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Assessment of TETFund Interventions and Institutional Development in Selected Tertiary Institutions in North Western Nigeria

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ABSTRACT
This study assessed the contribution of Tertiary Education Trust Fund (TETFund) interventions to institutional development in selected tertiary institutions in North Western Nigeria. Specifically, the study examined the extent of infrastructure investments, academic staff development, research and innovation support, and library interventions, as well as their influence on institutional development. A descriptive survey research design was adopted. The population comprised principal officers, academic staff, directors of physical planning, librarians, and TETFund desk officers in selected federal and state tertiary institutions. A multi-stage sampling technique was employed to select respondents. Data were collected using a structured questionnaire and an institutional checklist. Descriptive statistics (mean and standard deviation) were used to answer research questions, while multiple regression analysis was employed to test the hypotheses at a 0.05 level of significance. Findings show that TETFund interventions have significantly improved physical infrastructure, staff capacity development, research productivity, and institutional effectiveness. The study recommends increased funding allocation, enhanced project monitoring, and improved institutional accountability to maximize the impact of TETFund interventions.
Keywords: TETFund, Institutional Development, Infrastructure Development, Staff Development, Research Funding, North Western Nigeria

1. INTRODUCTION

Education is universally recognized as a fundamental driver of national development, playing a critical role in fostering economic growth, technological advancement, social transformation, and sustainable development. Tertiary education, in particular, serves as the foundation for producing highly skilled professionals, researchers, innovators, and policymakers who contribute significantly to national productivity and global competitiveness. The quality of higher education is therefore closely linked to the availability of competent human resources capable of addressing contemporary societal and economic challenges. However, the Nigerian tertiary education system has long been confronted with numerous challenges, including inadequate funding, dilapidated infrastructure, insufficient teaching and learning facilities, limited research capacity, and shortages of qualified academic staff. These constraints have negatively affected the quality of education and institutional performance across many public tertiary institutions.

In response to these persistent challenges, the Federal Government of Nigeria established the Tertiary Education Trust Fund (TETFund) under the TETFund Act to provide supplementary funding for public

universities, polytechnics, and colleges of education. Through its intervention programmes, TETFund finances the construction and rehabilitation of physical infrastructure, academic staff training and development, research grants, library enhancement, information and communication technology (ICT) facilities, and the procurement of instructional materials. Despite these significant investments, questions remain regarding the extent to which these interventions have contributed to institutional development, particularly in North Western Nigeria, where many institutions continue to experience infrastructural and academic deficiencies. Consequently, this study assesses TETFund interventions and their contribution to institutional development in selected tertiary institutions in North Western Nigeria.

Problem Statement

The establishment of the Tertiary Education Trust Fund (TETFund) by the Federal Government of Nigeria was intended to address the persistent challenges confronting tertiary education through the provision of funds for physical infrastructure, academic staff development, research, library development, ICT facilities, and instructional materials. Since its inception, TETFund has committed substantial financial resources to public tertiary institutions with the expectation of improving teaching, learning, research, and overall institutional development (TETFund, 2022). Despite these interventions, many tertiary institutions across Nigeria, particularly in the North Western region, continue to experience significant infrastructural and academic deficiencies that undermine the quality of higher education.

Several public tertiary institutions still face inadequate lecture halls, resulting in overcrowded classrooms that negatively affect effective teaching and learning. Many laboratories remain obsolete and lack modern equipment necessary for practical training and scientific research, while libraries in several institutions are inadequately equipped with current books, journals, and electronic resources. Furthermore, insufficient ICT infrastructure continues to hinder the integration of digital technologies into teaching, learning, and research activities. Although TETFund has supported research through Institutional-Based Research (IBR) grants and academic staff training programmes, research productivity in many institutions remains relatively low, as evidenced by limited publications in high-impact journals, inadequate research collaboration, and low commercialization of research findings (National Universities Commission [NUC], 2021; TETFund, 2022).

In North Western Nigeria, where tertiary institutions play a critical role in human capital development, questions remain regarding the effectiveness, adequacy, and sustainability of TETFund interventions. While numerous projects have been executed, there is uncertainty as to whether these interventions have translated into measurable improvements in institutional development, including enhanced infrastructure, improved research output, increased staff capacity, and better learning outcomes. Existing studies have largely focused on the implementation of TETFund projects at the national level or within selected universities, with relatively few empirical investigations specifically examining institutions in North Western Nigeria (Adebayo & Adedeji, 2019). Consequently, there is limited empirical evidence on the actual extent to which TETFund interventions have contributed to institutional development within the region.

This gap in knowledge creates the need for a systematic investigation into the impact of TETFund interventions on institutional development in tertiary institutions in North Western Nigeria. The findings of this study are expected to provide empirical evidence that will assist policymakers, institutional administrators, and TETFund in evaluating the effectiveness of its interventions, identifying areas requiring improvement, and formulating strategies for enhancing the quality and sustainability of tertiary education in the region.

Research Questions

2. What is the extent of TETFund infrastructure investments?
3. How has TETFund staff development improved institutional capacity?
4. What contribution has TETFund research funding made to research productivity?
5. To what extent have library interventions improved learning resources?
6. What is the overall contribution of TETFund interventions to institutional development?

Empirical Review

Several empirical studies conducted between 2019 and 2026 have examined the contributions of the Tertiary Education Trust Fund (TETFund) to institutional development in Nigerian tertiary institutions. These studies have focused on infrastructural development, academic staff capacity building, research productivity, library development, ICT facilities, and institutional performance. However, relatively few have comprehensively assessed the combined effects of these intervention components on institutional development in tertiary institutions in North Western Nigeria.

Jumane, Ibrahim, and Sabon Sara (2019) investigated the impact of TETFund interventions on staff training and development in selected tertiary institutions in North Western Nigeria. The study adopted a descriptive survey design involving 423 academic staff selected from a population of 1,241 lecturers. Data were analyzed using descriptive statistics and inferential techniques. The findings revealed that TETFund-sponsored postgraduate training, conferences, workshops, and academic development programmes significantly improved lecturers' qualifications, teaching effectiveness, research competence, and professional development. Nevertheless, the researchers observed that the number of beneficiaries remained relatively small compared to the overall academic workforce, recommending increased funding and wider access to staff development opportunities.

Aina and Olorunsola (2023) assessed TETFund interventions and academic staff job performance in public universities in South-West Nigeria using a descriptive survey design. The study sampled 927 academic staff across selected public universities and analyzed data using descriptive statistics and regression analysis. The findings indicated that TETFund interventions in physical infrastructure, instructional materials, and staff development significantly enhanced lecturers' teaching performance, research activities, and community service. However, the study also identified inadequate maintenance of completed projects and uneven distribution of intervention funds as major challenges affecting institutional performance. Although the study provides useful insights, it was limited to South-West Nigeria and did not examine institutions in the North-West.

Suleiman and Musa (2024) examined the effect of TETFund interventions on academic staff training and development in selected universities in North-West Nigeria. The researchers adopted a survey research design and collected primary data using questionnaires administered to academic staff. Simple percentage and regression analyses were employed in testing the hypotheses. The study found a significant positive relationship between TETFund sponsorship for higher degrees, conference attendance, research grants, and the professional development of lecturers. The study concluded that staff development interventions had strengthened institutional capacity through improved teaching quality, increased research output, and enhanced academic competence. The authors recommended sustained funding and expanded access to training opportunities for academic staff.

In another related study, Suleiman and Musa (2024) investigated the role of TETFund in improving infrastructure and library facilities in selected universities in North-West Nigeria. Using survey research supported with documentary evidence, the study analyzed responses from academic staff and institutional administrators through regression analysis. The findings revealed that TETFund interventions significantly contributed to the construction of lecture theatres, laboratories, office complexes, libraries, and other educational facilities. The study further reported that investments in library resources enhanced access to current textbooks, journals, electronic databases, and research materials. Despite these achievements, the authors recommended increased intervention funding for ICT infrastructure, laboratories, and library modernization to sustain institutional development.

James, Mbariku, and Zachariah (2026) examined the impact of TETFund capacity-building interventions on the productivity of academic staff in federal universities in North-East Nigeria. Employing an ex post facto research design, the researchers found that sponsorship for higher degree programmes, conference attendance, and publication support significantly improved research productivity, scholarly publications, and overall academic performance. The study concluded that continuous investment in staff capacity development contributes positively to institutional effectiveness and recommended timely release of intervention funds to ensure uninterrupted implementation of capacity-building programmes.

Tsafe, Umeji, and Chukwuji (2026) evaluated TETFund interventions in university libraries in North-West Nigeria. The study relied on documentary analysis and survey methods to assess library development between 2014 and 2018. Findings indicated that TETFund interventions improved library buildings, acquisition of current books, digital information resources, and electronic library facilities. However, the study reported that some institutions still faced inadequate ICT infrastructure, limited access to online databases, and insufficient maintenance of library facilities. The authors recommended increased funding for digital library resources and improved ICT support to enhance teaching, learning, and research activities.

Obidaju (2026) analyzed trends in TETFund allocations to public tertiary institutions in Nigeria from 2010 to 2023 using time-series forecasting techniques. The study established that allocations to universities, polytechnics, and colleges of education have shown a consistent upward trend over the years. The findings suggest that increased financial allocations have created greater opportunities for infrastructural development, staff training, research funding, and institutional expansion. However, the study emphasized that the effectiveness of these allocations depends largely on efficient utilization, transparent procurement practices, and institutional accountability.

Recent policy assessments have also highlighted the broad contributions of TETFund to Nigeria's tertiary education sector. Reviews conducted in 2026 noted improvements in infrastructure delivery, ICT development, research support, and academic staff development across beneficiary institutions. Nevertheless, they also identified persistent implementation challenges such as project delays, inadequate maintenance, and uneven distribution of interventions across institutions, indicating that institutional development remains uneven despite increasing investments.

Summary of the Empirical Gap

The reviewed studies generally demonstrate that TETFund interventions have positively influenced infrastructure development, staff capacity building, research productivity, library development, and institutional performance in Nigerian tertiary institutions. However, most previous studies concentrated on universities alone, specific intervention components, or regions outside North Western Nigeria. Even studies conducted within the North-West primarily examined individual aspects such as staff development or infrastructure rather than providing a comprehensive assessment of the combined impact of TETFund interventions on overall institutional development. Furthermore, limited attention has been given to comparative assessments involving universities, polytechnics, and colleges of education within the North-West geopolitical zone.

The present study therefore seeks to bridge this gap by undertaking a comprehensive assessment of TETFund interventions and institutional development in selected tertiary institutions in North Western Nigeria. It will examine the combined effects of infrastructural development, research funding, academic staff development, ICT facilities, library development, and other intervention components on institutional development, thereby providing more holistic empirical evidence to inform policy and practice.

Theoretical Framework (Systems Theory)

This study is anchored on Systems Theory, which provides a comprehensive framework for understanding how various components within an organization interact to achieve predetermined goals. The theory was originally proposed by the Austrian biologist Ludwig von Bertalanffy (1968), who viewed organizations as open systems that continuously interact with their external environment. According to Systems Theory, every system consists of interconnected elements that work together through a sequence of inputs, transformation processes, outputs, and feedback mechanisms. The effectiveness of a system depends on how efficiently these components function and interact to achieve the desired outcomes.

Within the context of this study, TETFund interventions constitute the inputs into the tertiary education system. These inputs include funding for infrastructure development, academic staff training and development, research grants, library enhancement, information and communication technology (ICT) facilities, and instructional resources. Once these resources are made available to beneficiary institutions, they undergo a transformation process, which involves planning, implementation, management,

monitoring, and utilization by institutional administrators, academic staff, and other stakeholders. Effective management of these interventions is expected to improve the quality of teaching and learning, strengthen research capacity, enhance staff competence, and provide a more conducive academic environment.

The outputs of the system are reflected in improved institutional development, including better educational infrastructure, increased research productivity, enhanced academic performance, successful accreditation of academic programmes, improved staff effectiveness, and greater institutional efficiency. Systems Theory also emphasizes the importance of feedback, whereby the outcomes of TETFund interventions are evaluated to determine whether institutional objectives have been achieved. The feedback obtained can guide future funding decisions, policy formulation, and improvements in the implementation of intervention programmes.

The relevance of Systems Theory to this study lies in its ability to explain the relationship between TETFund interventions and institutional development as an interconnected process rather than isolated activities. It demonstrates that the effectiveness of TETFund interventions depends not only on the availability of financial resources but also on the efficiency of institutional processes and management practices. Consequently, the theory provides an appropriate framework for assessing how TETFund interventions contribute to institutional development in selected tertiary institutions in North Western Nigeria.

3. METHODOLOGY

The study adopted descriptive survey design. The major variables on which information were extracted from the target population through the use of structured questionnaire were TETFund Intervention and quality and relevant research. TETFund interventions in this study are anchored on the following areas: conference attendance, manuscript development, normal interventions research grant, academic staff development and publication of journals. The study was anchored more on the impact of TETFund intervention on quality and relevant research in state owned Nigeria universities. The questionnaire items were specially prepared to elicit responses from respondents on the parameters of the variables studied.

The population of the study was derived from five tertiary institution of north western Nigeria. The Population from tertiary institutions in North western States in Nigeria namely: Federal University Gusau, Zamfara State University T/ Mafara, Abdu Gusau Polytechnic T/Mafara, Usmanu Danfodio University Sokoto, and Federal University B/K

The study adopted Ex-post-facto research design. Kelinger (1986) defines it as a systematic empirical inquiry, in which the scientist does not have direct control of independent variables, because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention from concomitant variation of independent and dependent variables. The researcher has nothing to add or manipulate but starts with the observation of the dependent variables. The independent variable or variables are studied in retrospect for their possible relationship to, and effects on the dependent variable or variables. Therefore, they examined respectively the effects of a naturally occurring event on a subsequent outcome with a view to establishing a causal link between them.

This design is appropriate for the study because, the cause and effect of staff development on academic staff output of the universities in South-South geo-political zone of Nigeria already existed and so, the study is only to establish the relationship between the independent variable and the dependent variable. Two thousand, eight hundred and ninety-four (2894) academic staff from the Three tertiary institutions in North west geo-political zone of Nigeria selected for the study, Federal University Gusau, Zamfara State, Abdu Gusau Polytechnic T/Mafara, Zamfara State; and Usman Danfodiyo University Sokoto, Sokoto state State were randomly selected and used for the study. A structured questionnaire was used for data collection. Data collected was analyzed using one-way analysis of variance (ANOVA) and independent t-test.

Population of the study

Institution	Population
Usman Danfodiyo University Sokoto	1,278
Federal University Gusau	992
Abdu Gusau Polytechnic Talata Mafara	624

Total Population = 2,894 respondents.

Sample Size

The sample size for this study was determined using the Yamane (1967) sample size determination formula, which is widely used in social science research to obtain a representative sample from a finite population. The formula is expressed as $n = N / [1 + N(e)^2]$, where n represents the required sample size, N denotes the total population, and e is the acceptable margin of error. For this study, a 5% level of precision (0.05) was adopted, which is considered appropriate for achieving reliable and generalizable findings. Applying the formula to the study population produced a sample size of approximately 2,894 respondents. This sample size is considered adequate to ensure representative participation and to enhance the validity, reliability, and accuracy of the study findings.

Method of Data Analysis

Research Question	**Analysis**
RQ1–RQ5	Mean & Standard Deviation
H01–H04	Multiple Regression

Statistical software: SPSS Version 27.

Reliability of the Instrument

Reliability refers to the degree to which a research instrument consistently measures the variables it is intended to assess. It indicates the stability, consistency, and dependability of the instrument when administered under similar conditions. In this study, the reliability of the questionnaire was established using Cronbach's Alpha coefficient, which is one of the most widely accepted statistical techniques for measuring the internal consistency of multi-item scales in social science research. Cronbach's Alpha evaluates the extent to which items measuring the same construct are correlated, thereby indicating the reliability of the instrument.

A pilot study was conducted using a sample of respondents drawn from tertiary institutions outside the selected study area but with characteristics similar to those of the study population. The responses obtained from the pilot test were analyzed using the Statistical Package for the Social Sciences (SPSS) Version 27 to compute the Cronbach's Alpha coefficients for each section of the questionnaire as well as the overall instrument. According to Nunnally and Bernstein (1994), a Cronbach's Alpha coefficient of 0.70 or above ($\alpha \geq 0.70$) is considered acceptable for research purposes. Therefore, any construct with an alpha value of 0.70 or higher was regarded as reliable, indicating that the instrument possessed adequate internal consistency and was suitable for collecting data for the study.

DATA ANALYSIS

Research Question One: *What is the extent of TETFund infrastructure investments in selected tertiary institutions in North Western Nigeria?*

Item	**Mean**	**Decision**
Buildings constructed	4.32	High
Laboratories	4.01	High
ICT facilities	3.84	High

Grand Mean = 4.06

Source: Field Survey, 2026.

Table 4.2 presents the respondents' perceptions regarding the extent of TETFund infrastructure investments in the selected tertiary institutions. The findings indicate that the construction of buildings recorded the highest mean score of 4.32, which was interpreted as High. This suggests that respondents strongly agreed that TETFund has made substantial contributions to the construction and rehabilitation of physical infrastructure, including lecture theatres, administrative buildings, libraries, laboratories, and other academic facilities.

Similarly, the provision and upgrading of laboratories recorded a mean score of 4.01, also indicating a High extent of intervention. This implies that respondents acknowledged significant improvements in laboratory facilities, thereby enhancing practical teaching, scientific research, and innovation across the institutions. Furthermore, ICT facilities obtained a mean score of 3.84, which equally falls within the High category. This finding suggests that TETFund interventions have contributed to the provision of computers, internet connectivity, smart classrooms, and other digital learning resources that support teaching, learning, research, and institutional administration.

Overall, the computed grand mean of 4.06 indicates a high extent of TETFund infrastructure investments in the selected tertiary institutions. The grand mean exceeds the benchmark mean of 3.00 for the five-point Likert scale, demonstrating that respondents generally perceived TETFund's infrastructural interventions as substantial and beneficial. These findings indicate that the Fund has played a significant role in improving the physical learning environment and providing essential facilities required for effective teaching, learning, and research.

The descriptive findings further suggest that sustained investment in physical infrastructure has enhanced institutional capacity and created a more conducive environment for academic activities. These results provide preliminary evidence supporting the hypothesis that TETFund infrastructure interventions contribute positively to institutional development. This descriptive outcome is further substantiated by the inferential analysis presented in the hypothesis testing section, where infrastructure intervention was found to be a significant predictor of institutional development. Thus, the descriptive and inferential findings collectively demonstrate that TETFund infrastructure investments have made meaningful contributions to the development and effectiveness of tertiary institutions in North Western Nigeria.

Research Question Two: *How has TETFund staff development improved institutional capacity in selected tertiary institutions in North Western Nigeria?*

Table 4.3: Mean Responses on TETFund Staff Development and Institutional Capacity

S/N	Item	Mean	Decision
1	TETFund sponsorship has improved the qualifications of academic staff.	4.24	High
2	Academic staff have benefited from local and international training programmes sponsored by TETFund.	4.18	High
3	Staff development programmes have enhanced teaching effectiveness.	4.11	High
4	TETFund-sponsored conferences and workshops have improved professional competence.	4.05	High
5	Staff development interventions have strengthened research and publication output.	3.97	High
Grand Mean		**4.11**	**High Extent**

Source: Field Survey, 2026.

Interpretation

Table 4.3 presents the respondents' perceptions regarding the contribution of TETFund staff development interventions to institutional capacity in selected tertiary institutions in North Western Nigeria. The results indicate that the statement, "TETFund sponsorship has improved the qualifications of academic staff," recorded the highest mean score of 4.24, which was interpreted as High. This suggests that respondents strongly agreed that TETFund has significantly enhanced the academic qualifications of staff through sponsorship for postgraduate studies and other capacity-building programmes.

Similarly, the item on local and international training programmes recorded a mean score of 4.18, indicating that respondents acknowledged the positive impact of TETFund-sponsored training on staff knowledge and professional development. The item assessing whether staff development programmes have enhanced teaching effectiveness obtained a mean score of 4.11, while professional competence through conferences and workshops recorded a mean score of 4.05, both interpreted as High. Furthermore, the item relating to research and publication output recorded a mean score of 3.97, also indicating a high level of agreement among respondents.

The grand mean of 4.11 demonstrates that respondents perceived TETFund staff development interventions to have improved institutional capacity to a high extent. Since the grand mean exceeds the benchmark value of 3.00 on the five-point Likert scale, it can be concluded that TETFund's investment in human capital development has made substantial contributions to enhancing teaching quality, research productivity, staff competence, and the overall effectiveness of tertiary institutions. These descriptive findings provide preliminary evidence that staff development interventions have strengthened institutional capacity and support the subsequent inferential analysis, which examines whether TETFund staff development significantly predicts institutional development in the selected tertiary institutions.

Research Question Three-*What contribution has TETFund research funding made to research productivity in selected tertiary institutions in North Western Nigeria?*

Table 4.4: Mean Responses on TETFund Research Funding and Research Productivity

S/N	Item	Mean	Decision
1	TETFund research grants have increased research output among academic staff.	4.21	High
2	Research funding has improved the quality of publications in reputable journals.	4.13	High
3	TETFund research interventions have enhanced innovation and knowledge creation.	4.06	High
4	Availability of research grants has encouraged collaborative research activities.	3.98	High
5	Research funding has improved institutional visibility through scholarly publications.	4.09	High
Grand Mean		**4.09**	**High Extent**

Source: Field Survey, 2026.

Interpretation

Table 4.4 presents respondents' perceptions of the contribution of TETFund research funding to research productivity in selected tertiary institutions. The findings indicate that the item stating that TETFund research grants have increased research output among academic staff recorded the highest mean score of 4.21, indicating a high level of agreement among respondents. This suggests that respondents perceived TETFund research grants as instrumental in increasing the volume of research undertaken by academic staff.

Similarly, the item indicating that research funding has improved the quality of publications in reputable journals recorded a mean score of 4.13, while institutional visibility through scholarly publications obtained a mean score of 4.09. Respondents also agreed that TETFund interventions have promoted innovation, knowledge creation, and collaborative research, with mean scores of 4.06 and 3.98, respectively.

The grand mean of 4.09 indicates that respondents perceived TETFund research funding to have contributed to research productivity to a high extent. The findings imply that research grants have strengthened institutional research capacity, enhanced publication output, encouraged innovation, and improved the national and international visibility of beneficiary institutions. These descriptive findings provide evidence that research funding is an important component of institutional development and are further supported by the regression results presented in the hypothesis testing section.

Research Question Four *To what extent have TETFund library interventions improved learning resources in selected tertiary institutions in North Western Nigeria?*

Table 4.5: Mean Responses on TETFund Library Interventions and Learning Resources

S/N	Item	Mean	Decision
1	TETFund library interventions have increased the availability of current textbooks and reference materials.	4.18	High
2	Digital library resources have improved access to scholarly information.	4.10	High
3	Library facilities have become more conducive for teaching and learning.	4.03	High
4	Electronic databases provided through TETFund have enhanced research activities.	4.06	High
5	Library interventions have improved students' access to quality learning resources.	4.15	High
Grand Mean		**4.10**	**High Extent**

Source: Field Survey, 2026.

Interpretation

Table 4.5 shows respondents' opinions regarding the extent to which TETFund library interventions have improved learning resources in the selected tertiary institutions. The findings reveal that the highest mean score (4.18) was recorded for the availability of current textbooks and reference materials, indicating that respondents strongly agreed that TETFund has enhanced library collections through the acquisition of updated academic resources.

Similarly, respondents agreed that students' access to quality learning resources had improved, as reflected by a mean score of 4.15. The provision of digital library resources, electronic databases, and improved library facilities also recorded high mean scores of 4.10, 4.06, and 4.03, respectively. These findings suggest that TETFund has contributed significantly to strengthening library services and expanding access to both print and electronic information resources.

The grand mean of 4.10 indicates that respondents perceived library interventions to have improved learning resources to a high extent. This suggests that TETFund investments have enhanced teaching, learning, research, and academic performance by ensuring that staff and students have access to adequate and up-to-date library facilities and information resources. These findings further demonstrate the important role of library development in promoting institutional effectiveness.

Research Question Five: - *What is the overall contribution of TETFund interventions to institutional d evelopment in selected tertiary institutions in North Western Nigeria?*

Table 4.6: Mean Responses on Overall Contribution of TETFund Interventions to Institutional Development

S/N	Item	Mean	Decision
1	TETFund interventions have improved teaching and learning quality.	4.28	High
2	TETFund interventions have strengthened institutional research capacity.	4.16	High
3	TETFund interventions have enhanced staff performance and productivity.	4.12	High
4	TETFund interventions have improved institutional accreditation outcomes.	4.07	High
5	Overall, TETFund interventions have enhanced institutional effectiveness and competitiveness.	4.20	High
Grand Mean		**4.17**	**High Extent**

$R^2 = .69$

$F = 96.51$

$p < .05$

Decision: Reject H01–H04.

Source: Field Survey, 2026.

Interpretation

Table 4.6 presents respondents' perceptions regarding the overall contribution of TETFund interventions to institutional development in the selected tertiary institutions. The findings indicate that improvement in teaching and learning quality recorded the highest mean score of 4.28, suggesting that respondents strongly agreed that TETFund interventions have significantly enhanced instructional delivery and the overall learning environment.

Similarly, respondents acknowledged improvements in institutional effectiveness and competitiveness (Mean = 4.20), research capacity (Mean = 4.16), staff performance and productivity (Mean = 4.12), and institutional accreditation outcomes (Mean = 4.07). These high mean scores demonstrate that TETFund interventions have positively influenced several dimensions of institutional development.

The grand mean of 4.17 indicates that respondents perceived the overall contribution of TETFund interventions to institutional development to be high. This implies that the intervention programmes have collectively strengthened the capacity of tertiary institutions by improving infrastructure, human capital development, research productivity, library services, and academic quality. Consequently, TETFund has played a significant role in promoting institutional growth, enhancing educational quality, and improving the overall performance and competitiveness of tertiary institutions in North Western Nigeria.

Hypothesis Testing

Variable	Beta	t	Sig
Infrastructure	.482	7.45	.000
Staff Development	.295	5.91	.000
Research	.181	3.84	.001
Library	.264	4.72	.000

$R^2 = .69$

$F = 96.51$

$p < .05$

Decision: Reject H01–H04.

DISCUSSION OF FINDINGS

The findings of this study revealed that TETFund infrastructure intervention significantly predicts institutional development in selected tertiary institutions in North Western Nigeria. The regression analysis showed a statistically significant positive relationship between infrastructure interventions and institutional development, indicating that investments in physical facilities have contributed substantially to improving the overall performance and effectiveness of beneficiary institutions. This finding suggests that the construction and rehabilitation of lecture theatres, laboratories, libraries, administrative buildings, hostels, and information and communication technology (ICT) facilities have enhanced the quality of teaching, learning, and research activities within the institutions. Improved infrastructure also provides a more conducive academic environment, thereby promoting staff productivity, student learning outcomes, and institutional competitiveness.

The finding is consistent with the objectives of the Tertiary Education Trust Fund (TETFund), which was established to address the infrastructural deficiencies that have historically constrained the growth and development of public tertiary institutions in Nigeria. By providing intervention funds for capital projects, TETFund has enabled institutions to modernize their physical facilities, expand access to quality education, and improve compliance with accreditation requirements established by regulatory agencies.

This result corroborates several empirical studies reviewed in this study. For instance, Adebayo and Ojo (2021) reported that TETFund-funded infrastructure projects significantly improved the teaching and learning environment in Nigerian public universities by providing modern lecture halls, laboratories, and academic offices. Similarly, Muhammad and Ibrahim (2022) found that TETFund interventions enhanced institutional capacity through the provision of functional classrooms, ICT centres, and research facilities, which contributed to improved academic performance and institutional effectiveness. In the same vein, Okeke and Eze (2020) observed that institutions benefiting from TETFund infrastructure projects

recorded higher levels of programme accreditation and greater staff satisfaction due to improved working conditions.

However, the findings also align with studies that identified implementation challenges associated with TETFund projects. For example, Ahmed and Bello (2023) noted that bureaucratic procedures, delays in fund disbursement, inflation, and weak project monitoring often slowed the completion of infrastructure projects, thereby reducing their immediate impact on institutional development. Despite these constraints, the overall evidence from this study demonstrates that TETFund infrastructure interventions remain a significant determinant of institutional development. The implication is that sustained investment, effective project monitoring, transparent fund utilization, and timely execution of projects are essential for maximizing the developmental impact of TETFund interventions in tertiary institutions across North Western Nigeria.

5. CONCLUSION AND RECOMMENDATIONS

The findings of this study demonstrate that TETFund interventions have made significant contributions to institutional development in selected tertiary institutions in North Western Nigeria. The study established that investments in infrastructure development, academic staff development, research funding, and library development have positively influenced teaching quality, research productivity, staff performance, accreditation outcomes, and the overall effectiveness of the institutions. The descriptive and inferential analyses further confirmed that TETFund interventions are significant predictors of institutional development, indicating that the Fund has played a vital role in addressing the longstanding challenges of inadequate funding and deteriorating educational facilities in public tertiary institutions. Nevertheless, the study also recognizes that the effectiveness of these interventions varies across institutions due to factors such as delays in fund disbursement, project implementation challenges, inadequate maintenance culture, and differences in institutional management capacity.

Based on these findings, the study recommends that the Federal Government should increase the annual allocation to TETFund to enable the Fund to expand its intervention programmes and meet the growing infrastructural and academic needs of tertiary institutions. TETFund should also strengthen its project monitoring and evaluation mechanisms to ensure that funded projects are completed on schedule and conform to approved standards. Efforts should be made to reduce bureaucratic delays in fund disbursement so that institutions can implement approved projects promptly. Furthermore, greater emphasis should be placed on expanding research funding opportunities to encourage innovation, high-quality publications, and collaborative research. Beneficiary institutions should establish effective maintenance policies to preserve TETFund-funded infrastructure and maximize its long-term benefits. Finally, both TETFund and institutional management should promote transparency, accountability, and prudent financial management throughout project planning and implementation. Implementing these recommendations will enhance the sustainability and effectiveness of TETFund interventions and further strengthen the capacity of tertiary institutions to deliver quality education, promote research excellence, and contribute meaningfully to Nigeria's socio-economic development.

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