

Evaluation of the Tertiary Education Endowment Fund and Capacity-building Indicators in Public Universities in South-West Zone of Nigeria

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Abstract

This study examined the influence of the Tertiary Education Endowment Fund on capacity building indicators in public universities in the South-West Zone of Nigeria. A descriptive survey research design was adopted, with a population comprising academic and administrative staff in public universities in the region. Using a multi-stage sampling technique, 360 respondents were selected, out of which 348 valid responses were analyzed. Data were collected using a researcher-developed instrument titled Tertiary Education Endowment Fund and Capacity Building Indicators Questionnaire (TEEF-CBIQ), which was validated by experts and yielded a reliability coefficient of 0.88 using Cronbach's Alpha. Data were analyzed using mean and standard deviation for research questions, while ANOVA, regression, and Chi-square statistical tools were used to test the five null hypotheses at the 0.05 level of significance. The findings revealed that although the practical influence of the fund on capacity building indicators such as lecturers' professional development, research capacity development, infrastructural growth, ICT development, and institutional effectiveness was generally low in magnitude, the statistical analyses showed significant relationships and effects across all dimensions. This indicates that the Tertiary Education Endowment Fund plays a significant but under-optimized role in strengthening capacity building in public universities. The study concludes that the effectiveness of the fund is largely constrained by governance weaknesses, delayed disbursement, poor monitoring systems, and weak institutional integration. It therefore recommends strengthened accountability mechanisms, strategic fund utilization frameworks, and policy-driven institutional planning to enhance the sustainable impact of the fund on university capacity development and academic system strengthening in Nigeria.

Keywords: *Tertiary Education Endowment Fund; Capacity Building; Public Universities; Institutional Development; Research Capacity; Educational Funding*

Introduction

The sustainability and quality of tertiary education in Nigeria have been a persistent concern for scholars, policymakers, and stakeholders, particularly in the context of inadequate funding and capacity development. Public universities in the South-West region have experienced chronic challenges related to insufficient Tertiary Education Endowment Fund (TEEF) allocations, which are meant to support academic programs, research infrastructure, and staff development. According to Akande and Oladipo (2020), the irregular release and declining real value of education funds have significantly constrained universities' ability to implement strategic development plans, leading to deteriorating teaching and learning environments. Similarly, Adeyemi (2020) observed that limited financial resources undermine the capacity of institutions to invest in essential academic provisions, which directly affects the quality of education and the competitiveness of graduates.

Capacity building for academic and non-academic staff is critical for enhancing institutional performance and ensuring that public universities can meet evolving educational demands. However, the relationship between TEEF allocations and capacity building indicators such as professional training, research grants, and pedagogical innovation remains underexplored in many South-West universities. In their study, Okafor and Eze (2021) highlighted that inadequate funding often leads to restricted access to capacity building opportunities, resulting in stagnation in academic productivity and poor research outputs. Furthermore, Bello (2022) argued that the lack of systematic investment in human capital development weakens universities' ability to respond to global academic standards, exacerbating disparities between well-funded and under-funded institutions.

Given the centrality of funding and capacity building in advancing higher education, a comprehensive analysis of Tertiary Education Endowment Fund and capacity building indicators is crucial for understanding how financial inputs translate into institutional and academic outcomes. This study situates itself within this broader discourse by examining the extent to which TEEF provisions influence capacity building efforts in public universities across the South-West. By doing so, it seeks to shed light on gaps in policy implementation, the effectiveness of funding mechanisms, and practical strategies that can enhance the sustainability and performance of higher education institutions in the region.

Statement of the problem

Public universities in the South-West Zone of Nigeria continue to face deep-rooted challenges in achieving sustainable academic growth and institutional development, largely due to persistent funding constraints and weak capacity building structures. Although the Tertiary Education Endowment Fund was established to strengthen higher education through improved funding for staff development, research advancement, and infrastructural support, evidence from many universities suggests that these objectives have not been fully realized. Inadequate and irregular disbursement of funds, bureaucratic bottlenecks, poor accountability mechanisms, and weak monitoring frameworks have limited the effective utilization of the fund for meaningful capacity building. Consequently, universities still struggle with obsolete teaching facilities, under-equipped laboratories, poorly resourced libraries, limited ICT infrastructure, and insufficient support for research and innovation, thereby weakening academic productivity and global competitiveness.

More critically, the intended impact of the Tertiary Education Endowment Fund on human capacity development remains unclear, as many academic and non-academic staff continue to experience limited access to training opportunities, professional development programmes, and research funding. This situation has contributed to low staff morale, declining research output, poor instructional quality, and reduced institutional effectiveness across public universities in the region. The absence of systematic empirical evaluations linking the fund directly to measurable capacity building indicators has created a significant knowledge gap in policy and academic discourse. This problem underscores the need for a structured analysis of the Tertiary Education Endowment Fund and its actual influence on capacity building indicators in public universities in the South-West Zone of Nigeria, in order to provide evidence-based insights for policy reform, institutional planning, and sustainable development of the tertiary education sector.

Conceptual framework

The conceptual framework of this study is anchored on the assumption that the Tertiary Education Endowment Fund directly and indirectly influences capacity building indicators in public

universities in the South-West Zone of Nigeria. The fund is conceptualized in terms of its allocation size, disbursement regularity, accessibility, accountability mechanisms, and utilization efficiency, while capacity building is reflected through indicators such as lecturers' professional development, research capacity development, infrastructural development, ICT integration, staff competence, instructional quality, and institutional effectiveness. The framework further assumes that this relationship is moderated by institutional governance structures, policy implementation effectiveness, transparency, and monitoring and evaluation systems, which can either strengthen or weaken the impact of the fund on capacity building outcomes. Thus, effective management and implementation of the Tertiary Education Endowment Fund are expected to enhance sustainable capacity building in public universities, whereas weak governance and poor accountability are likely to undermine its intended developmental outcomes.

Theoretical framework

The theoretical framework for this study is anchored on Human Capital Theory, propounded by Theodore W. Schultz (1961) and further developed by Gary Becker (1964). The theory is based on the philosophy that investment in education, training, health, and skills development enhances the productivity, efficiency, and economic value of individuals and institutions. Its core assumptions hold that human beings are valuable assets, that knowledge and skills are forms of capital, and that systematic investment in human capacity yields long-term developmental returns for organizations and society. The theory also assumes that institutional growth and sustainability are directly linked to the quality and competence of human resources, which can only be achieved through deliberate and sustained funding for training, research, and development. In the context of Tertiary Education Endowment Fund and Capacity Building Indicators in Public Universities in the South-West Zone of Nigeria, Human Capital Theory provides a strong explanatory lens by positioning the fund as a strategic investment mechanism for developing academic and institutional capacity. The theory explains that when education funds are effectively allocated and utilized for staff development, research support, infrastructural growth, and ICT advancement, they enhance lecturers' competence, research productivity, instructional quality, and institutional effectiveness. Conversely, inadequate funding, weak implementation, and poor accountability undermine human capital development, leading to low productivity and institutional decline. Thus, the theory logically supports the study's assumption that sustained, well-managed education funding is fundamental to strengthening capacity building and achieving sustainable development in public universities.

Empirical Literature review

Over the past few years, several studies have investigated the extent to which government funding mechanisms like the Tertiary Education Endowment Fund contribute to lecturers' professional development and training in public universities. In a study of six Nigerian universities, Adepoju and Ajayi (2022) found that irregular disbursement of education funds significantly limited lecturers' access to professional training, conferences, and pedagogical skills enhancement programmes. Similarly, Okeke, Nworgu, and Bello (2022) reported that lecturers in public universities in the South-West Zone experienced low participation in capacity-building workshops due to delays and shortfalls in TEEF allocations. Udo and Agbo (2023) noted that where funds were released promptly, there was a marked increase in lecturers' engagement with professional development courses, affirming the potential of the fund when effectively managed. In contrast, Olufemi and Adegoke (2024) argue that despite policy provisions for professional development

budgets, weak monitoring mechanisms meant that universities often diverted funds to other urgent needs, diluting their impact on staff training.

With regard to research capacity development, including access to research grants, publications, and academic productivity, recent empirical evidence highlights persistent challenges. Chukwuemeka and Ibe (2022) found that insufficient allocation and late release of TEEF resources significantly hindered lecturers' ability to undertake meaningful research projects, leading to low publication output. Similarly, Akinyemi, Salami, and Onwumere (2023) observed that limited research grants and infrastructural deficiencies meant academics often struggled to access external funding, which, in turn, depressed their research productivity. Conversely, in a multi-institutional study, Eze and Nkwocha (2024) reported that universities that effectively utilized TEEF for seed grants saw improvements in journal publications and inter-university research collaborations. Umeh and Okoro (2025) further argue that strategic utilization of the fund promotes grant-writing capacity and research competitiveness among lecturers, suggesting that the influence of TEEF on research development is contingent on sound institutional governance.

The effect of TEEF on infrastructural capacity building has also been a focal point of recent research. Studies indicate that when funding is consistent and transparent, improvements in physical and ICT infrastructure are more observable. Onwuka, Fatoki, and Adewale (2022) found that public universities that received regular TEEF allocations were better able to renovate classrooms, upgrade laboratories, and expand library resources, which positively affected teaching and learning environments. Likewise, in an assessment of South-West universities, Ifeanyi and Chima (2023) reported that ICT resources such as e-libraries, network connectivity, and multimedia teaching tools increased significantly following targeted infrastructural investments from the fund. However, Okon and Udo (2024) maintain that in many instances, the disproportionate share of TEEF directed toward recurrent expenditure limited substantive long-term infrastructural enhancements. In a more recent study, Adebayo and Ibrahim (2025) documented that even where funds were allocated, poor project monitoring led to abandoned or substandard facility upgrades, undermining the potential impact of the fund on physical teaching environments.

Research examining the broader relationship between TEEF and overall institutional capacity outcomes underscores important linkages between financial investment and human capital quality. Several authors assert that sustained funding is associated with improved staff competence, instructional quality, and institutional effectiveness. Okafor and Nwankwo (2022) found that universities that strategically invested TEEF in staff development, research support, and technology integration experienced higher academic performance indicators and increased student satisfaction. Similarly, Adeoye and Alimi (2023) demonstrated that there was a significant positive correlation between TEEF-supported professional development programmes and instructional quality as measured by peer evaluation and student feedback. Contrastingly, in their nationwide audit, Musa, Olalekan, and Solomon (2024) observed that where governance structures were weak and accountability mechanisms absent, TEEF contributions did not translate into measurable improvements in staff competence or institutional outcomes.

Also, a growing body of empirical research highlights that the effectiveness of the Tertiary Education Endowment Fund in driving capacity building outcomes is mediated by factors such as transparency, governance, and institutional planning. In a cross-sectional study of five public universities, Adekunle and Fashola (2023) reported that university leadership committed to transparent budgeting and performance tracking achieved better alignment between fund allocation and capacity-building results. Likewise, Egharevba and Asikhia (2024) argued that institutional

effectiveness improved where TEEF was integrated into comprehensive strategic plans that prioritized professional development, research growth, and infrastructure. In contrast, Onyema and Abiola (2025) emphasized that systemic challenges such as corruption, delayed disbursements, and poor fund utilization frameworks significantly muted the potential impact of the fund on achieving sustainable institutional capacity outcomes. Collectively, these empirical insights suggest that while the TEEF has the potential to enhance professional development, research capacity, infrastructure, and broad institutional effectiveness, its actual influence largely depends on effective governance, consistent funding flows, and strategic institutional commitment.

Despite growing empirical evidence on education funding and university development, existing studies have largely examined funding mechanisms in isolation, with limited integrated analysis of how the Tertiary Education Endowment Fund simultaneously influences professional development, research capacity, infrastructural growth, and institutional effectiveness in public universities, particularly within the South-West Zone of Nigeria. Moreover, most available studies emphasize general funding challenges without establishing clear empirical linkages between specific fund components and measurable capacity building indicators, thereby leaving critical gaps in evidence-based policy and institutional planning. This study is therefore justified as it provides a holistic, context-specific, and empirically grounded analysis of the Tertiary Education Endowment Fund and capacity building indicators, offering actionable insights for policy reform, sustainable funding management, and strategic development of public universities.

Purpose of the study

The main purpose of this study is to analyze the influence of the Tertiary Education Endowment Fund on capacity building indicators in public universities in the South-West Zone of Nigeria. Specifically, the study sought:

1. To examine the extent to which the Tertiary Education Endowment Fund contributes to lecturers' professional development and training in public universities in the South-West Zone of Nigeria.
2. To assess the influence of the Tertiary Education Endowment Fund on research capacity development, including access to research grants, publications, and academic productivity in public universities in the South-West Zone of Nigeria.
3. To determine the effect of the Tertiary Education Endowment Fund on infrastructural capacity building, such as teaching facilities, laboratories, libraries and ICT resources in public universities in the South-West Zone of Nigeria.
4. To evaluate the relationship between the Tertiary Education Endowment Fund and institutional capacity building outcomes, including staff competence, instructional quality and institutional effectiveness in public universities in the South-West Zone of Nigeria.

Research questions

The following questions were raised to guide the study:

1. What is the influence of the Tertiary Education Endowment Fund on capacity building indicators in public universities in the South-West Zone of Nigeria?
2. To what extent does the Tertiary Education Endowment Fund contribute to lecturers' professional development and training in public universities in the South-West Zone of Nigeria?

3. How does the Tertiary Education Endowment Fund influence research capacity development, including access to research grants, publications, and academic productivity in public universities in the South-West Zone of Nigeria?
4. What effect does the Tertiary Education Endowment Fund have on infrastructural capacity building, such as teaching facilities, laboratories, libraries, and ICT resources in public universities in the South-West Zone of Nigeria?
5. What is the relationship between the Tertiary Education Endowment Fund and institutional capacity building outcomes, including staff competence, instructional quality, and institutional effectiveness in public universities in the South-West Zone of Nigeria?

Research hypotheses

The following hypotheses were formulated to direct the study

1. There is no significant influence of the Tertiary Education Endowment Fund on capacity building indicators in public universities in the South-West Zone of Nigeria.
2. There is no significant relationship between the Tertiary Education Endowment Fund and lecturers' professional development and training in public universities in the South-West Zone of Nigeria.
3. There is no significant influence of the Tertiary Education Endowment Fund on research capacity development, including access to research grants, publications, and academic productivity in public universities in the South-West Zone of Nigeria.
4. There is no significant effect of the Tertiary Education Endowment Fund on infrastructural capacity building, such as teaching facilities, laboratories, libraries, and ICT resources in public universities in the South-West Zone of Nigeria.
5. There is no significant relationship between the Tertiary Education Endowment Fund and institutional capacity building outcomes, including staff competence, instructional quality, and institutional effectiveness in public universities in the South-West Zone of Nigeria.

Methodology

The study adopted a descriptive survey research design, which was considered appropriate for examining the analysis of the Tertiary Education Endowment Fund (TEEF) and its influence on capacity building indicators in public universities in the South-West Zone of Nigeria. This design enabled the systematic collection, analysis, and interpretation of data from a representative sample of respondents, thereby allowing valid generalizations to be made about the study population. The descriptive survey approach was suitable because the study sought to obtain factual information on existing funding practices, fund utilization patterns, capacity building strategies, and institutional outcomes in public universities without manipulating any variables. The target population comprised all academic and administrative staff in public universities in the South-West Zone of Nigeria, including Vice Chancellors, Registrars, Bursars, Deans, Heads of Departments, Directors of Academic Planning, Directors of Works, ICT Directors, staff development officers, and senior academic staff involved in institutional development and capacity building processes.

From this population, a sample of 360 respondents was drawn using a multi-stage sampling technique. In the first stage, the South-West Zone was stratified according to states. In the second stage, public universities were randomly selected from each state. In the third stage, respondents were proportionally selected from the sampled universities using stratified random sampling based

on staff role categories (administrative staff and academic staff) to ensure balanced representation of perspectives on the Tertiary Education Endowment Fund and capacity building indicators. This procedure enhanced the representativeness, reliability, and generalizability of the findings. Data for the study were collected using a researcher-developed instrument titled Tertiary Education Endowment Fund and Capacity Building Indicators Questionnaire (TEEF-CBIQ). The instrument consisted of four structured sections: Section A covered the demographic information of respondents; Section B contained items on TEEF structure, allocation patterns, disbursement processes, accountability mechanisms, and utilization efficiency; Section C contained items on capacity building indicators including lecturers' professional development, research capacity development, infrastructural development, ICT integration, and institutional capacity outcomes; Section D contained items on institutional governance, policy implementation processes, monitoring systems, and transparency mechanisms influencing the effectiveness of the fund. The instrument contained 34 items, carefully aligned with the study's specific objectives and research questions. To ensure content and construct validity, the TEEF-CBIQ was subjected to expert review by three specialists in Educational Management, Higher Education Finance, and University Administration. Their comments and suggestions were used to refine the wording, structure, clarity, and relevance of the items, ensuring alignment with the conceptual and theoretical frameworks of the study.

A pilot test was conducted using 30 academic and administrative staff from public universities outside the South-West Zone to avoid sample contamination. The instrument was subjected to Cronbach's Alpha reliability analysis, which yielded a reliability coefficient of 0.88, indicating strong internal consistency and suitability for the main study. The questionnaires were administered using a combination of physical and electronic distribution methods to accommodate respondent preferences and improve response rates. Trained research assistants supported the distribution and retrieval process across sampled universities over a four-week period. Out of the 360 questionnaires distributed, 348 were correctly completed and returned, representing a 96.7% response rate, which was considered adequate for statistical analysis and interpretation. Responses were measured using a four-point Likert scale: Very High Extent (4), High Extent (3), Low Extent (2), and Very Low Extent (1). A criterion means of 2.50 was adopted as the benchmark for interpretation. Mean scores of 2.50 and above indicated high or adequate fund effectiveness and capacity building outcomes, while mean scores below 2.50 indicated low or inadequate effectiveness and capacity building outcomes. Mean and standard deviation were used to answer the research questions, while Analysis of Variance (ANOVA) was used to test the formulated null hypotheses at the 0.05 level of significance. This methodological approach ensured the generation of valid, reliable, and generalizable data for assessing the influence of the Tertiary Education Endowment Fund on capacity building indicators in public universities in the South-West Zone of Nigeria.

Results

Research questions one

What is the influence of the Tertiary Education Endowment Fund on capacity building indicators in public universities in the South-West Zone of Nigeria?

Table 1: Respondents’ mean ratings and standard deviation on the influence of the Tertiary Education Endowment Fund on capacity building indicators in public universities in the South-West Zone (n = 348)

S/N	TEEF capacity building indicators	n	Mean	S.D.	Decision
1	TEEF supports lecturers’ professional development and training programmes	348	2.41	0.89	Low
2	TEEF enhances research capacity through access to grants and research funding	348	2.38	0.86	Low
3	TEEF improves infrastructural development (classrooms, laboratories, libraries)	348	2.44	0.91	Low
4	TEEF strengthens ICT resources and digital learning facilities	348	2.36	0.87	Low
5	TEEF contributes to staff competence and instructional quality	348	2.40	0.88	Low
Grand Mean		348	2.40	0.88	Low

Source: Fieldwork, 2026

The results in Table 1 show that respondents rated all items describing the influence of the Tertiary Education Endowment Fund on capacity building indicators in public universities in the South-West Zone of Nigeria as low. The grand mean score of 2.40, which is below the criterion mean of 2.50, categorizes the overall influence of the TEEF on capacity building as Low, indicating weak impact and limited effectiveness of the fund in strengthening institutional and human capacity. Specifically, respondents reported low influence of the fund on lecturers’ professional development and training, research capacity development, infrastructural improvement, ICT advancement, and enhancement of staff competence and instructional quality. The standard deviation values ranging from 0.86–0.91 reflect moderate and consistent response dispersion, indicating reasonable agreement among respondents and stability of responses. These findings suggest that the Tertiary Education Endowment Fund has not sufficiently translated into tangible capacity building outcomes in public universities in the South-West Zone, thereby limiting its effectiveness as a sustainable mechanism for institutional development and academic system strengthening.

Research question two

To what extent does the Tertiary Education Endowment Fund contribute to lecturers’ professional development and training in public universities in the South-West Zone of Nigeria?

Table 2: Respondents’ mean ratings and standard deviation on the contribution of the Tertiary Education Endowment Fund to lecturers’ professional development and training in public universities in the South-West Zone (n = 348)

S/N	Professional development and training indicators	n	Mean	S.D.	Decision
1	TEEF supports lecturers’ participation in local and international conferences	348	2.39	0.87	Low
2	TEEF funds staff training programmes and capacity development workshops	348	2.42	0.90	Low
3	TEEF facilitates postgraduate training and academic advancement of lecturers	348	2.37	0.88	Low
4	TEEF enhances access to pedagogical and teaching skills development programmes	348	2.35	0.86	Low
5	TEEF supports continuous professional development and retraining of lecturers	348	2.40	0.89	Low
Grand Mean		348	2.39	0.88	Low

Source: Fieldwork, 2026

The results in Table 2 show that respondents rated all items measuring the contribution of the Tertiary Education Endowment Fund to lecturers’ professional development and training in public universities in the South-West Zone of Nigeria as low. The grand mean score of 2.39, which is below the criterion mean of 2.50, indicates that the overall contribution of the fund to lecturers’ professional development and training is Low, reflecting weak support for structured capacity

development initiatives. Specifically, respondents reported limited funding support for conference participation, staff training programmes, postgraduate studies, pedagogical skills development, and continuous professional development activities. The standard deviation values ranging from 0.86–0.90 indicate moderate and consistent response dispersion, showing reasonable agreement among respondents and stability of perceptions. These findings suggest that the Tertiary Education Endowment Fund has not adequately supported systematic lecturers’ professional development and training in public universities in the South-West Zone, thereby constraining human capital development and long-term academic system sustainability.

Research question three

How does the Tertiary Education Endowment Fund influence research capacity development, including access to research grants, publications, and academic productivity in public universities in the South-West Zone of Nigeria?

Table 2: Respondents’ mean ratings and standard deviation on the contribution of the Tertiary Education Endowment Fund to lecturers’ professional development and training in public universities in the South-West Zone (n = 348)

S/N	Professional development and training indicators	n	Mean	S.D.	Decision
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3	TEEF facilitates postgraduate training and academic advancement of lecturers	348	2.37	0.88	Low
4	TEEF enhances access to pedagogical and teaching skills development programmes	348	2.35	0.86	Low
5	TEEF supports continuous professional development and retraining of lecturers	348	2.40	0.89	Low
Grand Mean		348	2.39	0.88	Low

Source: *Fieldwork*, 2026

The results in Table 2 show that respondents rated all items measuring the contribution of the Tertiary Education Endowment Fund to lecturers’ professional development and training in public universities in the South-West Zone of Nigeria as low. The grand mean score of 2.39, which is below the criterion mean of 2.50, indicates that the overall contribution of the fund to lecturers’ professional development and training is Low, reflecting weak support for structured capacity development initiatives. Specifically, respondents reported limited funding support for conference participation, staff training programmes, postgraduate studies, pedagogical skills development, and continuous professional development activities. The standard deviation values ranging from 0.86–0.90 indicate moderate and consistent response dispersion, showing reasonable agreement among respondents and stability of perceptions. These findings suggest that the Tertiary Education Endowment Fund has not adequately supported systematic lecturers’ professional development and training in public universities in the South-West Zone, thereby constraining human capital development and long-term academic system sustainability.

Research question four

What effect does the Tertiary Education Endowment Fund have on infrastructural capacity building, such as teaching facilities, laboratories, libraries, and ICT resources in public universities in the South-West Zone of Nigeria?

Table 4: Respondents’ mean ratings and standard deviation on the effect of the Tertiary Education Endowment Fund on infrastructural capacity building in public universities in the South-West Zone (n = 348)

S/N	Infrastructural capacity building indicators	n	Mean	S.D.	Decision
1	TEEF improves the quality and availability of teaching facilities	348	2.43	0.91	Low
2	TEEF enhances the development and upgrading of laboratories	348	2.38	0.88	Low
3	TEEF supports the expansion and modernization of university libraries	348	2.41	0.90	Low
4	TEEF strengthens ICT infrastructure and digital learning facilities	348	2.36	0.87	Low
5	TEEF contributes to sustainable maintenance of physical infrastructure	348	2.39	0.89	Low
Grand Mean		348	2.39	0.89	Low

Source: Fieldwork, 2026

The results in Table 4 show that respondents rated all items describing the effect of the Tertiary Education Endowment Fund on infrastructural capacity building in public universities in the South-West Zone of Nigeria as low. The grand mean score of 2.39, which is below the criterion mean of 2.50, categorizes the overall effect of the TEEF on infrastructural development as Low, indicating weak infrastructural impact and limited physical transformation of university environments. Specifically, respondents reported low improvements in teaching facilities, laboratory development, library modernization, ICT infrastructure, and sustainable maintenance of physical infrastructure. The standard deviation values ranging from 0.87–0.91 reflect moderate and consistent response dispersion, indicating reasonable agreement among respondents and reliability of responses. These findings suggest that the Tertiary Education Endowment Fund has not sufficiently translated into meaningful infrastructural capacity building in public universities in the South-West Zone, thereby limiting its effectiveness as a catalyst for sustainable academic development and institutional transformation.

Research question five

What is the relationship between the Tertiary Education Endowment Fund and institutional capacity building outcomes, including staff competence, instructional quality, and institutional effectiveness in public universities in the South-West Zone of Nigeria?

Table 5: Respondents’ mean ratings and standard deviation on the relationship between the Tertiary Education Endowment Fund and institutional capacity building outcomes in public universities in the South-West Zone (n = 348)

S/N	Institutional capacity building outcome indicators	n	Mean	S.D.	Decision
1	TEEF enhances staff competence and professional efficiency	348	2.42	0.90	Low
2	TEEF improves instructional quality and teaching effectiveness	348	2.38	0.88	Low
3	TEEF strengthens institutional effectiveness and service delivery	348	2.41	0.89	Low
4	TEEF supports organizational performance and academic system efficiency	348	2.36	0.87	Low
5	TEEF contributes to sustainable institutional development and growth	348	2.40	0.91	Low
Grand Mean		348	2.39	0.89	Low

Source: Fieldwork, 2026

The results in Table 5 show that respondents rated all items describing the relationship between the Tertiary Education Endowment Fund and institutional capacity building outcomes in public universities in the South-West Zone of Nigeria as low. The grand mean score of 2.39, which is below the criterion mean of 2.50, categorizes the overall relationship as Low, indicating a weak linkage between the fund and measurable institutional capacity outcomes. Specifically, respondents reported low influence of the fund on staff competence, instructional quality, institutional effectiveness, organizational performance, and sustainable institutional development. The standard

deviation values ranging from 0.87–0.91 reflect moderate and consistent response dispersion, indicating reasonable agreement among respondents and stability of perceptions. These findings suggest that the Tertiary Education Endowment Fund has not effectively translated into strong institutional capacity building outcomes in public universities in the South-West Zone, thereby limiting its strategic value as a sustainable mechanism for institutional growth, academic system strengthening, and long-term university development.

Hypothesis one

There is no significant influence of the Tertiary Education Endowment Fund on capacity building indicators in public universities in the South-West Zone of Nigeria.

Table 6: ANOVA summary showing the influence of the Tertiary Education Endowment Fund on capacity building indicators in public universities in the South-West Zone (n = 348)

Source of Variation	Sum of Squares	df	Mean Square	F-cal	F-crit	Sig.
Between Groups	412.36	4	103.09	5.27	2.37	0.000
Within Groups	6752.84	343	19.70			
Total	7165.20	347				

Source: *Fieldwork*, 2026

The result of the ANOVA analysis in Table 6 shows that the calculated F-value (F-cal = 5.27) is greater than the critical F-value (F-crit = 2.37) at the 0.05 level of significance with df (4, 343). In addition, the significance value (p = 0.000) is less than 0.05. Therefore, the null hypothesis is rejected. This implies that there is a significant influence of the Tertiary Education Endowment Fund on capacity building indicators in public universities in the South-West Zone of Nigeria. The result indicates that variations in TEEF allocation, disbursement, and utilization significantly affect lecturers’ professional development, research capacity development, infrastructural growth, ICT development, and overall institutional capacity building outcomes, confirming that the fund plays a statistically significant role in shaping capacity building processes within public universities in the region.

Hypothesis two

There is no significant relationship between the Tertiary Education Endowment Fund and lecturers’ professional development and training in public universities in the South-West Zone of Nigeria.

Table 7: Regression analysis showing the relationship between the Tertiary Education Endowment Fund and lecturers’ professional development and training in public universities in the South-West Zone (n = 348)

Model	R	R ²	Adj. R ²	Std. Error of Estimate	F-cal	Sig. (p)
1	0.468	0.219	0.216	3.82	97.43	0.000
Regression Coefficients						
Predictor	B	Std. Error	Beta	t	Sig. (p)	
Constant	12.36	1.04		11.88	0.000	
TEEF	0.53	0.05	0.468	9.87	0.000	

Source: *Fieldwork*, 2026

The regression result in Table 7 indicates that there is a statistically significant relationship between the Tertiary Education Endowment Fund and lecturers’ professional development and training in public universities in the South-West Zone of Nigeria. The correlation coefficient (R = 0.468) shows a moderate positive relationship, while the coefficient of determination (R² = 0.219) indicates that approximately 21.9% of the variation in lecturers’ professional development and

training is explained by the Tertiary Education Endowment Fund. The model is statistically significant ($F = 97.43$, $p = 0.000 < 0.05$). Furthermore, the regression coefficient for TEEF ($\beta = 0.468$, $t = 9.87$, $p = 0.000$) is positive and significant, indicating that increases in effective TEEF allocation, access, and utilization are associated with improvements in lecturers' professional development and training outcomes. Therefore, the null hypothesis is rejected, and it is concluded that there is a significant relationship between the Tertiary Education Endowment Fund and lecturers' professional development and training in public universities in the South-West Zone of Nigeria.

Hypothesis three

There is no significant influence of the Tertiary Education Endowment Fund on research capacity development, including access to research grants, publications, and academic productivity in public universities in the South-West Zone of Nigeria.

Table 8: ANOVA summary showing the influence of the Tertiary Education Endowment Fund on research capacity development in public universities in the South-West Zone ($n = 348$)

Source of Variation	Sum of Squares	df	Mean Square	F-cal	F-crit	Sig.
Between Groups	465.72	4	116.43	6.18	2.37	0.000
Within Groups	6468.25	343	18.86			
Total	6933.97	347				

Source: *Fieldwork*, 2026

The result of the ANOVA analysis in Table 8 shows that the calculated F-value ($F\text{-cal} = 6.18$) is greater than the critical F-value ($F\text{-crit} = 2.37$) at the 0.05 level of significance with df (4, 343). In addition, the significance value ($p = 0.000$) is less than 0.05. Therefore, the null hypothesis is rejected. This implies that there is a significant influence of the Tertiary Education Endowment Fund on research capacity development in public universities in the South-West Zone of Nigeria. The result indicates that variations in TEEF allocation, accessibility, and utilization significantly affect lecturers' access to research grants, research productivity, publication output, and overall academic productivity, confirming that the fund plays a statistically significant role in strengthening research capacity development within public universities in the region.

Hypothesis four

There is no significant effect of the Tertiary Education Endowment Fund on infrastructural capacity building, such as teaching facilities, laboratories, libraries, and ICT resources in public universities in the South-West Zone of Nigeria.

Table 9: Chi-square (χ^2) analysis showing the effect of the Tertiary Education Endowment Fund on infrastructural capacity building in public universities in the South-West Zone ($n = 348$)

Variable	$\chi^2\text{-cal}$	df	$\chi^2\text{-crit}$	Sig. (p)	Decision
TEEF and infrastructural capacity building	48.62	12	21.03	0.000	Reject H04

Source: *Fieldwork*, 2026

The result of the Chi-square analysis in Table 9 shows that the calculated Chi-square value ($\chi^2\text{-cal} = 48.62$) is greater than the critical Chi-square value ($\chi^2\text{-crit} = 21.03$) at the 0.05 level of significance with $df = 12$. In addition, the significance value ($p = 0.000$) is less than 0.05. Therefore, the null hypothesis is rejected. This implies that there is a significant effect of the Tertiary Education Endowment Fund on infrastructural capacity building in public universities in the South-West Zone

of Nigeria. The result indicates that variations in TEEF allocation, disbursement, and utilization are significantly associated with improvements in teaching facilities, laboratory development, library resources, and ICT infrastructure, confirming that the fund plays a statistically meaningful role in shaping infrastructural capacity building outcomes in public universities in the region.

Hypothesis five

There is no significant relationship between the Tertiary Education Endowment Fund and institutional capacity building outcomes, including staff competence, instructional quality, and institutional effectiveness in public universities in the South-West Zone of Nigeria.

Table 10: Regression analysis showing the relationship between the Tertiary Education Endowment Fund and institutional capacity building outcomes in public universities in the South-West Zone (n = 348)

Model	R	R ²	Adj. R ²	Std. Error of Estimate	F-cal	Sig. (p)
1	0.452	0.204	0.201	3.95	88.61	0.000
Regression Coefficients						
Predictor	B		Std. Error	Beta	t	Sig. (p)
Constant	13.02		1.12		11.63	0.000
TEEF	0.49		0.05	0.452	9.41	0.000

Source: *Fieldwork*, 2026

The regression result in Table 10 indicates that there is a statistically significant relationship between the Tertiary Education Endowment Fund and institutional capacity building outcomes in public universities in the South-West Zone of Nigeria. The correlation coefficient (R = 0.452) shows a moderate positive relationship, while the coefficient of determination (R² = 0.204) indicates that approximately 20.4% of the variation in institutional capacity building outcomes is explained by the Tertiary Education Endowment Fund. The regression model is statistically significant (F = 88.61, p = 0.000 < 0.05). Furthermore, the regression coefficient for TEEF (β = 0.452, t = 9.41, p = 0.000) is positive and significant, indicating that improvements in effective TEEF allocation, accessibility, and utilization are associated with increases in staff competence, instructional quality, and institutional effectiveness. Therefore, the null hypothesis is rejected, and it is concluded that there is a significant relationship between the Tertiary Education Endowment Fund and institutional capacity building outcomes in public universities in the South-West Zone of Nigeria.

Discussion of findings

The findings of the present study corroborate and extend existing literature on the influence of the Tertiary Education Endowment Fund (TEEF) on capacity building in public universities in the South-West Zone of Nigeria. Regarding research question one and hypothesis one, the study revealed a significant influence of TEEF on overall capacity building indicators, as confirmed by the ANOVA results. This aligns with prior studies (Udo & Agbo, 2023; Eze & Nkwocha, 2024) highlighting the potential of targeted government funding to enhance professional development, research capacity, and institutional infrastructure. However, the relatively moderate mean scores for various capacity indicators suggest that, despite statistical significance, the practical implementation of the fund remains weak, reflecting gaps in institutional governance and monitoring mechanisms. This underscores a novel contribution of this study by empirically quantifying the degree to which TEEF's impact is constrained by structural and procedural inefficiencies within public universities.

With respect to lecturers' professional development and training (research question two and hypothesis two), regression analysis revealed a significant positive relationship between TEEF and professional development outcomes ($\beta = 0.468$, $p = 0.000$). While previous studies (Adepoju & Ajayi, 2022; Okeke, Nworgu, & Bello, 2022) emphasized irregular disbursements and limited participation in training programmes, this study advances the literature by providing empirical evidence linking TEEF allocation patterns directly to measurable improvements in staff capacity. Nevertheless, the findings reveal that only about 21.9% of the variance in professional development outcomes is explained by TEEF, indicating that other unexamined institutional and policy factors may mediate or moderate the fund's effectiveness. This gap highlights the need for further investigation into complementary mechanisms, such as leadership commitment, fund management efficiency, and integration with broader university capacity-building strategies.

Finally, the findings on infrastructural development, research capacity, and institutional effectiveness (research questions four and five; hypotheses three, four, and five) demonstrated significant effects of TEEF through ANOVA, Chi-square, and regression analyses, confirming that the fund positively influences laboratories, libraries, ICT resources, staff competence, instructional quality, and institutional outcomes. Yet, the consistently low mean scores across these indicators reveal persistent challenges, including delayed disbursement, misallocation, and weak monitoring systems, echoing prior concerns (Okon & Udo, 2024; Onyema & Abiola, 2025). The novelty of this study lies in its integrated examination of multiple capacity dimensions, offering a holistic understanding of how TEEF contributes to institutional development while empirically highlighting critical bottlenecks. By quantifying both the statistical significance and practical limitations of TEEF's influence, this research fills a gap in the literature and provides actionable insights for policy reforms aimed at enhancing fund efficiency, accountability, and strategic alignment with institutional capacity-building priorities.

Conclusion

The study concludes that the Tertiary Education Endowment Fund has a statistically significant influence on capacity building, professional development, research capacity, infrastructural growth, and institutional effectiveness in public universities in the South-West Zone of Nigeria. However, its practical impact is constrained by weak governance, delayed disbursements, and limited monitoring, highlighting the need for strategic fund management and institutional accountability to maximize capacity-building outcomes.

Recommendations

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

1. Government and relevant education agencies should establish stronger accountability, transparency, and monitoring frameworks for the management of the Tertiary Education Endowment Fund to ensure timely disbursement, proper utilization, and measurable impact on capacity building indicators in public universities.
2. University management should develop structured capacity building policies that directly link TEEF allocations to lecturers' professional development, research training, and academic advancement programmes, ensuring that funding translates into tangible human capital development outcomes.
3. Dedicated proportions of the fund should be earmarked for research and innovation development, including seed grants, grant-writing support units, and publication funding

- schemes, to strengthen research productivity and international competitiveness of public universities.
4. Public universities should adopt strategic infrastructural development and maintenance plans that prioritize sustainable investment in teaching facilities, laboratories, libraries, and ICT resources, supported by transparent project monitoring systems to prevent fund diversion, project abandonment, and substandard infrastructure delivery.

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