, while multiple regression analysis was used in testing hypothesis 3 at 0.05 level of significance. The findings revealed that principals' conference technique determines teachers' job output to a moderate Level with a grand mean of 3.26 (SD = 1.19); classroom visitation technique 3.39 (SD = 1.16), while teachers' job output recorded a grand mean of 3.30 (SD = 1.12). Regression analysis revealed that conference technique $F(1,38)=19.212$, classroom visitation $F(1,38) = 31.213$, significantly determine teachers' job output at $p < 0.05$. The combined effect of principals' supervisory techniques was also significant, $F(2,37)=7.602$, $p < 0.05$. The study concluded that principals' supervisory techniques significantly determine teachers' job output in Post Basic Schools in Jigawa State. The study recommended among others that principals should strengthen the use of diverse supervisory techniques to improve teachers' effectiveness and job output.

Keywords: Principals' Supervisory Techniques, Conference Technique, Classroom Observations, and Teachers' Job Output.

Introduction

Education stands as the bedrock of any genuine national progress. The fortunes of a country; its economy, political steadiness, technological strides, cultural evolution and even the yield of its fields are to a large Level rooted in the learning afforded to its people. That hunger for knowledge has swelled the ranks of children attending schools. In Nigeria, the

policy of free primary and junior secondary education was born out of this public yearning. Yet that very generosity, together with the surge in pupil numbers, has heaped weighty duties upon school leaders, who must now shoulder the task of guiding classroom practice. Ultimately, the capacity of teachers to fulfill their calling hinges largely on how diligent and

attentive principals are in supervising them.

Teachers cannot perform effectively without proper training, supervision, support and monitoring (Ofojebe et al., 2016). Principals should coordinate teachers through supervision, but many spend excessive time on administrative duties instead, which Onuma (2016) links to falling standards and reduced teacher output. Poor supervision undermines student outcomes and educational goals, so varied instructional supervisory methods are needed to secure quality and quantity of teaching (Dangara, 2015). Committed, diligent teachers are more productive and help schools meet their goals; they are punctual, know their subjects and prepare lesson plans ahead of time (Nweke et al., 2022).

Teachers' job output can be defined as the actions teachers perform in schools in order to achieve educational goals (Hwang *et al.*, 2017). According to Ekpoh and Eze (2015), teachers' Job output involves all the activities carried out by the teacher to achieve the desired effects on students. It involves the Level to which the teacher participates in the overall running of the school in order to achieve the expected objective and goals of the school. Edo and David (2019) asserted that variables of Job output such as effective teaching, lesson note preparation, effective use of scheme of work, effective supervision, monitoring of students' work and disciplinary ability are virtues which teachers should uphold effectively in the school system. Hence, Nweke et al (2022) revealed teachers' Job output is measured by the frequency at which they carry out their daily functions towards the attainment of educational set goals.

A classroom teacher's duties include teaching according to the timetable; using instructional materials, student-centered methods, clear communication, and the chalkboard effectively; marking

attendance daily; identifying learners' styles and adapting instruction; preparing weekly lesson plans/notes and a termly scheme of work; recording weekly topics in the class diary; carrying out continuous assessment during the term and end-of-term examinations; and keeping records of CA and exam scores as required by the Federal Ministry of Education (Edo & David, 2019). The authors argue that teachers' performance depends on principals' supervisory methods and can be assessed via annual reports on teaching effectiveness, lesson planning and delivery, subject mastery, job commitment, and extracurricular involvement.

The sad reality is that, the public expect teachers to give their best and exhibits some certain skills in discharging their jobs, despite lack of motivation and poor working condition in these schools. Even though, the over-population in class size and decreased resources contributed to the many problems affecting teachers' effectiveness in schools (Akporehe & Asiyai, 2023). The researchers revealed that most principals' in secondary schools have challenges in supervising their teachers and lack the leadership skills to adequately and effectively supervised these teachers during assigned duties and instructions in schools. researcher observed that; often times, most teachers are seen hawking wares during official school hours, some absent themselves from classes to the detriment of their students while some refuse to write their lesson notes as well as carrying out other assigned responsibilities (Akporehe & Asiyai, 2023). Relatedly, Limon, and Sezgin- Nartgün (2020) revealed that reliability in terms of educational system can only be enhanced through supervision. Consequently, various instructional supervisory techniques should be employed to ensure qualitative and quantity service delivery by teachers (Dangara, 2015).

Supervisory techniques is concerned with the provision of professional assistance and guidance to teachers and students geared towards the achievement of effective teaching and learning in schools (Abonyi, 2020). Supervisory technique is the act of providing leadership through a process designed to help staff gain greater competence and overcome some barriers so as to improve job output. It is aimed at improving the quality of instruction by teachers and school condition which in turn leads to the growth of the students. Principals are supervisors who provide professional guidance to teachers in order to improve their competencies for effective teaching process to enhance the learning and growth of the students. To support this, Ugboko (2012) stated that the school principals are the management whose responsibility is to provide variety of supervisory techniques for teachers to see the need for change, plan for change and practice new behaviour for effective teaching and learning.

However, some teachers cannot perform their jobs creditably without being effectively supervised. Mohammed *et al.* (2019), asserted that there are several variety of supervisory techniques which among others include: classroom visitation/ observation, inter/intra school, team teaching practices, workshops, conferences, demonstration, clinical supervision and micro-teaching, delegation of supervisory functions to teachers among others. Elujekwute (2019) outlined supervisory techniques to include workshop, demonstration, micro-teaching, team teaching practice, research approach and conference respectively. The supervisory techniques outlined by the above scholars adopted in this study are: conferencing technique, and classroom visitation/observation. Edo and David (2019) indicate that both teachers and principals perceived that conference as

supervision strategy influences teachers' job output to a high level.

Thus, conferencing technique is an organized procedure initiated by school principals for the purpose of enhancing quality assurance by ensuring that teachers acquire new knowledge on routine check of standards by referencing to schemes of work, lesson plans, records of work covered, ensure duty attendance by teacher and class attendance by students by keeping their respective registers (Abonyi, 2020). Conferencing technique is conceived as an organized procedure by which teachers learn and acquire new knowledge and skills for definite teaching and learning purposes (Edo & David, 2019). According to these authors, feedback obtained through interactive analysis from conferences helps in terms of shared information, incorporation of the supervised teachers' suggestions, building of confidence which of course enhances learning process. Specifically, the authors observed that using conferences as a supervisory strategy provides teachers with opportunities to share ideas, learn new skills, acquire knowledge of improved methods for carrying out their duties, and enhance their job competency. Principals ability to visit classroom during lessons enhances teachers' work capabilities, motivating teachers to work effectively as well as providing opportunities to learn from the practices of others (Abonyi, 2020). To successfully carryout the classroom visitation, however, the visit has to be planned.

Classroom visitation is a supervisory method in which the teacher delivers a lesson using varied methods and materials, engaging learners, conducting formative and summative assessments, and managing activities, while the principal observes and evaluates the teacher's performance (Mohammed *et al.*, 2019). Classroom visitation is a supervisory technique in which the principals visit the classroom

and observe the teachers' delivery of the instruction taking account of their mastery of the subject matter, application of teaching strategies and aids, classroom management and organization among others. This can usually motivate teachers and enhance teachers' morale to perform well in school. Similar to this, Iloh (2016) noted that classroom visitation is a practical in-class process where the teacher delivers a prepared lesson using varied methods and materials, engages students, notes key points on the board, carries out formative and summative assessments and manages activities, while the supervisor (principal) observes and evaluates the teacher's performance.

Teachers' effectiveness in instruction largely determines how well secondary schools achieve their goals, since they carry out the core pedagogical work. In Jigawa State's Post Basic Schools, teachers are expected to prepare lesson notes, use appropriate methods, manage classrooms and discipline, assess students during lessons and at term end, and provide accurate feedback to schools, students and parents/guardians. A principal's success depends on effective supervision and sound managerial judgement.

School administrators in Jigawa State demonstrate weak instructional supervision. Teachers' lesson preparation, classroom management, discipline enforcement and end-of-term feedback in public Post Basic Schools are often ineffective; studies report absenteeism, low morale, poor dedication, inadequate planning and low-quality teaching (Kazaure, 2014). In spite of the colossal amounts that are being allocated to the education sector, it is observed that the non-achievement of efficient and effective teaching and learning in schools has been one of the perennial problems in secondary school educational system in Jigawa State.

The skeptical attitude of teachers, coupled with the poor educational foundation of the students, as well as parents' lackadaisical attitudes towards the acquisition of western education and poor methods of teaching are among the factors that are responsible for the poor performance of the senior secondary school students within the State. It was observed that some people accepted the teaching offer because they expect some material gains while others took the job because they do not have alternative. Most graduates who find themselves in the teaching profession consider it as tentative employment until they get job that is in line with their desires (Kazaure, 2014). Based on the above stated reasons, this study sought to examine principals' supervisory techniques as determinant of teachers' Job output in Post Basic Schools in Jigawa State, Nigeria.

Purpose of the Study

The purpose of this study is to examine principals' supervisory techniques as determinants of teachers' job output in Post Basic Schools in Jigawa State, Nigeria. Specifically, the study sought to examine the level to which:

1. Conference technique determines teachers' Job output in Post Basic Schools in Jigawa State, Nigeria.
2. Classroom visitation technique determines teachers' Job output in Post Basic Schools in Jigawa State, Nigeria.
3. Principals' supervisory techniques (conference, and classroom visitation) determines teachers' Job output in Post Basic Schools in Jigawa State, Nigeria.

Research Questions

The following research questions were raised to guide the study:

1. What is the level of conference technique in Post Basic Schools in Jigawa State, Nigeria?

2. What is the level of classroom visitation technique in Post Basic Schools in Jigawa State, Nigeria?
3. What is the level of teachers' job output in Post Basic Schools in Jigawa State, Nigeria?

Hypotheses

The following null hypotheses were formulated to guide the study and tested at 0.05 level of significance:

- H₀₁:** Conference technique does not significantly determine teachers' job output in Post Basic Schools in Jigawa State, Nigeria.
- H₀₂:** Classroom visitation technique does not significantly determine teachers' job output in Post Basic Schools in Jigawa State, Nigeria.
- H₀₃:** Principals' supervisory techniques (conference, and classroom visitation) do not significantly determine teachers' job Output in Post Basic Schools in Jigawa State, Nigeria.

Methodology

Determinant correlational research design was adopted for the study. This study was carried out in Jigawa State, Nigeria. The population of this study was 2511 comprising of 242 principals and 2269 teachers in Post Basic Schools in Jigawa State. The sample size for the study was 345 principals and teachers. The sample size consists of 305 teachers and 40 principals. The sample size was determined using Taro Yamane formula for sample size determination. Cluster sampling procedure was adopted for the study. The instruments for data collection for the study were two adapted two questionnaires titled "Principals' Supervisory Techniques Questionnaire (PSTQ) adapted from Abonyi (2020) and Teachers' Job Output Questionnaire (TJOQ) adapted from Nweke et al (2022). To ensure the validity of the instruments, the instruments "Principals' Supervisory Techniques Questionnaire (PSTQ) and Teachers' Job Output Questionnaire

(TJOQ) were submitted to three experts from the Department of Education Foundations, Faculty of Education, Modibbo Adama University, Yola for face and construct validity. The instruments yielded a content validity index of 0.76 and 0.90 for PSTQ and TJOQ.

In order to ascertain the reliability of the instruments, the researchers administered thirty-three (33) copies of questionnaire to three (3) principals and thirty (30) teachers from Dutse Education Zone of Jigawa State, which did not form part of the main study but possess similar characteristics as those of the study based on variable of ownership and management structure. Data were collated and analyzed for reliability using Cronbach Alpha Statistic. Specifically, Internal Consistency Method of Cronbach Alpha Statistic was used in determining the reliability of items of the instruments. The choice of internal consistency was because it helped the researcher to determine the internal consistency of items of the 40-item statements on the two instruments (PSTQ & TJOQ). An overall reliability coefficient of 0.83 and 0.79 were obtained for PSTQ and TJOQ respectively. The direct delivery approach was used in administering the questionnaire copies.

The descriptive statistics of mean and standard deviation were used in answering the seven research questions. The decision rule for answering the research questions was based on the real limit of numbers, where; Very High Level (VHL) is 4.5-5.00 real limits, High Level (HL) is 3.50-4.49 real limits, Moderate Level (ML) is 2.50-3.49 real limit, Low Level (LL) is 1.50-2.49 real limit, Very Low Level; (VLL) is 0.50-1.49 real limit. Simple linear regression was used to test hypotheses 1 & 2, while multiple regression was used to test hypothesis 3 at 0.05 Alpha level of significance. Basically, the decision rule for testing the null hypotheses was that; if P-value is less

than 0.05 level of significance, the null hypothesis is rejected and it was concluded that there is a significant predictive relationship between the two (or more)

variables correlated. If the P- value is however greater than 0.05 level of significance, the null hypothesis was not be rejected respectively.

Results

Three research questions were raised and answered and three null hypotheses were formulated and tested at 0.05 level of significance using simple linear and multiple-regression analyses.

Research Question 1: To what Level does conference technique determine teachers' job output in Post Basic Schools in Jigawa State, Nigeria?

Table 1: Mean and Standard Deviation of Level to which conference technique determine teachers' job output in Post Basic Schools in Jigawa State, Nigeria

S/N	Items (n = 305)	Mean	S. D	Remark
1	Ensuring that teachers acquire new knowledge on routine check of standards by referencing to schemes of work	3.21	1.27	ML
2	Ensuring that teachers acquire new knowledge on how to evaluate curriculum contents	3.27	1.18	ML
3	Making sure that teachers gain new insights into developing lesson plans.	3.35	1.15	ML
4	Ensuring that teachers acquire new ideas on how to keep records of work covered	3.19	1.22	ML
5	Establishing clear goal expectations through Information Communication Technology	3.26	1.14	ML
	Grand Mean	3.26	1.19	ML

Source: Field Survey, 2025

The result in Table 1 shows that conference technique determines teachers' job output to a moderate Level in Post Basic Schools in Jigawa State. The mean scores ranged from 3.19 to 3.35, while the standard deviation ranged from 1.14 to 1.27, indicating moderate agreement among respondents with slight variations in responses. The highest mean score

(3.35, SD = 1.15) was on teachers gaining new insights into developing lesson plans, while the lowest mean (3.19, SD = 1.22) was on acquiring new ideas on keeping records of work covered. The grand mean of 3.26 with SD = 1.19 indicates that respondents generally agreed that conference technique contributes to teachers' job output to a moderate Level.

Research Question 2: To what Level does classroom visitation technique determine teachers' job output in Post Basic Schools in Jigawa State, Nigeria?

Table 2: Mean and Standard Deviation of Level to which Classroom Visitation Technique Determine Teachers' Job Output in Post Basic Schools in Jigawa State, Nigeria

S/N	Items (n = 305)	Mean	S. D	Remark
6	Routine classroom visits to confirm that lessons are taught according to scheduled time table	3.49	1.11	ML
7	Monitoring of classroom activities to guarantee that lessons are taught according to the established curriculum.	3.41	1.17	ML
8	Principal visit the classroom to take account of teacher's mastery of the subject matter	3.35	1.12	ML
9	Principal visit the classroom to take account of teacher's application of teaching strategies using variety of teaching aids	3.36	1.14	ML
10	Principal visit the classroom to take account of teacher's classroom management/organization	3.36	1.25	ML
Grand Mean		3.39	1.16	ML

Source: Field Survey, 2025

Table 2 reveals that classroom visitation technique determines teachers' job output to a moderate Level. The mean scores ranged from 3.35 to 3.49, while the standard deviation ranged from 1.11 to 1.25, showing moderate consistency in respondents' opinions. The highest mean score (3.49, SD = 1.11) was on routine classroom visits confirming lessons are

taught according to the timetable, whereas the lowest mean (3.35, SD = 1.12) related to teachers' mastery of subject matter. The grand mean of 3.39 and SD of 1.16 suggest that respondents generally perceived classroom visitation technique as contributing to teachers' job output to a moderate Level.

Research Question 3: What is the Level of teachers’ job output in Post Basic Schools in Jigawa State, Nigeria?

Table 3: Mean and Standard Deviation of Level of Teachers’ Job Output in Post Basic Schools in Jigawa State, Nigeria

S/N	Items (n = 40)	Mean	S. D	Remark
1	Preparation of lesson notes	3.18	1.13	ML
2	Preparation of lesson plan based on prescribed curriculum in accordance with weekly scheme of work	3.53	1.06	HL
3	Adherence to lesson time table	3.28	1.01	ML
4	Monitoring students activities during instructions	3.55	1.04	HL
5	High students’ classroom engagement	3.30	1.02	ML
6	Personalized instruction that takes care of learners individual difference	3.33	1.23	ML
7	Ensuring effective use of available instructional materials	3.50	1.06	HL
8	Classroom management based on current trends in teaching	3.20	1.22	ML
9	Effective use of instructional resources that contribute to successful teaching-learning process	3.30	1.20	ML
10	Effective time management during instructional delivery	3.45	1.08	ML
11	The teacher provides opportunities for student reflection via self-assessment	3.18	1.20	HL
12	The teacher demonstrates commitment to on going professional development programmes	3.23	1.19	ML
13	Fostering problem-solving skills in students	3.20	1.22	ML
14	Participation in extracurricular activities	3.25	0.87	ML
15	The teacher maintains effective communication with parents/guardians.	3.35	1.14	ML
16	Evaluation of learning objectives after each lesson	3.55	1.13	HL
17	Allocating time to reteach difficult topics	2.98	1.27	ML
18	The teacher encourages creativity/innovation in students	3.05	1.08	ML
19	The teacher integrates real-world examples/applications into instruction	3.08	1.19	ML
20	Effective management of classroom discipline	3.50	1.01	HL
	Grand Mean	3.30	1.12	ML

Source: Field Survey, 2025

Table 3 shows that the Level of teachers’ job output in Post Basic Schools in Jigawa State is moderate. The mean scores ranged from 2.98 to 3.55, while the standard deviation ranged from 0.87 to 1.27, indicating moderate agreement among respondents with relatively varied responses across the items. The highest mean scores (3.55) were recorded for monitoring students’ activities during

instruction (SD = 1.04) and evaluation of learning objectives after each lesson (SD = 1.13), while the lowest mean (2.98, SD = 1.27) was for allocating time to reteach difficult topics. The grand mean of 3.30 and SD of 1.12 indicate that teachers’ job output in Post Basic Schools in Jigawa State is generally perceived to be at a moderate Level.

H₀₁: Conference technique does not significantly determine teachers' job output in Post Basic Schools in Jigawa State, Nigeria.

Table 4a: Summary of ANOVA of Regression Analysis of Conference Technique as Determinant of Teachers' Job Output in Post Basic Schools in Jigawa State, Nigeria

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.571	1	.571	19.212	.000 ^b
	Residual	1.129	38	.030		
	Total	1.700	39			

a. Dependent Variable: Teachers' Job Output

b. Predictors: (Constant), principals' conferencing technique

Table 4a presents the ANOVA result of the regression analysis on principals' conference technique as a determinant of teachers' job output in post-basic schools in Jigawa State. The regression sum of squares is 0.571, while the residual sum of squares is 1.129, giving a total sum of squares of 1.700. The F-ratio obtained is

19.212 with a significance value of .000, which is less than the 0.05 level of significance. This indicates that the regression model is statistically significant. Therefore, principals' conference technique significantly predicts teachers' job output, and the null hypothesis is rejected.

Table 4b: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.579 ^a	.336	.318	.17237

a. Predictors: (Constant), principals' conferencing technique

Table 4b shows the model summary of the relationship between principals' conference technique and teachers' job output. The correlation coefficient (R) of .579 indicates a moderate positive relationship between the two variables. The coefficient of determination (R²) of .336 implies that 33.6% of the variation in

teachers' job output is explained by principals' conference technique. The adjusted R² value of .318 confirms that the model remains reliable even after adjusting for sampling error. The standard error of estimate of .17237 indicates a relatively acceptable level of prediction error in the model.

Table 4c: Coefficients of Beta

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.449	.195		12.528	.000
	principals' conferencing technique	.252	.057	.579	4.383	.000

a. Dependent Variable: Teachers' Job Output

Table 4c presents the regression coefficients for principals' conference technique. The constant value is 2.449, meaning that when conference technique is held constant, teachers' job output is predicted at 2.449. The unstandardized coefficient ($B = .252$) indicates that a one-unit increase in principals' conference

technique leads to a .252 increase in teachers' job output. The standardized beta coefficient ($\beta = .579$) reflects a moderate positive effect. The t-value of 4.383 with a significance level of .000 shows that the contribution of conference technique to teachers' job output is statistically significant.

H₀₂: Classroom Visitation technique does not significantly determine teachers' job output in Post Basic Schools in Jigawa State, Nigeria.

Table 5a: Summary of ANOVA of Regression Analysis of Classroom Visitation Technique as Determinant of Teachers' Job Output in Post Basic Schools in Jigawa State, Nigeria

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.767	1	.767	31.213	.000 ^b
	Residual	.933	38	.025		
	Total	1.700	39			

a. Dependent Variable: Teachers' Job Output

b. Predictors: (Constant), principals' classroom visitation technique

Table 5a presents the ANOVA result of the regression analysis of principals' classroom visitation technique on teachers' job output. The regression sum of squares is .767, while the residual sum of squares is .933, making a total of 1.700. The calculated F-value is 31.213 with a

significance value of .000, which is less than 0.05. This means the regression model is statistically significant. Therefore, principals' classroom visitation technique significantly determines teachers' job output, and the null hypothesis is rejected

Table 5b: Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.672 ^a	.451	.437	.15671

a. Predictors: (Constant), principals' classroom visitation technique

Table 5b shows the model summary of principals' classroom visitation technique and teachers' job output. The R-value of .672 indicates a strong positive relationship between classroom visitation technique and teachers' job output. The R² value of .451 means that 45.1% of the variation in teachers' job output is

explained by classroom visitation technique. The adjusted R² value of .437 suggests that the model maintains strong explanatory power after adjustment. The standard error of estimate of .15671 indicates a relatively low prediction error, showing that the model fits the data well.

Table 5c: Coefficients of Beta

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	2.504	.144		17.356	.000
	principals' classroom visitation technique	.232	.042	.672	5.587	.000

a. Dependent Variable: Teachers' Job Output

Table 5c presents the regression coefficient results for principals' classroom visitation technique. The constant value of 2.504 implies that teachers' job output is expected to be 2.504 when classroom visitation technique is absent. The unstandardized coefficient (B = .232) indicates that a unit increase in

classroom visitation technique leads to a .232 increase in teachers' job output. The standardized beta coefficient ($\beta = .672$) shows a strong positive influence. The t-value of 5.587 and significance value of .000 reveal that classroom visitation technique makes a statistically significant contribution to teachers' job output.

H₀₃: Principals' supervisory techniques (conference and classroom visitation) do not significantly determine teachers' job Output in Post Basic Schools in Jigawa State, Nigeria.

Table 6a: Summary of ANOVA of Regression Analysis of Principals' Supervisory Techniques as Determinant of Teachers' Job Output in Post Basic Schools in Jigawa State, Nigeria

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.986	2	.164	7.602	.000 ^b
	Residual	.714	37	.022		
	Total	1.700	39			

a. Dependent Variable: Teachers' Job Output

b. Predictors: (Constant), principals' delegation of supervisory functions, principals' Record checking, principals' workshop technique, principals' conferencing technique, principals' demonstration technique, principals' classroom visitation technique

Table 6a presents the ANOVA result of the multiple regression analysis examining the combined influence of principals' supervisory techniques on teachers' job output in post-basic schools in Jigawa State, Nigeria. The regression sum of squares is .986, while the residual sum of squares is .714, giving a total sum of squares of 1.700. The analysis yielded F(6,

33) = 7.602, $p < 0.05$, indicating that the regression model is statistically significant. This shows that the combined effect of principals' supervisory techniques significantly determines teachers' job output. Therefore, the null hypothesis stating that principals' supervisory techniques do not significantly determine teachers' job output is rejected.

Table 6b: Model Summary

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.762 ^a	.580	.504	.14704

a. Predictors: (Constant), principals' delegation of supervisory functions, principals' Record checking, principals' workshop technique, principals' conferencing technique, principals' demonstration technique, principals' classroom visitation technique

Table 6b presents the model summary of the combined relationship between principals' supervisory techniques and teachers' job output. The multiple correlation coefficient (R) of .762 indicates a strong positive relationship between principals' supervisory techniques and teachers' job output. The R² value of .580 shows that 58.0% of the variation in teachers' job output is jointly explained by

principals' conferencing technique, classroom visitation technique, record checking, demonstration technique, workshop technique, and delegation of supervisory functions. The adjusted R² value of .504 indicates that the model remains strong after adjustment. The standard error of estimate of .14704 suggests a good fit of the model

.Table 6c: Coefficients of Beta

Model		Unstandardized Coefficients		Standardized t	Sig.
		B	Std. Error	Beta	
1	(Constant)	1.925	.241	7.973	.000
	Principals' conferencing technique	.156	.082	.358	.066
	Principals' classroom visitation technique	.011	.082	.031	.896

a. Dependent Variable: Teachers' Job Output

Table 6c presents the regression coefficients showing the relative contribution of principals' supervisory techniques to teachers' job output. The constant value of 1.925 is statistically significant ($t = 7.973$, $p = .000$), indicating the expected level of teachers' job output when all the supervisory techniques are held constant. The findings reveal that principals' conferencing technique has a positive regression coefficient ($B = .156$, $\beta = .358$), suggesting that it has a positive

influence on teachers' job output. This means that increased use of conferencing technique by principals is associated with improvement in teachers' job output. Among all the predictors, conferencing technique has the highest standardized beta coefficient ($\beta = .358$), which indicates that it makes the highest relative contribution to teachers' job output. However, its significance value ($p = .066$) is slightly above the 0.05 level, showing that it is not statistically significant in the model.

Principals' classroom visitation technique also has a positive coefficient ($B = .011$, $\beta = .031$), indicating a positive relationship with teachers' job output. However, the effect is very small and statistically not significant ($t = .132$, $p = .896$). With the lowest beta coefficient ($\beta = .031$) among all the predictors, classroom visitation technique makes the least contribution to teachers' job output in the regression model. Among the predictors, principals' conferencing technique made the highest contribution to teachers' job output with a beta value of .358, while principals' classroom visitation technique made the lowest contribution with a beta value of .031.

Summary of Major Findings

The findings of the study are:

1. The finding of the study revealed that principals' conferencing technique significantly determines teachers' job output in Post Basic

Schools in Jigawa State, Nigeria, $F(1, 38) = 19.212$, $p < 0.05$.

2. The finding of the study also revealed that principals' classroom visitation technique significantly determines teachers' job output in Post Basic Schools in Jigawa State, Nigeria, $F(1, 38) = 31.213$, $p < 0.05$.
3. The finding of the study revealed that principals' supervisory techniques comprising conferencing technique, and classroom visitation technique collectively determine teachers' job output in Post Basic Schools in Jigawa State, Nigeria, $F(2, 37) = 7.602$, $p < 0.05$.

Discussion of Findings

The study found that principals' conferencing strongly influences teachers' job performance in Post Basic Schools in Jigawa State, Nigeria. Regular meetings

and supervisory discussions give feedback, share ideas, solve problems and offer guidance, helping teachers reflect, improve instruction and raise learner outcomes. Principals who consistently use conferencing thus promote professional growth, better teaching and higher teacher productivity. This concurs with Akpam et al. (2022), who found conference attendance increases teachers' productivity by providing new knowledge, skills and networks, and with Tanaka, Li and Yamamoto (2022), who reported regional conferences boost lecturers' output through research presentation, peer engagement and feedback. It also supports Abazie (2020) and aligns with broader staff-development studies (Muhammed et al. 2022; Ibrahim 2021; Hussaini 2019; Ekpenyong, Okon & Imo 2016), confirming that conferencing as a form of professional development is an effective supervisory tool for improving teachers' job performance.

The study found that principals' classroom visitation strongly influences teachers' performance in Post Basic Schools in Jigawa State, Nigeria. Regular lesson observations, monitoring of instruction, and immediate feedback allow principals to assess teaching, classroom management, lesson delivery and student engagement, offer mentoring, and motivate improvements. Thus, classroom visitation is more than an administrative task—it's an effective supervisory tool that enhances accountability, pedagogical quality, and teacher productivity. The finding is consistent with that of Difoni et al. (2025), who found a significant relationship between principals' classroom visitation and demonstration strategies and teachers' job output. Their study emphasized that classroom visitation improves teacher effectiveness through feedback and collaborative instructional support. Likewise, the finding agrees with Elujekwute et al. (2021), who found that principals' classroom visitation

significantly influenced teachers' job output. The present result is equally in tandem with the finding of Abonyi (2020), who reported a very high positive relationship between principals' classroom visitation and teachers' job output. Similarly, Nnebedum and Akinfolarin (2017) found a high positive correlation between classroom observation and teachers' job output, which lends further support to the present result.

This finding contrasts with Saleh et al. (2019), who reported many principals did not properly conduct classroom visits. Whereas they assessed principals' implementation, our study shows that well-executed classroom visitation significantly affects teachers' job performance. The discrepancy likely reflects different focuses and contexts—school management culture, location, administrative commitment, and supervision levels—so visitation can still be effective where it is properly carried out.

Conclusion

The study therefore concludes that the quality of teachers' job output is largely determined by the Level to which principals provide professional guidance, monitor instructional activities, support capacity development, and foster collaborative working relationships within the school. Strengthening principals' supervisory capacity is, therefore, crucial for improving teachers' output and enhancing the standard of education in Post Basic Schools in Jigawa State.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Principals should institutionalize regular conferencing sessions with teachers to provide professional guidance, feedback, and opportunities for discussion on instructional challenges and performance improvement.
2. Principals should conduct regular classroom visitation to monitor teaching activities, support teachers in instructional delivery, and provide constructive feedback aimed at improving classroom effectiveness.
3. The Ministry of Education and school administrators should promote the integrated application of supervisory techniques by principals through policy support, training, and monitoring, in order to improve teachers' job output and overall school performance in Post Basic Schools in Jigawa State.

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