TOTAL QUALITY MANAGEMENT PRACTICES: AS CORRELATE OF TEACHERS' PRODUCTIVITY IN PUBLIC SENIOR SCHOOLS IN BWARI AREA COUNCIL, ABUJA, NIGERIA

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Abstract

This study examined Total Quality Management (TQM) practices as correlates of teachers' productivity in public senior secondary schools in Bwari Area Council, Abuja, Nigeria. A descriptive survey research design was adopted, with a population of 1,739 education stakeholders, from which a sample of 104 respondents was selected using a simple random sampling technique. Data were collected using a researcher-developed instrument titled Total Quality Management Practices and Teachers' Productivity Questionnaire (TQMPTPQ), which yielded a reliability coefficient of 0.85 using Cronbach's alpha method. Descriptive statistics (mean and standard deviation) and inferential statistics (Pearson Product Moment Correlation) were employed for data analysis at a 0.05 level of significance. Findings revealed that TQM practices such as staff inspection, training, curriculum review, and performance evaluation were moderately implemented, with agreement levels ranging between 70% and 75% and mean scores between 2.89 and 3.01. Teacher productivity indicators also recorded moderate-to-high levels, with mean scores ranging from 2.87 to 2.96 and agreement levels between 69% and 72%. Inferential analysis showed strong and significant relationships between TQM components and teacher productivity: communication flow ($r = 0.95$, $p < 0.05$) and capacity-building programmes ($r = 0.99$, $p < 0.05$). The study concluded that effective implementation of TQM practices significantly enhances teacher productivity. It recommended the institutionalization of participatory management, continuous professional development, and improved communication systems to strengthen educational outcomes in public secondary schools.

Introduction

Secondary education in Nigeria serves as a bridge between primary and tertiary education and plays a crucial role in individual and national development. It is designed to prepare learners for useful living and higher education through intellectual growth, skill acquisition, and value formation. The goals of secondary education, as stated in the Nigerian National Policy on Education, include manpower development, national integration, and the promotion of effective citizenship (Federal Republic of Nigeria [FRN], 2014). Secondary education is divided into junior and senior secondary levels and focuses on the academic, vocational, social, and moral development of learners. It also equips students with critical thinking, creativity, and problem-solving skills necessary for societal participation (UNESCO, 2022).The achievement of these educational goals depends largely on teachers' productivity. Teacher productivity involves the quality and effectiveness of instruction, lesson preparation, classroom management, and student engagement (Ottan, 2023).

Productive teachers employ innovative teaching methods, active learning strategies, and continuous assessment techniques that improve students' academic performance and institutional outcomes.

To enhance teacher productivity, schools increasingly adopt Total Quality Management (TQM) practices. TQM is a management philosophy that promotes continuous improvement, stakeholder participation, effective communication, and accountability in organizations, including educational institutions. In schools, TQM practices such as continuous professional development, participatory decision-making, communication flow, and performance monitoring help improve teachers' motivation and instructional effectiveness (Montenegro et al., 2023). Professional development programmes expose teachers to modern teaching methods and educational technologies, thereby improving competence and confidence. Similarly, participatory management and effective communication foster collaboration, commitment, and teamwork among staff (Olaleye & Omotosho, 2019). Performance monitoring and feedback also encourage professional growth and accountability (Ayeni, 2020). Therefore, the application of TQM practices is essential for enhancing teacher productivity and improving educational quality in public secondary schools.

Objectives of the Study

The study aims to assess total quality management practices in relation to teachers' productivity in public senior schools in Bwari Area Council. Abuja Nigeria. Specifically, the study seeks to:

1. to identify Total Quality Management practices in public senior schools in Bwari Area Council, Abuja;
2. to examine the effective flow of communication and its impact on teacher productivity in public senior schools in Bwari Area Council, Abuja; and
3. to assess teachers' attendance in capacity-building programs as an indicator of Total Quality Management practices in public senior schools in Bwari Area Council, Abuja.

Research Questions

The following research questions were raised as a guide for the study:

1. What are the Total Quality Management practices in public senior schools in Bwari Area Council, Abuja?
2. What is the level of communication flow in public senior schools in Bwari Area Council, Abuja, with respect to teacher productivity?
3. How often do teachers attend capacity-building programs in public senior schools in Bwari Area Council, Abuja?

Hypotheses

The following hypotheses were generated and tested at 0.05 level of significance to guide the study.

1. The flow of communication does not significantly influence teacher productivity in public senior schools in Bwari Area Council, Abuja.
2. There is no significant impact of capacity-building programs on teacher productivity in public senior schools in Bwari Area Council, Abuja.

Methodology

This study adopted a descriptive survey research design to examine the relationship between Total Quality Management (TQM) practices and teacher productivity in public senior secondary schools in Bwari Area Council, Abuja. The design was considered appropriate because it enabled the researcher to collect respondents' opinions and describe existing relationships without manipulating variables.The population comprised principals, academic vice-principals, administrative vice-principals, and teachers in the 13 public senior secondary schools within the council. According to the Bwari Area Education Office (2025), the total population consisted of 1,739 respondents, including 13 principals, 13 academic vice-principals, 13 administrative vice-principals, and approximately 1,700 teachers.

A simple random sampling technique was used to select 104 respondents from eight public senior secondary schools. The sample included one principal, one academic vice-principal, one administrative vice-principal, and thirteen teachers from each selected school. This ensured fair representation of both administrative and teaching staff.Data were collected using a researcher-developed questionnaire titled *Total Quality Management Practices and Teachers' Productivity Questionnaire (TQMPTPQ)*. The instrument consisted of two sections: demographic information and 30 items addressing the study objectives. Responses were rated on a four-point Likert scale ranging from Strongly Agree to Strongly Disagree. To ensure validity, the instrument was reviewed by experts in Educational Measurement and Educational Foundations. Reliability was established using Cronbach's alpha to determine the internal consistency of the instrument.

Data Presentation, Analysis and Discussion of Findings

This section deals with the analysis and interpretation of the data collected from the field and the discussion of findings.

Answers to the Research Questions

Research Question 1: What are the Total Quality Management practices in public senior schools in Bwari Area Council, Abuja?

Table 1
Total Quality Management practices in public senior schools

TQM Practices	SA%	A%	D%	SD%	Mean	Std Dev
Staff inspection is regularly conducted to ensure compliance with educational standards.	34 (32.69%)	44 (42.31%)	18 (17.31%)	8 (7.69%)	3	0.9
Teachers undergo regular training and professional development programs to improve their teaching methods.	32 (30.77%)	46 (44.23%)	16 (15.38%)	10 (9.62%)	2.96	0.92

Curriculum reviews are frequently conducted to ensure it meets the current educational needs.	36 (34.62%)	42 (40.38%)	17 (16.35%)	9 (8.65%)	3.01	0.93
There is a regular process of verification to assess the quality of teaching materials used in the school.	33 (31.73%)	45 (43.27%)	19 (18.27%)	7 (6.73%)	3	0.88
The school has a clear and structured method for evaluating teacher performance to ensure quality standards.	31 (29.81%)	43 (41.35%)	18 (17.31%)	12 (11.54%)	2.89	0.96

Source: Survey report, 2025

The analysis of Research Question 1 revealed positive perceptions of Total Quality Management (TQM) practices in public senior secondary schools within Bwari Area Council, Abuja. Findings showed that most respondents agreed that staff inspection is regularly conducted to ensure compliance with educational standards. Specifically, 75% of the respondents either strongly agreed or agreed with the statement, while the mean score of 3.00 and standard deviation of 0.90 indicated a generally favorable perception with moderate variation in responses.Similarly, the findings showed that regular teacher training and professional development programmes are implemented in the schools. About 75% of the respondents agreed with this assertion, with a mean score of 2.96 and standard deviation of 0.92, suggesting that respondents perceived teacher development practices positively.

The study also revealed that curriculum review practices are carried out regularly to meet educational needs. This item recorded the highest mean score of 3.01, indicating strong approval from respondents. Approximately 75% of participants agreed that curriculum review is consistently implemented, although the standard deviation of 0.93 reflected some differences in opinions.Furthermore, respondents agreed that teaching materials are regularly verified to support effective instructional delivery. About 75% of the respondents supported this statement, while the mean score of 3.00 indicated a positive assessment of instructional material management practices.However, structured evaluation of teacher performance recorded the lowest level of agreement among the TQM indicators. Although about 71% of respondents still agreed that teacher evaluation is conducted systematically, the mean score of 2.89 and the highest standard deviation of 0.96 suggested greater variability in perceptions. This implies that teacher performance evaluation practices may not be consistently implemented across all schools.Overall, the findings indicate that TQM practices are moderately and positively implemented in public senior secondary schools in Bwari Area Council, Abuja, although variations exist across schools and among respondents.

Research Question 2: What is the level of communication flow in public senior schools in Bwari Area Council, Abuja, with respect to teacher productivity?

Table 2
Level of communication flow in public senior schools

Items	SA%	A%	D%	SD%	Mean	Std Dev
There is an open and effective communication flow between teachers and school management.	32 (30.77%)	44 (42.31%)	18 (17.31%)	10 (9.62%)	2.94	0.93
Teachers are frequently updated on school policies that directly affect their productivity.	30 (28.85%)	46 (44.23%)	19 (18.27%)	9 (8.65%)	2.93	0.9
Communication in the school is often one-way, with minimal feedback from teachers.	14 (13.46%)	28 (26.92%)	38 (36.54%)	24 (23.08%)	2.31	0.97
Teachers' feedback is actively considered in improving school practices and productivity.	33 (31.73%)	43 (41.35%)	20 (19.23%)	8 (7.69%)	2.97	0.9
The communication flow in the school promotes a collaborative environment for enhancing teacher productivity.	31 (29.81%)	45 (43.27%)	21 (20.19%)	7 (6.73%)	2.96	0.88

Source: Survey report, 2025

Table 2 presents the analysis of communication flow in public senior secondary schools in Bwari Area Council, Abuja. The findings revealed that respondents generally perceived communication as effective and supportive of teacher productivity. About 73% of respondents agreed that there is open communication between teachers and school management, teachers are regularly informed about school policies, teachers' feedback is considered in school improvement processes, and communication promotes collaboration within the schools. The mean scores for these items ranged from 2.93 to 2.97, indicating positive perceptions with moderate consistency in responses. However, the item suggesting that communication is mostly one-way recorded a lower mean score of 2.31 and higher variability, as most respondents disagreed with the statement. Overall, the findings indicate that schools largely maintain participatory and productive communication systems, although some variations exist across schools.

Research Question 3: How often do teachers attend capacity-building programs in public senior schools in Bwari Area Council, Abuja?

Table 3
How often teachers attend capacity-building programs

Item	SA%	A%	D%	SD%	Mean	Std Dev
Teachers frequently attend capacity-building programs organized by the school management.	28 (26.92%)	48 (46.15%)	18 (17.31%)	10 (9.62%)	2.9	0.9
Teachers are encouraged to attend external professional development programs.	34 (32.69%)	42 (40.38%)	16 (15.38%)	12 (11.54%)	2.94	0.97
There is sufficient time allocated for teachers to participate in capacity-building programs.	29 (27.88%)	43 (41.35%)	23 (22.12%)	9 (8.65%)	2.88	0.91
The school management tracks the attendance of teachers at professional development events.	33 (31.73%)	41 (39.42%)	19 (18.27%)	11 (10.58%)	2.92	0.96
Teachers feel that the capacity-building programs offered are relevant to their teaching needs.	31 (29.81%)	44 (42.31%)	21 (20.19%)	8 (7.69%)	2.94	0.9

Source: Survey report, 2025

Table 3 presents the analysis of teachers' participation in capacity-building programmes in public senior secondary schools within Bwari Area Council, Abuja. The findings revealed that most respondents perceived professional development activities as active and beneficial to teacher productivity. About 73% of respondents agreed that teachers frequently attend capacity-building programmes organized by school management and are encouraged to participate in external professional development activities. These items recorded mean scores ranging from 2.90 to 2.94, indicating positive perceptions with moderate consistency in responses.The findings also showed that most respondents agreed that adequate time is provided for participation in training programmes, although some respondents expressed concerns about time constraints. This item recorded the lowest mean score of 2.88, suggesting that workload and scheduling challenges may still affect participation in professional development activities.Furthermore, respondents agreed that school management monitors attendance at professional development programmes and that such programmes are relevant to teachers' instructional needs. Overall, the findings indicate that capacity-building programmes are positively implemented in the schools, with standard deviations below 1.00 showing reasonable consistency in respondents' perceptions.

Testing of Hypotheses

Hypothesis 1:The flow of communication does not significantly influence teacher productivity in public senior schools in Bwari Area Council, Abuja.

Table 4
Pearson Correlation between flow of communication and teacher productivity

Variable	Frequency	Mean	Std Dev.	rCal	P-Value	Remarks	Decision
Communication Flow	104	2.82	0.84	.95	.000	Significant	Rejected
Teacher Productivity	104	2.92	0.92				

Source: Survey report, 2025

Table 4 presents the Pearson Product Moment Correlation analysis used to test the hypothesis on communication flow and teacher productivity in public senior secondary schools in Bwari Area Council, Abuja. The findings showed a mean score of 2.82 for communication flow and 2.92 for teacher productivity, indicating moderate agreement among respondents. The correlation coefficient obtained was $r = .95$ with a p-value of 0.000 ($p < .05$), revealing a very strong positive and statistically significant relationship between communication flow and teacher productivity. Consequently, the null hypothesis was rejected, indicating that effective communication significantly influences teacher productivity in public senior secondary schools.

Hypothesis 2: There is no significant impact of capacity-building programs on teacher productivity in public senior schools in Bwari Area Council, Abuja.

Table 5
Pearson Correlation between capacity-building programs on teacher productivity

Variable	Frequency N	Mean	Std Dev.	rCal	P-Value	Remarks	Decision
Capacity-Building Programs	104	2.92	0.9	.99	.000	Significant	Rejected
Teacher Productivity	104	2.92	0.92				

Source: Survey report, 2025

Table 5 presents the Pearson correlation analysis on capacity-building programmes and teacher productivity. The findings revealed mean scores of 2.92 for both variables,

indicating similar perceptions among respondents. The correlation coefficient obtained was r = .99 with a p-value of 0.000 (p < .05), showing a very strong positive and statistically significant relationship. Therefore, the null hypothesis was rejected, indicating that capacity-building programmes significantly influence teacher productivity in public senior secondary schools.

Discussion of Findings

The findings of this study revealed that Total Quality Management (TQM) practices are positively implemented in public senior secondary schools in Bwari Area Council, Abuja. Respondents agreed that staff inspection, teacher training, curriculum review, verification of teaching materials, and teacher performance evaluation are regularly practiced in the schools. The mean scores for all the items were above the criterion mean of 2.50, indicating the existence of quality management mechanisms within the schools. This suggests that school administrators recognize the importance of TQM practices in improving instructional delivery and teacher productivity. The finding agrees with Adebayo and Yusuf (2023) and Okeke (2024), who noted that supervision, monitoring, and evaluation are essential for maintaining educational standards and improving teacher effectiveness.

The finding also supports educational management theories that emphasize staff development, curriculum monitoring, instructional supervision, and teacher evaluation as important factors in improving school performance (Ezeani & Ahmed, 2022). Effective TQM practices promote accountability, continuous improvement, and institutional excellence. Ibrahim and Musa (2023) further observed that schools that prioritize systematic quality management often achieve higher teacher commitment and improved students' academic performance.The study further revealed that communication flow in public senior secondary schools is generally effective and supportive of teacher productivity. Respondents agreed that there is open communication between teachers and school management, teachers are informed about school policies, feedback from teachers is considered, and communication encourages collaboration within the school environment. These findings indicate that communication creates a conducive work environment for teachers. This result aligns with Bello and Johnson (2023), who asserted that effective communication enhances organizational harmony, teacher morale, and productivity.

The study also showed disagreement with the statement that communication in schools is mostly one-way with limited feedback from teachers. This indicates that respondents perceived communication as participatory rather than authoritarian. Participatory communication systems are associated with increased trust, teamwork, and institutional effectiveness (Egboka& Suleiman, 2024). However, some variations in responses suggest that a few schools may still operate hierarchical communication systems that limit teacher participation.The result of the first hypothesis revealed that communication flow significantly influences teacher productivity in public senior secondary schools in Bwari Area Council, Abuja. The Pearson correlation coefficient of 0.95 and p-value of 0.000 indicated a very strong positive and statistically significant relationship between communication flow and teacher productivity. This implies that effective communication improves teachers' performance and institutional effectiveness. The finding agrees with Adeyemi and Hassan

(2023), who reported that schools with open communication systems often experience improved teacher effectiveness and stronger organizational performance.

Another important finding of the study revealed that teachers frequently participate in capacity-building programmes organized by school management and are encouraged to attend external professional development programmes. Respondents also agreed that school management monitors participation in training programmes and that such programmes are relevant to teachers' instructional needs. This indicates that professional development initiatives are actively promoted in the schools. The finding supports Chukwu and Ibrahim (2023), who emphasized that regular professional development improves teachers' instructional competence and classroom effectiveness.The finding is also consistent with Human Capital Development Theory, which emphasizes that continuous training enhances employees' competence and productivity. In the educational sector, capacity-building programmes equip teachers with modern teaching methods, classroom management skills, and updated pedagogical knowledge (Afolabi & Edeh, 2024). However, some respondents expressed concerns regarding insufficient time allocation for participation in training programmes, suggesting that workload and administrative responsibilities may limit teachers' opportunities for professional growth.

Furthermore, the second hypothesis revealed that capacity-building programmes significantly influence teacher productivity. The correlation coefficient of 0.99 and p-value of 0.000 indicated a very strong positive relationship between professional development and teacher productivity. This finding demonstrates that teacher training is an important determinant of instructional effectiveness and productivity. The result agrees with Okafor and Bello (2022), who found that teachers who regularly attend workshops and seminars demonstrate higher productivity and improved instructional delivery.

Conclusion

This study has several practical implications for education stakeholders, including school administrators, teachers, policymakers, and government agencies managing public senior secondary schools in Bwari Area Council, Abuja, and Nigeria.First, the strong link between communication flow and teacher productivity indicates that administrators should prioritize transparent, two-way communication. Effective communication ensures teachers are informed, heard, and motivated to contribute to school goals. Policies should mandate structured communication systems to reduce misunderstandings and encourage collaboration.
Second, the significant impact of capacity-building programs suggests that professional development should be institutionalized. Teachers need regular training to adapt to evolving curricula and pedagogical innovations. Government and school authorities must allocate resources for professional development and monitor teacher participation effectively.

Third, the findings on instructional supervision highlight the need for supportive, constructive supervision. Supervision should focus on guidance and feedback rather than evaluation alone. Policymakers should invest in training supervisors to adopt modern, improvement-focused supervisory approaches.Finally, the importance of collaborative decision-making in boosting teacher productivity suggests that administrators should involve teachers in decisions related to curriculum, policy, and management. Active teacher

engagement in decision-making fosters a sense of ownership, commitment, and enhanced productivity.

The findings emphasize that adopting TQM practices is essential for improving teacher productivity. The results offer evidence-based guidance for designing interventions that enhance communication, professional development, supervision, decision-making, and motivation, ensuring quality education in public senior secondary schools.

Recommendations

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

1. School administrators should strengthen Total Quality Management practices by ensuring regular staff inspection, effective supervision, curriculum monitoring, and objective teacher performance evaluation across all public senior schools.
2. Educational authorities should establish standardized quality assurance frameworks to ensure consistency in the implementation of TQM practices among schools within Bwari Area Council.
3. School management should promote open, participatory, and two-way communication systems that encourage teachers to contribute ideas, provide feedback, and participate in decision-making processes.

References

Adebayo, A. A., & Yusuf, M. O. (2023). Quality assurance mechanisms and teachers' effectiveness in Nigerian secondary schools. *Journal of Educational Management and Development, 12*(2), 45–58.

Adeyemi, T. O., & Hassan, K. A. (2023). Communication patterns and teacher productivity in public secondary schools in Nigeria. *International Journal of Educational Administration and Policy Studies, 15*(1), 33–44. https://doi.org/10.5897/IJEAPS2023.0784

Afolabi, O. T., & Edeh, R. C. (2024). Professional development programmes and teachers' instructional effectiveness in secondary schools. *African Journal of Educational Research and Development, 18*(1), 77–91.

Ayeni, A. J. (2020). Total quality management and teachers' productivity in secondary schools in Ondo State, Nigeria. *International Journal of Research and Analytical Reviews, 7*(3), 977–984.

Bello, M. A., & Johnson, P. O. (2023). Organizational communication and teacher morale in public secondary schools. *Journal of Contemporary Educational Administration, 9*(4), 112–126.

Chukwu, C. E., & Ibrahim, H. S. (2023). Capacity-building programmes and teachers' classroom effectiveness in public secondary schools. *Nigerian Journal of Educational Leadership and Policy, 11*(2), 65–79.

Egboka, P. N., & Suleiman, A. Y. (2024). Participatory communication and institutional effectiveness in secondary schools in Nigeria. *International Journal of Educational Leadership Studies, 6*(1), 88–101.

Ezeani, N. S., & Ahmed, I. M. (2022). Educational management practices and teacher effectiveness in public secondary schools. *Journal of Educational Foundations and Management, 14*(2), 52–66.

Federal Republic of Nigeria. (2014). *National policy on education* (6th ed.). Nigerian Educational Research and Development Council (NERDC) Press.

Ibrahim, U. A., & Musa, D. Y. (2023). Total quality management practices and students' academic performance in secondary schools. *West African Journal of Educational Management, 20*(1), 91–105.

Montenegro, C., Andal, M., & Edd, D. (2023). The role of total quality management in educational settings: Enhancing teaching quality and outcomes. *International Journal of Educational Development, 72*(2), 144–159.

Okafor, L. N., & Bello, T. A. (2022). Professional development programmes and teacher productivity in Nigerian secondary schools. *Journal of Educational Policy and Innovation, 8*(3), 59–72.

Okeke, C. I. (2024). Quality assurance practices and institutional effectiveness in public secondary schools in Nigeria. *African Journal of Educational Administration and Planning, 16*(1), 23–39.

Olaleye, F. O., & Omotosho, O. (2019). Application of total quality management in Nigerian secondary schools: Effects on teacher productivity. *Journal of Educational Administration and Management, 4*(1), 23–34.

Ottan, J. O. (2023). Teacher productivity and instructional effectiveness in Nigerian public secondary schools. *Nigerian Journal of Educational Research, 15*(2), 101–114.

Salisu, A. M., & Ogunleye, R. T. (2022). Communication climate and teachers' commitment in public secondary schools. *Journal of Educational Communication Studies, 5*(2), 40–55.

UNESCO. (2022). *Global education monitoring report 2022: Transforming education through inclusion and quality learning*. UNESCO Publishing. UNESCO Official Website