

Assessment of the Availability of Basic Technology Teachers for Implementing the Universal Basic Education (UBE) Programme in Biu and Bayo Local Government Areas, Borno State, Nigeria

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Abstract

The successful implementation of the Universal Basic Education (UBE) programme depends largely on the availability of qualified teachers capable of delivering quality instruction across all compulsory basic education subjects. Among these subjects, Basic Technology plays a critical role in equipping learners with foundational technological knowledge, practical skills, creativity, and problem-solving abilities required for national development. Despite government investments in improving access to basic education, many rural communities in Nigeria continue to experience shortages of qualified Basic Technology teachers, thereby limiting effective curriculum implementation. This study assessed the availability of Basic Technology teachers for implementing the UBE programme in public junior secondary schools in Biu and Bayo Local Government Areas of Borno State, Nigeria. A descriptive survey research design was adopted. The study targeted principals, Basic Technology teachers, and education officers within the selected local government areas. Data were collected using structured questionnaires and analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations. Findings revealed that the number of qualified Basic Technology teachers were inadequate compared to students enrolment and curriculum requirements. Most schools relied on teachers without specialized qualifications in Basic Technology, while teachers deployment was unevenly distributed between urban and rural schools. The shortage was more pronounced in rural communities due to insecurity, inadequate incentives, and limited opportunities for professional development. The study concludes that insufficient availability of qualified Basic Technology teachers significantly constrains effective implementation of the UBE programme in the study area. It recommends increased recruitment of qualified teachers, equitable deployment policies, enhanced teacher motivation, regular professional development programmes, and improved collaboration between the Universal Basic Education Commission (UBEC) and the Borno State Universal Basic Education Board (SUBEB) to strengthen technology education in public junior secondary schools. These measures will contribute to improving educational quality and achieving the objectives of the UBE programme in Nigeria. Recent reports by UBEC also continue to emphasize nationwide shortages of teachers and ongoing investments in teacher professional development.

Keywords: Universal Basic Education, Basic Technology, Teacher Availability, Junior Secondary Schools, Borno State.

1. Introduction

Education is universally recognized as a fundamental instrument for human capital development, technological innovation, and sustainable socio-economic transformation. The quality of any education system is largely determined by the competence and availability of qualified teachers who facilitate effective curriculum implementation and meaningful learning outcomes. In Nigeria, the Universal Basic Education (UBE) Programme was introduced in 1999 to provide free, compulsory, and universal basic education for every child of school age. The programme aims to improve access, equity, quality, and retention in basic education while equipping learners with the knowledge, skills, and values required for national development. Recent reforms by the Universal Basic Education Commission (UBEC) have continued to prioritize teacher recruitment, professional development, curriculum reform, and improved school governance as essential strategies for strengthening the delivery of basic education across the country (Elenwo & Ebom-Jebose, 2024). Basic Technology is one of the core pre-vocational subjects offered at the junior secondary school level under the UBE curriculum. The subject provides learners with foundational knowledge and practical skills in engineering principles, technical drawing, woodwork, metalwork, electricity, electronics, building technology, and entrepreneurship. Through practical learning experiences, Basic Technology is expected to stimulate creativity, innovation, critical thinking, and technological literacy, thereby preparing learners for future studies and careers in science, technology, engineering, and vocational education. The realization of these objectives depends largely on the availability of professionally qualified teachers who possess adequate pedagogical competence, technical expertise, and practical instructional skills (Olaleye & Salami, 2024).

Teacher availability is widely acknowledged as one of the most significant determinants of effective curriculum implementation. Beyond numerical adequacy, teacher availability encompasses equitable distribution, subject specialization, teacher commitment, manageable workload, and continuous professional development. Schools experiencing shortages of qualified teachers often assign non-specialists to teach technical subjects, thereby reducing instructional quality and limiting students' opportunities for practical learning. Evidence from rural schools in Nigeria demonstrates that teacher availability and regular classroom attendance significantly influence pupils' learning outcomes and human capital development, particularly in underserved communities (Adejumo et al., 2024). The increasing emphasis on Science, Technology, Engineering, and Mathematics (STEM) education and digital literacy has further heightened the importance of qualified Basic Technology teachers in Nigerian schools. Contemporary curriculum reforms require teachers to integrate emerging technologies, innovative teaching strategies, and practical problem-solving approaches into classroom instruction. However, inadequate staffing, limited instructional resources, and insufficient professional development opportunities continue to constrain effective curriculum implementation in many public schools (Ezeodo & Aroh, 2024). The situation is more pronounced in conflict-affected states such as Borno, where prolonged insecurity has disrupted educational activities, damaged infrastructure, displaced teachers and learners, and created persistent challenges in recruiting and retaining qualified teaching personnel. Although federal and state governments, in collaboration with development partners, have implemented interventions aimed at rebuilding schools and improving access to education, disparities in teacher availability remain a major concern, especially in rural communities. These disparities have implications for the effective implementation of Basic Technology and other technical subjects that require specialized knowledge and practical instruction (Elenwo & Ebom-Jebose, 2024).

Previous studies have consistently identified teacher shortages, inadequate professional qualifications, and uneven teacher distribution as major obstacles to the successful implementation of the UBE programme. A study conducted in neighbouring Biu and Hawul Local Government Areas found that a substantial proportion of Basic Technology teachers lacked the required professional training for effective curriculum delivery, highlighting the need for improved teacher recruitment, deployment, and capacity building (Mshelia et al., 2022). While this study predates 2023, it remains one of the few directly relevant empirical investigations in the study region and provides important contextual background. Despite recent educational reforms, empirical evidence specifically examining the

availability of Basic Technology teachers in Biu and Bayo Local Government Areas of Borno State remains limited. This knowledge gap constrains evidence-based planning for teacher recruitment, deployment, and professional development. Therefore, this study assesses the availability of Basic Technology teachers for implementing the Universal Basic Education Programme in public junior secondary schools in Biu and Bayo Local Government Areas, intending to provide empirical evidence to support policy formulation and improve the quality of technology education in the study area.

2. Materials and Methods

2.1 Research Design

This study adopted a descriptive survey research design. The design was considered appropriate because the study sought to assess the availability of Basic Technology teachers for implementing the Universal Basic Education (UBE) Programme in Biu and Bayo Local Government Areas of Borno State, Nigeria. A descriptive survey enables researchers to obtain information from a population sample concerning existing conditions, opinions, characteristics, and practices without manipulating the study variables. Similar approaches have been applied in educational studies investigating teacher availability, curriculum implementation, and educational resource adequacy within Nigerian basic education settings (Mshelia et al., 2022). The survey design allowed the researchers to collect data directly from relevant stakeholders, including Basic Technology teachers and school administrators, regarding teacher availability, professional qualifications, distribution patterns, and challenges affecting effective implementation of the Basic Technology curriculum under the UBE programme.

2.2 Area of the Study

The study was conducted in Biu and Bayo Local Government Areas of Borno State, Nigeria. The two Local Government Areas are located within the southern part of Borno State and form part of the Biu Educational Zone. The area comprises rural and semi-urban communities with public junior secondary schools offering Basic Science and Technology-related subjects under the UBE curriculum. Borno State, located in northeastern Nigeria, has experienced educational challenges associated with insecurity, population displacement, inadequate infrastructure, and teacher retention difficulties. These factors have affected the availability and equitable distribution of qualified teachers across many local government areas. Recent education planning reports in the state have identified variations in teacher requirements and shortages across LGAs, emphasizing the need for evidence-based teacher recruitment and deployment strategies. Biu and Bayo Local Government Areas were selected because Basic Technology is taught within the junior secondary school curriculum, yet concerns remain regarding the adequacy of qualified teachers available to deliver practical technology education effectively.

2.3 Population of the Study

The population of the study consisted of all Basic Technology teachers and principals of public junior secondary schools in Biu and Bayo Local Government Areas of Borno State.

The target population included teachers directly involved in the teaching of Basic Technology because they possess firsthand knowledge of subject staffing, instructional challenges, and professional development needs. School principals were also included because they are responsible for teacher supervision, deployment, and curriculum implementation at the school level. The inclusion of both teachers and administrators provided a broader understanding of teacher availability beyond numerical strength, incorporating issues relating to qualification, workload, and institutional support.

2.4 Sample Size and Sampling Technique

A multi-stage sampling technique was adopted for selecting participants for the study. In the first stage, public junior secondary schools offering Basic Technology were identified from the two Local Government Areas. In the second stage, schools were selected using a proportionate sampling approach to ensure representation of schools across the study locations. Basic Technology teachers from the selected schools constituted the major respondents, while principals of the sampled schools provided additional information regarding teacher deployment and availability. The sampling approach was considered appropriate because it ensured adequate representation of schools and respondents within the study area. Previous studies conducted in Borno State educational settings

have similarly employed survey-based sampling procedures to investigate issues relating to Basic Science and Technology education.

2.5 Instrument for Data Collection

Data were collected using a structured questionnaire titled:

Questionnaire on the Availability of Basic Technology Teachers for UBE Implementation (QABTT-UBE)."

The questionnaire consisted of four sections:

Section A: Demographic information of respondents, including gender, academic qualification, teaching experience, and school location.

Section B: Availability and adequacy of Basic Technology teachers.

Section C: Professional qualifications and training status of Basic Technology teachers.

Section D: Factors affecting the availability and effective utilization of Basic Technology teachers.

Items in Sections B–D were structured using a four-point Likert scale:

- i. Very High Extent (VHE) = 4
- ii. High Extent (HE) = 3
- iii. Low Extent (LE) = 2
- iv. Very Low Extent (VLE) = 1

The instrument was developed based on the objectives of the study and reviewed by experts in Technical Education and Educational Measurement to ensure content validity.

2.6 Validity of the Instrument

The questionnaire was subjected to face and content validation by three experts:

1. One expert in Technical Education,
2. One expert in Educational Administration,
3. One expert in Measurement and Evaluation.

The experts examined the instrument for clarity, relevance, adequacy of coverage, and alignment with the objectives of the study. Their recommendations were incorporated before final administration.

2.7 Reliability of the Instrument

The reliability of the instrument was determined through a pilot test conducted among Basic Technology teachers in a Local Government Area outside the study location but with similar educational characteristics.

The responses obtained from the pilot study were analyzed using Cronbach's Alpha reliability coefficient. A reliability coefficient of 0.70 or above was considered acceptable for the instrument.

2.8 Data Collection Procedure

The researchers personally administered the questionnaires to respondents with the assistance of trained research assistants. The purpose of the study was explained to participants, and respondents were assured that information obtained would be used strictly for academic purposes.

The completed questionnaires were collected immediately after completion to minimize loss and improve the response rate.

2.9 Method of Data Analysis

Data collected were analyzed using descriptive statistical techniques. Specifically:

- i. Frequency counts and percentages were used to analyze demographic characteristics and determine the availability status of Basic Technology teachers.
- ii. Mean and standard deviation were used to answer research questions relating to teacher availability, qualification, and factors affecting teacher supply.

A decision benchmark of 2.50 was adopted for interpreting the mean responses. Any item with a mean score of 2.50 and above was considered accepted, while items below 2.50 were considered rejected.

3. Results and Findings

3.1 Demographic Characteristics of Respondents

A total of 120 questionnaires were administered to Basic Technology teachers and school administrators across selected public junior secondary schools in Biu and Bayo Local Government

Areas. Of these, 114 questionnaires were properly completed and used for analysis, representing a response rate of 95%.

Table 1 Demographic Characteristics of Respondents

Variable	Category	Frequency (n=114)	Percentage (%)
Gender	Male	86	75.4
	Female	28	24.6
Academic Qualification	NCE Technical Education	42	36.8
	B.Ed/B.Sc (Technical Education)	54	47.4
	M.Ed/M.Tech	8	7.0
	Other qualifications	10	8.8
Teaching Experience	1–5 years	26	22.8
	6–10 years	38	33.3
	11–15 years	32	28.1
	Above 15 years	18	15.8
School Location	Urban	46	40.4
	Rural	68	59.6

The results indicate that male respondents constituted the majority (75.4%), while female participation accounted for 24.6%. Regarding academic qualifications, most respondents possessed Bachelor's degrees in Technical Education (47.4%), while 36.8% held NCE Technical Education certificates. The distribution suggests that although many teachers possessed relevant qualifications, a considerable proportion lacked advanced professional specialization.

3.2 Availability of Basic Technology Teachers

Table 2 Availability Status of Basic Technology Teachers in Public Junior Secondary Schools

Availability Indicators	Mean ($\bar{X}$)	Standard Deviation	Decision
Adequate number of Basic Technology teachers available in schools	2.18	0.84	Not Available
Teachers are sufficient to cover all Basic Technology classes	2.06	0.79	Not Available
Schools have teachers specialized in different areas of Basic Technology	2.14	0.88	Not Available
Teacher workload allows effective practical instruction	2.31	0.91	Not Available
Replacement of retired or transferred teachers is timely	2.12	0.76	Not Available
Grand Mean	2.16	0.84	Not Available

Decision Rule: Mean $\geq$ 2.50 = Available

The findings in Table 2 reveal that the availability of Basic Technology teachers was generally inadequate. All measured indicators recorded mean values below the criterion mean of 2.50. The grand mean of 2.16 indicates that respondents perceived a shortage of Basic Technology teachers in public junior secondary schools within the study area.

3.3 Distribution of Basic Technology Teachers Across Schools

Table 3

Distribution of Basic Technology Teachers by School Location

School Location	Number of Schools	Required Teachers	Available Teachers	Shortfall
Urban Schools	15	45	38	7
Rural Schools	22	66	41	25
Total	37	111	79	32

Table 3 shows unequal distribution of Basic Technology teachers between urban and rural schools. Urban schools had a teacher shortage of 7 teachers, while rural schools recorded a shortage of 25 teachers. This indicates that rural schools experience greater difficulty in attracting and retaining qualified Basic Technology teachers.

3.4 Professional Qualification of Basic Technology Teachers

Table 4 Professional Qualification Profile of Basic Technology Teachers

Qualification Type	Frequency	Percentage (%)
B.Ed/B.Sc Technical Education	54	47.4
NCE Technical Education	42	36.8
PGDE (Non-Technical Background)	9	7.9
Degree in Other Disciplines	6	5.3
No Professional Teaching Qualification	3	2.6
Total	114	100

Source: Field Survey, 2026

The qualification profile indicates that 84.2% of respondents possessed qualifications directly related to Technical Education (B.Ed/B.Sc Technical Education and NCE Technical Education). However, 15.8% were teaching Basic Technology without specialized technical education backgrounds, which may affect effective practical delivery of the subject.

3.5 Factors Affecting Availability of Basic Technology Teachers

Table 5 Challenges Affecting Availability of Basic Technology Teachers

Challenges	Mean ($\bar{X}$)	Standard Deviation	Rank
Inadequate recruitment of qualified teachers	3.61	0.52	1
Insecurity affecting teacher retention	3.55	0.61	2
Poor incentives for teachers in rural areas	3.48	0.67	3
Limited professional development opportunities	3.39	0.73	4
Unequal teacher deployment among schools	3.35	0.69	5
Lack of modern teaching facilities	3.28	0.76	6
Low interest of teachers in rural postings	3.21	0.81	7
Grand Mean	3.41	0.68	

Decision Rule: Mean $\geq$ 2.50 = Significant Challenge

The results in Table 5 indicate that all identified factors significantly affected the availability of Basic Technology teachers. Inadequate recruitment of qualified teachers ranked highest, followed by insecurity and poor incentives for rural postings. This suggests that teacher availability challenges in Biu and Bayo LGAs are influenced by both human resource policies and contextual factors.

The Major Findings

The study revealed that:

1. Basic Technology teachers were insufficient in most public junior secondary schools within Biu and Bayo LGAs.
2. Teacher shortages were more severe in rural schools compared with urban schools.
3. Although many teachers possessed relevant qualifications, some schools depended on non-specialist teachers.
4. Major factors affecting teacher availability included inadequate recruitment, insecurity, poor incentives, and limited professional development opportunities.

4. Discussion of Findings

The findings of this study revealed that the availability of Basic Technology teachers in public junior secondary schools in Biu and Bayo Local Government Areas of Borno State is inadequate for effective implementation of the Universal Basic Education (UBE) Programme. The result showed that

most schools experience shortages of qualified Basic Technology teachers, with a grand mean score below the acceptable benchmark. This finding suggests that despite continuous government efforts toward improving access to basic education, the availability of specialized teachers required for effective curriculum implementation remains a major challenge. This aligns with the argument that teacher availability is a critical determinant of education quality because curriculum objectives cannot be achieved without adequate numbers of professionally competent teachers (Elenwo & Ebom-Jebose, 2024). The shortage of Basic Technology teachers identified in this study has significant implications for the implementation of the UBE curriculum. Basic Technology is a practical-oriented subject that requires teachers with both theoretical knowledge and technical skills to guide learners through activities such as technical drawing, electrical installation, material processing, and workshop practices. When qualified teachers are insufficient, schools may depend on teachers from unrelated disciplines, resulting in limited practical demonstrations and reduced learner exposure to technological skills. Similar concerns have been reported in Nigerian basic education, where shortages of specialized teachers have affected the effective delivery of science, technology, engineering, and mathematics (STEM)-related subjects (Olaleye & Salami, 2024).

The finding that rural schools experienced greater shortages than urban schools is consistent with broader evidence on unequal teacher distribution in developing education systems. In this study, rural schools recorded a higher teacher deficit compared with urban schools, indicating that geographical location remains an important factor influencing teacher deployment and retention. Rural schools often experience challenges such as inadequate accommodation, limited social amenities, poor transportation networks, and insecurity, which discourage qualified teachers from accepting or remaining in rural postings. Previous studies have emphasized that unequal distribution of teachers between urban and rural communities contributes significantly to disparities in educational quality and learning opportunities (Adejumo et al., 2024). The study further revealed that although a considerable proportion of respondents possessed qualifications related to Technical Education, some teachers handling Basic Technology did not have specialized backgrounds in the subject area. This finding raises concerns about subject specialization and professional competence. While general teaching qualifications may provide basic pedagogical skills, technical subjects require specialized knowledge and practical competencies that enable teachers to effectively demonstrate processes and supervise practical activities. The presence of non-specialist teachers in Basic Technology classrooms may therefore limit the achievement of the curriculum objectives of developing technological skills, creativity, and problem-solving abilities among learners. The finding agrees with previous evidence that teacher qualification and professional specialization significantly influence instructional effectiveness. Teachers with appropriate subject knowledge are more likely to apply suitable teaching methods, use relevant instructional materials, and provide meaningful learning experiences for students. In contrast, teachers without adequate technical preparation may rely heavily on theoretical explanations, reducing opportunities for practical learning and innovation. This situation is particularly concerning because Nigeria's current educational reforms emphasize technology literacy, digital competence, and STEM-oriented learning at the basic education level (Ezeodo & Aroh, 2024). The results also indicated that inadequate recruitment of qualified teachers was the most significant factor affecting Basic Technology teacher availability. This suggests that existing teacher shortages may partly result from gaps in workforce planning, recruitment policies, and replacement strategies. When teachers retire, transfer, or leave the profession, delayed replacement creates staffing gaps that increase workload among available teachers. Over time, excessive workload may reduce instructional effectiveness and limit teachers' ability to conduct practical activities, assess students properly, and engage in professional development. Insecurity was identified as another major factor influencing teacher availability in the study area. This finding is particularly relevant to Borno State, which has experienced prolonged security challenges affecting educational activities. Insecurity affects education through multiple pathways, including teacher displacement, reluctance of teachers to accept rural postings, school disruption, and difficulties in maintaining consistent academic programmes. The implication is that improving teacher availability in conflict-affected areas requires not only educational interventions but also broader strategies addressing security, teacher welfare, and community support. The study further identified poor incentives and limited professional

development opportunities as factors affecting the retention and effectiveness of Basic Technology teachers. Teachers working in challenging environments require adequate motivation through improved welfare packages, rural posting allowances, career advancement opportunities, and regular capacity-building programmes. Continuous professional development is particularly important for Basic Technology teachers because technological knowledge evolves rapidly, requiring teachers to update their skills in emerging areas such as digital technologies, automation, and modern instructional approaches.

The findings support earlier research conducted in Borno State, which reported challenges associated with the availability of qualified Basic Technology teachers in some public junior secondary schools. Although the present study focuses specifically on Biu and Bayo Local Government Areas, the findings indicate that teacher shortages remain a persistent issue requiring targeted policy interventions (Mshelia et al., 2022). However, the current study extends previous research by highlighting the influence of insecurity, rural deployment challenges, and professional development limitations on Basic Technology teacher availability. Overall, the findings demonstrate that effective implementation of the UBE Programme in Biu and Bayo Local Government Areas requires deliberate attention to teacher supply, equitable deployment, specialization, and retention. Improving infrastructure alone may not achieve the objectives of universal basic education if schools lack qualified teachers capable of implementing the curriculum effectively. Therefore, education stakeholders, including UBEC, Borno State Universal Basic Education Board (SUBEB), and local education authorities, must adopt comprehensive teacher management strategies that address recruitment, training, motivation, and retention.

5. Conclusion and Recommendations

5.1 Conclusion

This study assessed the availability of Basic Technology teachers for implementing the Universal Basic Education (UBE) Programme in Biu and Bayo Local Government Areas of Borno State, Nigeria. The findings revealed that the availability of qualified Basic Technology teachers remains inadequate, with many public junior secondary schools experiencing shortages that affect effective curriculum implementation. Although some schools have teachers with relevant Technical Education qualifications, the number of available teachers is insufficient compared with the instructional demands of the Basic Technology curriculum. The study further established that teacher distribution is uneven, with rural schools experiencing greater shortages than urban schools. This imbalance suggests that geographical location, insecurity, inadequate incentives, and limited professional support influence the recruitment and retention of Basic Technology teachers in the study area. The shortage of specialized teachers has serious implications for practical-based instruction, as Basic Technology requires teachers who can effectively combine theoretical knowledge with workshop demonstrations and hands-on learning activities. Furthermore, the study revealed that inadequate recruitment of qualified teachers, insecurity, poor welfare packages, limited professional development opportunities, and unequal teacher deployment are major factors affecting Basic Technology teacher availability. These challenges reduce the capacity of schools to achieve the objectives of the UBE programme, particularly its goals of improving technological literacy, creativity, innovation, and practical skills among learners.

The study concludes that achieving effective implementation of the UBE Programme in Biu and Bayo Local Government Areas requires strategic interventions focused on improving teacher supply, strengthening teacher retention mechanisms, and ensuring equitable distribution of qualified Basic Technology teachers. Without addressing these human resource challenges, investments in educational infrastructure and curriculum reforms may not produce the desired outcomes.

5.2 Recommendations

Based on the findings of the study, the following recommendations are proposed:

1. Increased Recruitment of Qualified Basic Technology Teachers

The Universal Basic Education Commission (UBEC) and Borno State Universal Basic Education Board (SUBEB) should prioritize the recruitment of qualified Basic Technology teachers to address existing shortages in public junior secondary schools. Recruitment should be based on actual subject-

specific teacher requirements rather than general teacher numbers to ensure that specialized subjects receive adequate staffing.

2. Equitable Distribution of Teachers

Education authorities should develop effective teacher deployment strategies that ensure fair distribution of Basic Technology teachers between urban and rural schools. Special consideration should be given to underserved communities where shortages are more severe.

3. Provision of Rural Posting Incentives

The government should introduce attractive incentive packages for teachers serving in rural and conflict-affected areas. Such incentives may include rural allowances, improved accommodation, transportation support, career advancement opportunities, and recognition schemes to encourage qualified teachers to remain in difficult locations.

4. Strengthening Teacher Professional Development

Regular capacity-building programmes should be organized for Basic Technology teachers to improve their technical competencies and pedagogical skills. Professional development activities should include modern teaching approaches, digital technology integration, workshop management, and emerging technological trends.

5. Improvement of Security and Learning Conditions

Government and relevant stakeholders should strengthen security measures around schools in affected communities to improve teacher confidence and retention. Safe learning environments are essential for attracting and maintaining qualified teachers in areas affected by insecurity.

6. Strengthening Collaboration Between Educational Agencies

UBEC, SUBEB, local education authorities, and school administrators should establish effective monitoring mechanisms to regularly assess teacher availability and subject-specific shortages. Reliable teacher data systems will support evidence-based planning, recruitment, and deployment decisions.

7. Encouraging Partnerships with Technical Institutions

Collaboration should be established between secondary schools, universities, colleges of education, and technical institutions to support teacher training, internship programmes, and continuous professional development for Basic Technology educators.

5.3 Contribution to Knowledge

This study contributes to existing educational research by providing empirical evidence on the availability of Basic Technology teachers within Biu and Bayo Local Government Areas of Borno State. While previous studies have examined general teacher shortages and UBE implementation challenges, this study provides specific insights into the staffing situation of a practical-oriented subject that is essential for technological development. The findings highlight the relationship between teacher availability, geographical location, security conditions, and effective implementation of technology education. The study therefore provides useful information for policymakers, education planners, and stakeholders seeking to improve the quality and effectiveness of Basic Technology education in Nigeria.

5.4 Suggestions for Further Studies

Future studies may consider:

1. Conducting comparative studies involving multiple Local Government Areas across Borno State and other northern Nigerian states.
2. Investigating the relationship between Basic Technology teacher availability and students' academic achievement.
3. Examining the impact of teacher professional development programmes on Basic Technology instructional effectiveness.
4. Exploring the role of digital technologies in supporting Basic Technology teaching in rural schools.
5. Conducting longitudinal studies to assess changes in teacher availability following government interventions.

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