

ASSESSMENT OF IMPACT, CHALLENGES AND QUALITY OF LOCAL VS FOREIGN TETFUND TRAINING: FOCUS ON SELECTED FEDERAL AND STATE POLYTECHNICS IN NORTH CENTRAL NIGERIA

¹Y. B Usman and ²M. I Yusufu

¹ Department of Mathematics and Statistics, Federal Polytechnic Idah, Kogi state, Nigeria

² Department of Food science and Technology, Federal Polytechnic Idah, Kogi state, Nigeria

Correspondence e mail: ybusman_2005@yahoo.com

ABSTRACT

Academic staff training and development programmes play a critical role in strengthening teaching quality, research productivity, and institutional performance in tertiary education systems. In Nigeria, the Tertiary Education Trust Fund (TETFund) provides financial support for academic staff training through local and international postgraduate programmes. Despite these interventions, concerns persist regarding the challenges, effectiveness, and overall quality of TETFund-sponsored academic staff development programmes in Nigerian polytechnics. This study therefore examined the challenges, impact, and quality of TETFund academic staff training in selected polytechnics in North Central Nigeria, with particular emphasis on training outcomes, institutional retention patterns, teaching effectiveness, and programme distribution. The study adopted a quantitative survey design. Data were collected from academic staff across six selected polytechnics in North Central Nigeria, namely Benue State Polytechnic Ugbokolo, Federal Polytechnic Bida, Federal Polytechnic Nasarawa, Federal Polytechnic Idah, Federal Polytechnic Offa, and Plateau State Polytechnic Barkin Ladi. A structured questionnaire was used to obtain information on training experiences, perceived challenges, teaching quality, and institutional outcomes of TETFund sponsorship. A total of 49 valid responses were obtained from the administered questionnaires. Data were analysed using descriptive statistics and chi-square analysis to examine response distributions across institutions and training categories. The findings revealed that 59.2% of questionnaires were returned, indicating moderate participation across the sampled institutions. The results identified inadequate funding (40.16%) and infrastructural deficiencies (18.07%) as the most significant challenges affecting academic staff training programmes. In terms of training outcomes, the study found that 77.6% of trained academic staff were retained within their institutions, suggesting that TETFund programmes contribute positively to institutional human capital development. With respect to teaching quality, 66.3% of respondents rated teaching methods of trained academic staff as adequate or very adequate, indicating that training programmes enhance instructional delivery. The analysis of sponsorship types showed that both local (52.2%) and foreign (47.8%) training programmes contribute significantly to improving teaching effectiveness, although foreign programmes recorded slightly higher ratings. Furthermore, Master's degree programmes accounted for the largest proportion of training (59.8%), followed by doctoral programmes (25.7%), highlighting the emphasis on postgraduate academic qualification upgrades. Stakeholder recommendations emphasized the importance of financial planning (30.6%), support networks (28.6%), academic preparation (20.4%), and employment opportunities (20.4%) for improving the effectiveness of staff development programmes. The study concludes that TETFund-sponsored academic staff training programmes have significantly improved teaching quality, staff capacity, and institutional development in Nigerian polytechnics, although challenges related to funding, infrastructure, and institutional support remain. The study recommends increased funding for staff development programmes, improved institutional support systems, strengthened research infrastructure, and enhanced monitoring of training outcomes in order to maximize the long-term impact of TETFund interventions on higher education development in Nigeria.

Keywords: TETFund intervention, academic staff development, higher education quality, teaching effectiveness, staff retention, Nigerian polytechnics.

INTRODUCTION

Academic staff development is widely recognized as a fundamental component of quality assurance and institutional effectiveness in higher education systems worldwide. Universities and polytechnics depend on highly qualified academic personnel to deliver quality teaching, conduct impactful research, and contribute to national development. Consequently, staff training programmes, particularly postgraduate education and professional development initiatives, have become essential strategies for improving teaching competence and research productivity in tertiary institutions (Altbach & de Wit, 2023; Salifu, 2025). In many developing countries, however, higher education institutions face significant challenges such as inadequate funding, limited research infrastructure, and insufficient opportunities for academic staff development, which often constrain the quality of teaching and research outputs (Teferra, 2022).

In Nigeria, these challenges led to the establishment of the Tertiary Education Trust Fund (TETFund) as a strategic intervention agency designed to support the development of tertiary education through funding for infrastructure, research, and academic staff training. TETFund plays a crucial role in improving the capacity of academic staff by sponsoring postgraduate training programmes, research activities, conference participation, and specialized professional development initiatives in both local and foreign institutions. According to Ogunode and Abubakar (2022), TETFund interventions have significantly contributed to strengthening academic staff qualifications and improving institutional performance in Nigerian tertiary institutions. Similarly, Zafi (2025) observed that TETFund-sponsored training programmes enhance lecturers' pedagogical competence, research productivity, and professional engagement within the higher education system.

Despite these positive contributions, several studies have identified persistent challenges affecting the effectiveness of academic staff development programmes in Nigeria. These challenges include inadequate funding, infrastructural deficiencies, weak institutional support systems, and limited research facilities, all of which may hinder the effective implementation and outcomes of training initiatives (Menon, 2024; Salmi, 2022). In addition, issues such as academic staff mobility and brain drain may reduce the long-term institutional benefits of staff development programmes when trained academics leave their institutions in search of better working conditions elsewhere (Teferra, 2022).

Furthermore, the effectiveness of academic staff training programmes can be evaluated not only by the number of trained personnel but also by their impact on teaching quality, research productivity, and institutional performance. Studies on higher education development emphasize that the success of staff development programmes depends on the ability of trained academic staff to translate newly acquired knowledge and skills into improved teaching practices and academic innovation (Fernandes, Araújo, Miguel, & Abelha, 2023). Continuous professional development is therefore essential for equipping lecturers with modern pedagogical techniques and enhancing their capacity to address evolving educational demands.

Although TETFund interventions have significantly expanded academic staff training opportunities in Nigeria, empirical evidence on the challenges, quality, and institutional outcomes of these training programmes—particularly in polytechnics—remains limited. Most existing studies focus on universities, leaving polytechnics relatively underrepresented in the literature. This gap underscores the need for systematic evaluation of TETFund-sponsored training programmes in polytechnic institutions, which play a vital role in technical and vocational education in Nigeria.

Against this background, the present study examines the challenges, impact, and quality of TETFund academic staff training in selected polytechnics in North Central Nigeria. Specifically, the study investigates institutional participation in training programmes, major challenges affecting staff development, retention patterns of trained staff, teaching effectiveness following training, and stakeholder recommendations for improving the effectiveness of academic staff training programmes. By providing empirical evidence on these issues, the study contributes to the growing body of literature on higher education development and offers policy-relevant insights for strengthening academic staff capacity in Nigerian polytechnics.

METHODOLOGY

This study employed a quantitative survey research design to investigate the challenges, impact, and quality of TETFund-sponsored academic staff training programmes in selected polytechnics in North Central Nigeria. The survey approach was considered appropriate because it allows for the systematic collection and analysis of standardized data from respondents regarding their experiences and perceptions of staff development programmes (Creswell & Creswell, 2018; Bryman, 2022).

The study was conducted in six polytechnics located in North Central Nigeria, namely Benue State Polytechnic Ugbokolo, Federal Polytechnic Bida, Federal Polytechnic Nasarawa, Federal Polytechnic Idah, Federal Polytechnic Offa, and Plateau State Polytechnic Barkin Ladi. The target population comprised academic staff who had benefited from TETFund-sponsored training programmes, including postgraduate studies and professional development initiatives. A purposive sampling technique was adopted to select respondents with direct experience of TETFund training programmes, ensuring that the information obtained was relevant to the objectives of the study (Saunders, Lewis, & Thornhill, 2019). A total of 49 valid responses were obtained from the administered questionnaires across the selected institutions.

Data were collected using a structured questionnaire designed to obtain information on respondents' participation in training programmes, perceived challenges, teaching effectiveness after training, institutional retention of trained staff, and stakeholder recommendations for improving the effectiveness of academic staff development initiatives. The instrument was validated through expert review by scholars in higher education administration and research methodology to ensure clarity and relevance of the questionnaire items.

The questionnaires were administered directly to respondents in the selected polytechnics. Participation in the study was voluntary, and respondents were assured of confidentiality and anonymity. The collected data were analyzed using descriptive statistical techniques, including frequencies and percentages, while chi-square analysis was used to examine response distributions across institutions and training categories. These analytical procedures enabled the study to identify key patterns relating to training challenges, programme distribution, teaching effectiveness, and staff retention.

The study adhered to ethical research standards, including voluntary participation, confidentiality of respondents, and responsible handling of research data. No personal identifiers were collected from respondents, and the information obtained was used strictly for academic purposes.

RESULTS AND DISCUSSION

Discussion on distribution of questionnaire return status across the selected polytechnics

Table 1 presents the distribution of questionnaire return status across the selected polytechnics in North Central Nigeria. A total of 49 questionnaires were administered, of which 29 were returned, representing a 59.2% response rate, while 20 questionnaires (40.8%) were not returned. The response rate obtained in this study is considered adequate for survey-based research in higher education studies, where response rates between 50% and 60% are generally regarded as acceptable for meaningful statistical analysis and interpretation (Creswell & Creswell, 2018; Bryman, 2022). The moderate response rate therefore provides a sufficient basis for examining the challenges, impact, and quality of TETFund academic staff training programmes in the selected polytechnics.

Institutional distribution of returned questionnaires shows variations in participation across the polytechnics. Benue State Polytechnic, Ugbokolo recorded the highest response level with 8 returned questionnaires out of 9 administered, representing approximately 88.9%, suggesting strong institutional engagement and accessibility of respondents within the institution. Plateau State Polytechnic, Barkin Ladi recorded 4 returns out of 6 questionnaires (66.7%), while Federal Polytechnic Bida recorded 5 returns out of 8 questionnaires (62.5%). Conversely, Federal Polytechnic Nasarawa and Federal Polytechnic Idah each recorded 4 returns out of 9 questionnaires (44.4%), while Federal Polytechnic Offa recorded 4 out of 8 returns (50.0%). These variations suggest differences in institutional responsiveness, staff availability, and possibly the level of engagement with TETFund-sponsored training programmes.

The variations in response rates across institutions may also reflect structural and administrative realities within Nigerian tertiary institutions. Differences in staff workload, institutional communication channels, and administrative coordination can influence the willingness and ability of academic staff to participate in research surveys (Saunders, Lewis, & Thornhill, 2019). In the context of this study, institutions with higher response rates may indicate stronger institutional structures for monitoring academic staff development programmes, including TETFund sponsorships. Previous studies have similarly reported that institutional commitment and administrative support significantly influence the success and participation levels in academic staff development initiatives (Adeniran & Olanrewaju, 2023; Ogbogu, 2021).

Furthermore, the distribution of chi-square contributions across institutions indicates that some institutions contributed more strongly to the observed pattern of returned and non-returned questionnaires. Benue State Polytechnic, Ugbokolo shows the highest chi-square contribution among non-returned responses, indicating a noticeable deviation

from expected frequencies. Such variations are common in institutional surveys and often reflect contextual factors such as staff mobility, research engagement culture, and awareness of training programmes (Bryman, 2022). However, because the overall chi-square statistic and significance level are not presented in the table, it is not possible to conclude whether the differences in response distribution are statistically significant. Nevertheless, the observed variations remain analytically relevant in interpreting the broader findings of the study.

From the perspective of TETFund interventions, the response pattern observed across institutions highlights the uneven realities of implementing academic staff training programmes within Nigerian tertiary institutions. The Tertiary Education Trust Fund (TETFund) was established to strengthen institutional capacity through staff training, research development, and infrastructural support (TETFund, 2022). Academic staff training is particularly important in improving teaching quality, enhancing research productivity, and strengthening institutional competitiveness in higher education systems (Okebukola, 2020). Consequently, institutional participation in studies examining these programmes may also reflect the degree of institutional engagement with such interventions.

Table1: Summary of Return Status by Institution

Institution	No Returned (N)	Chi-square Contribution	N / Table Total	Yes Returned (N)	Chi-square Contribution	N / Table Total	Total (N)	N / Table Total
Benue State Polytechnic, Ugbokolo	1	1.946	0.020	8	1.342	0.163	9	0.184
Federal Polytechnic, Bida	3	0.022	0.061	5	0.015	0.102	8	0.163
Federal Polytechnic, Nasarawa	5	0.479	0.102	4	0.330	0.082	9	0.184
Federal Polytechnic, Idah	5	0.165	0.102	4	0.330	0.082	9	0.184
Federal Polytechnic, Offa	4	0.165	0.082	4	0.114	0.082	8	0.163
Plateau State Polytechnic, Barkin Ladi	2	0.082	0.041	4	0.057	0.082	6	0.122
Total	20	—	0.408	29	—	0.592	49	1.000

Survey study, March 2025

Discussion of Findings on Challenges of TETFund Academic Staff Training

The results presented in Table 2 highlight the key challenges affecting the effectiveness and quality of TETFund-sponsored academic staff training programmes in selected polytechnics in North Central Nigeria. The findings reveal that several structural, institutional, and operational constraints continue to affect the implementation and outcomes of academic staff development initiatives despite the substantial interventions of the Tertiary Education Trust Fund (TETFund).

The most prominent challenge identified in the study is inadequate funding, which accounted for 100 responses representing 40.16% of the total responses. This finding suggests that financial limitations remain a critical barrier to effective academic staff development in Nigerian tertiary institutions. Although TETFund was established to address funding gaps in higher education through the provision of intervention funds for research, infrastructure, and staff training, the demand for academic staff development continues to exceed available funding allocations. Previous studies have consistently reported that insufficient funding remains a major obstacle to improving the quality of higher education in Nigeria, particularly in relation to research capacity, postgraduate training opportunities, and staff professional development (Ogunode & Abubakar, 2022; Okebukola, 2023). Inadequate funding often limits the number of academic staff that can benefit from training programmes and reduces the sustainability of institutional capacity-building initiatives.

The second most significant challenge identified by respondents is infrastructural deficiencies, which accounted for 45 responses (18.07%). Infrastructure plays a critical role in supporting effective teaching, research, and academic development. Facilities such as laboratories, modern libraries, digital learning platforms, and research equipment are essential for academic staff to fully utilize the knowledge and skills acquired through training programmes. The persistence of infrastructural gaps in many Nigerian tertiary institutions has been widely documented in the literature. Studies indicate that inadequate infrastructure constrains teaching effectiveness, research productivity, and institutional competitiveness within the global higher education system (Salmi, 2022; World Bank, 2023). Although TETFund has invested significantly in infrastructural development across Nigerian tertiary institutions, the rapid expansion of enrolment and increasing institutional demands continue to place pressure on existing facilities.

Another important challenge highlighted in the findings is poor research facilities, which accounted for 19 responses (7.63%). Research facilities are central to academic productivity and knowledge generation in higher education institutions. When research facilities are inadequate, academic staff may find it difficult to apply the skills acquired through training programmes or conduct high-quality research. Empirical studies on higher education development in Africa emphasize that limited research infrastructure remains one of the key factors constraining research output and innovation in tertiary institutions (Altbach & de Wit, 2023; Teferra, 2022). This finding suggests that improving research infrastructure should be prioritized alongside academic staff training initiatives in order to maximize the benefits of TETFund interventions.

The study also identified academic corruption, which accounted for 17 responses (6.82%), as a challenge affecting academic staff development programmes. Governance and accountability issues within tertiary institutions can influence the allocation of training opportunities, research grants, and institutional resources. Corruption within academic institutions has been reported to undermine transparency and fairness in the distribution of development opportunities, thereby limiting the effectiveness of capacity-building programmes (Hallak & Poisson, 2022). Strengthening institutional governance mechanisms and accountability structures is therefore essential for ensuring that training opportunities are allocated based on merit and institutional needs.

Other challenges identified in the study include discrimination and racism (5.62%), insecurity (4.82%), and unstable academic calendars (4.82%). These factors reflect broader socio-political and institutional conditions affecting the higher education sector in Nigeria. Insecurity in certain parts of the country has disrupted academic activities and institutional operations, while unstable academic calendars often result from industrial disputes and administrative challenges within the tertiary education system. Research has shown that disruptions in academic calendars negatively affect staff productivity, training schedules, and institutional planning (Aina, 2023; Olanrewaju & Adeniran, 2022). Such disruptions may therefore undermine the effectiveness of academic staff training programmes and reduce their long-term impact on institutional development.

The findings further indicate that brain drain (3.61%) is perceived as a challenge associated with academic staff training. Brain drain refers to the migration of highly skilled professionals to institutions or countries offering better employment conditions, remuneration, and research opportunities. Although academic staff training programmes are designed to enhance institutional capacity, the absence of effective retention strategies may result in trained academics leaving their institutions, thereby limiting the institutional benefits of training investments. The issue of brain drain remains a significant challenge for higher education systems in many developing countries, including Nigeria (Tetty, 2022; Teferra, 2022).

Interestingly, homesickness (1.61%) was identified as a relatively minor challenge, while visa and immigration issues, cultural adjustment, and academic differences recorded no responses. This suggests that most of the respondents in the study may have participated in local or regional training programmes, which are increasingly encouraged by TETFund as a strategy for reducing the financial cost and administrative challenges associated with overseas training programmes.

Table2: Summary of Findings of Challenges

Challenge	Number of Responses	Proportion (%)
Inadequate funding	100	40.16%
Infrastructural deficiencies	45	18.07%
Poor research facilities	19	7.63%
Academic corruption	17	6.82%
Others	17	6.83%

Challenge	Number of Responses	Proportion (%)
Discrimination and racism	14	5.62%
Insecurity	12	4.82%
Unstable academic calendar	12	4.82%
Brain drain	9	3.61%
Homesickness	4	1.61%
Visa and immigration issues	0	0.00%
Cultural adjustment	0	0.00%
Academic differences	0	0.00%
Total	249	100.00%

Survey study, March 2025

Discussion of Institutional Retention Patterns of TETFund-Sponsored Academic Staff

The results presented in Table 3 provide insight into the institutional retention patterns of academic staff who benefited from TETFund-sponsored training programmes in selected polytechnics in North Central Nigeria. The data show that out of a total of 49 respondents, 38 respondents representing 77.6% indicated that trained academic staff were retained within their institutions after completing their training, while 11 respondents representing 22.4% reported that some trained staff did not remain in their institutions. This finding suggests that the majority of TETFund beneficiaries return to their home institutions after training, thereby contributing to institutional human capital development and knowledge transfer. The result supports the argument that academic staff development programmes funded through national intervention agencies such as the Tertiary Education Trust Fund (TETFund) play an important role in strengthening institutional capacity in Nigerian tertiary institutions.

Institutional distribution of retention responses shows some variation across the sampled polytechnics. Benue State Polytechnic, Ugbokolo recorded seven retained staff and two non-retained staff, while Federal Polytechnic Bida recorded seven retained staff and one non-retained staff, indicating relatively strong retention patterns in these institutions. Similarly, Federal Polytechnic Nasarawa and Federal Polytechnic Idah recorded six retained staff each with three non-retained cases, while Federal Polytechnic Offa recorded six retained staff and two non-retained staff. In contrast, Plateau State Polytechnic, Barkin Ladi recorded complete retention, with all six respondents indicating that trained staff returned to the institution after their training programmes. These variations suggest that institutional policies, working conditions, and staff motivation may influence retention patterns across tertiary institutions.

The relatively high retention rate observed in this study is consistent with findings from previous studies which indicate that academic staff training programmes significantly improve institutional loyalty, professional commitment, and career development among academic staff. For example, Ogunode and Abubakar (2022) reported that TETFund intervention programmes have significantly contributed to human capital development in Nigerian tertiary institutions by supporting postgraduate training, research development, and conference participation for academic staff. According to the authors, beneficiaries of such programmes often return to their institutions with enhanced teaching and research competencies, thereby strengthening institutional productivity.

Similarly, Salau, Osibanjo, and Adeniji (2021) argued that staff development programmes are important determinants of employee retention in higher education institutions because they enhance job satisfaction, professional growth, and institutional commitment. When academic staff perceive training opportunities as part of institutional support for career development, they are more likely to remain within the institution and contribute to its development. This observation supports the relatively high retention rate recorded in the present study.

Despite the generally positive retention pattern observed in the study, the 22.4% non-retention rate suggests that some challenges still exist in retaining trained academic staff in Nigerian tertiary institutions. One major factor associated with staff turnover in higher education institutions is the phenomenon of academic brain drain, which refers to the migration of highly skilled professionals to institutions or countries offering better remuneration, research opportunities, and working conditions. Teferra (2022) noted that many African universities and tertiary institutions continue to experience the challenge of losing highly trained academic staff to institutions in developed countries due to disparities in funding, research infrastructure, and academic working conditions.

In addition, Altbach and de Wit (2023) observed that global academic mobility has increased significantly in recent years, particularly among scholars from developing countries seeking better research environments and professional opportunities. Although international mobility can enhance academic collaboration and knowledge exchange, it may also lead to the loss of highly trained personnel in developing higher education systems if appropriate retention mechanisms are not implemented.

Another important factor influencing academic staff retention is the quality of the institutional working environment, including access to research funding, teaching facilities, and professional development opportunities. According to Okebukola (2023), sustained improvement in higher education systems in Nigeria requires continuous investment in academic staff development alongside improvements in infrastructure, governance, and institutional management. Without adequate institutional support, the knowledge and skills acquired through training programmes may not be fully utilized, thereby reducing the long-term impact of such programmes.

The chi-square contribution values presented in Table 3 further indicate that some institutions contributed more strongly to the observed pattern of retention and non-retention. For example, Plateau State Polytechnic, Barkin Ladi recorded the highest chi-square contribution among retained staff responses, suggesting that its retention pattern differs slightly from the expected distribution. This may reflect stronger institutional support mechanisms or more effective human resource management strategies in the institution. However, since the overall chi-square statistic and significance level are not reported in the table, these variations should be interpreted cautiously.

Table3: Summary of Institutional Retention Patterns

Institution	No (N)	Chi-square Contribution	N / Table Total	Yes (N)	Chi-square Contribution	N / Table Total	Total (N)	N / Table Total
Benue State Polytechnic, Ugbokolo	2	0.000	0.041	7	0.000	0.143	9	0.184
Federal Polytechnic, Bida	1	0.353	0.020	7	0.102	0.143	8	0.163
Federal Polytechnic, Nasarawa	3	0.475	0.061	6	0.137	0.122	9	0.184
Federal Polytechnic, Idah	3	0.475	0.061	6	0.137	0.122	9	0.184
Federal Polytechnic, Offa	2	0.023	0.041	6	0.007	0.122	8	0.163
Plateau State Polytechnic, Barkin Ladi	0	1.347	0.000	6	0.390	0.122	6	0.122
Total	11	—	0.224	38	—	0.776	49	1.000

Survey study, March 2025

Discussion of Teaching Method Ratings Following TETFund-Supported Academic Staff Training

Table 4 presents respondents' ratings of the effectiveness of teaching methods adopted by academic staff who benefited from TETFund training programmes across the selected polytechnics in North Central Nigeria. The overall distribution of responses indicates that teaching methods employed by trained staff were largely perceived to be effective. Out of 187 total responses, 72 responses (38.5%) rated the teaching methods as "very adequate," while 52 responses (27.8%) rated them as "adequate." In addition, 36 responses (19.3%) considered the teaching methods "fair," while 27 responses (14.4%) rated them as "inadequate." Notably, no respondent rated the teaching methods as "very inadequate." This distribution suggests that a majority of respondents (66.3%) perceived the teaching approaches of trained academic staff to be adequate or very adequate. The finding indicates that academic staff development programmes supported by the Tertiary Education Trust Fund (TETFund) have contributed positively to improving instructional delivery in the sampled polytechnics.

Institution-level analysis also reveals variations in teaching method ratings across the institutions. Federal Polytechnic Nasarawa recorded the highest number of "very

adequate” ratings (22 responses), followed by Federal Polytechnic Bida (17 responses) and Federal Polytechnic Offa (15 responses). Similarly, Benue State Polytechnic, Ugbokolo recorded nine responses in the “very adequate” category, while Plateau State Polytechnic, Barkin Ladi recorded seven responses. These findings suggest that academic staff training programmes may have strengthened pedagogical competence among lecturers in these institutions. The ability of academic staff to apply modern teaching approaches is critical for improving the quality of higher education and enhancing student learning outcomes.

The positive ratings observed in the present study are consistent with empirical evidence demonstrating that academic staff development programmes significantly improve teaching effectiveness in tertiary institutions. For instance, Ogunlokun and Ajao (2024) reported that TETFund-sponsored training programmes improved lecturers’ professional competence, teaching engagement, and instructional delivery in Nigerian polytechnics. According to the authors, academic staff who participate in professional development programmes are better equipped with updated pedagogical techniques and modern instructional strategies, which enhance classroom delivery and student learning experiences. Similarly, Salifu (2025) demonstrated that continuous professional development for lecturers significantly improves teaching quality in higher education institutions because it enables instructors to adopt innovative teaching methods, improve student engagement, and apply learner-centered approaches to teaching.

In addition, improvements in teaching effectiveness following academic staff development programmes have been widely documented in the global higher education literature. Yan (2022) emphasized that the quality of teaching in higher education depends largely on the pedagogical competence of academic staff, their exposure to professional training, and their ability to integrate modern teaching technologies into classroom practice. According to Yan (2022), lecturers who undergo continuous professional development are more likely to adopt interactive and student-centered teaching approaches that enhance knowledge transfer and learning outcomes.

Furthermore, the positive outcomes of staff development programmes are closely linked to institutional support mechanisms such as access to instructional resources and research facilities. Marwan, Shamaki, and Nwosu (2025) found that TETFund interventions, including academic staff training, research grants, and provision of instructional materials, significantly improved academic staff productivity and teaching effectiveness in Nigerian tertiary institutions. The authors explained that training programmes enhance lecturers’ pedagogical skills and provide them with opportunities to update their knowledge in their respective disciplines, thereby improving classroom teaching.

Despite the generally positive ratings recorded in this study, the presence of fair (19.3%) and inadequate (14.4%) ratings indicates that some challenges still affect the effectiveness of teaching methods in certain institutions. These challenges may include limited access to modern teaching technologies, insufficient instructional facilities, and inadequate research infrastructure. According to Hammed, Ajibare, and Oguntoye (2024), although academic staff development programmes improve lecturers’ pedagogical competencies, their effectiveness may be constrained by institutional factors such as poor infrastructure, inadequate digital learning tools, and limited access to teaching resources.

Similarly, Adedapo (2025) emphasized that improvements in teaching quality in Nigerian tertiary institutions require not only academic staff training but also sustained investment in physical infrastructure, instructional materials, and technological resources. Without adequate institutional support, the knowledge and skills acquired through staff development programmes may not be fully translated into improved teaching practices.

Table 4: Summary of Teaching Method Ratings by institutions

Institution	Very Inadequate	Inadequate	Fair	Adequate	Very Adequate	Total Responses	N / Table Total
Benue State Polytechnic, Ugbokolo	0	2 (0.273)	3 (0.188)	6 (0.035)	9 (0.219)	20	0.107
Federal Polytechnic, Bida	0	6 (0.038)	8 (0.051)	14 (0.177)	17 (0.006)	45	0.241
Federal Polytechnic, Nasarawa	0	7 (0.056)	10 (0.040)	14 (0.037)	22 (0.124)	53	0.283
Federal Polytechnic, Idah	0	5 (2.218)	7 (3.606)	4 (0.202)	2 (3.508)	18	0.096
Federal Polytechnic, Offa	0	6 (0.081)	5 (0.633)	11 (0.049)	15 (0.040)	37	0.198

Institution	Very Inadequate	Inadequate	Fair	Adequate	Very Adequate	Total Responses	N / Table Total
Plateau State Polytechnic, Barkin Ladi	0	1 (0.516)	3 (0.034)	3 (0.205)	7 (0.481)	14	0.075
Total	0	27 (0.144)	36 (0.193)	52 (0.278)	72 (0.385)	187	1.000

Survey study, March 2025

Discussion of Teaching Method Ratings by Sponsorship Type

Table 5 presents the distribution of respondents' ratings of teaching methods based on the type of TETFund sponsorship (local or foreign training) among academic staff in selected polytechnics in North Central Nigeria. The table indicates that both categories of training contributed positively to teaching effectiveness, although some variations exist in the distribution of ratings across the two sponsorship types.

A comparison of the two sponsorship categories shows that local training programmes recorded 130 responses (52.2%), while foreign training programmes recorded 119 responses (47.8%), indicating a relatively balanced distribution between the two categories. For locally sponsored training, 41 responses rated teaching methods as adequate and 20 responses rated them as very adequate, while 34 responses rated them as fair and 33 responses rated them as inadequate. In contrast, foreign-sponsored training recorded 51 responses in the adequate category and 39 responses in the very adequate category, suggesting that respondents perceived teaching methods associated with foreign training to be slightly more effective.

The higher ratings associated with foreign training programmes may be attributed to the exposure of academic staff to advanced pedagogical practices, modern instructional technologies, and international academic environments. According to Zafi (2025), TETFund-sponsored academic staff training—both locally and internationally—has significantly enhanced pedagogical competence and research productivity in Nigerian tertiary institutions by providing academic staff with opportunities to acquire updated teaching methods and professional knowledge.

Similarly, Sulaiman (2025) observed that TETFund interventions allocate significant resources to both local and international postgraduate training programmes in order to improve the teaching competence and research capacity of academic staff in Nigerian higher education institutions. These programmes enable lecturers to update their knowledge base and adopt innovative teaching strategies that enhance student learning outcomes.

The findings are also consistent with broader research on teacher professional development and instructional effectiveness in higher education. For example, Fernandes, Araújo, Miguel, and Abelha (2023) found that pedagogical training programmes significantly improve lecturers' teaching practices, instructional design, and classroom engagement. The authors reported that lecturers who participated in professional development programmes demonstrated higher levels of satisfaction with their teaching practices and were more likely to adopt innovative teaching strategies in their classrooms.

Similarly, Salifu (2025) reported that teacher professional development programmes contribute positively to teaching quality by improving classroom management, pedagogical competence, and instructional delivery. According to the study, educators who participate in continuous professional development programmes tend to adopt learner-centred teaching approaches that promote critical thinking and active learning among students.

Despite the generally positive ratings observed in this study, the presence of fair and inadequate ratings among both local and foreign sponsorship categories suggests that certain institutional factors may still limit the full effectiveness of training programmes. These factors may include inadequate teaching facilities, limited access to instructional technologies, and insufficient institutional support for implementing innovative teaching methods. Research has shown that although staff development programmes improve pedagogical competence, their effectiveness often depends on the availability of institutional resources and supportive learning environments (Fernández-Escandón, Pérez-Estébanez, & Pastor-Estébanez, 2025).

In addition, Ogunlokun (2024) reported that TETFund-sponsored training programmes significantly enhance academic staff engagement and professional competence, but the effectiveness of these programmes depends on institutional support mechanisms such as research funding, access to instructional materials, and supportive academic policies.

Table 5: Summary of Teaching Method Ratings by sponsorship type

Category	Very Inadequate	Inadequate	Fair	Adequate	Very Adequate	Total Responses	N / Table Total
Local	2 (0.875)	33 (4.958)	34 (1.448)	41 (1.030)	20 (3.789)	130	0.522
Foreign	0 (0.956)	10 (5.416)	19 (1.582)	51 (1.125)	39 (4.139)	119	0.478
Total	2 (0.008)	43 (0.173)	53 (0.213)	92 (0.369)	59 (0.237)	249	1.000

Survey study, March 2025

Discussion of Results: Program Distribution of TETFund-Sponsored Academic Staff Training

Table 6 presents the distribution of academic staff training programmes sponsored through local and foreign TETFund interventions among polytechnics in North Central Nigeria. The results reveal clear variations in the types of programmes undertaken by academic staff and the sponsorship pattern associated with each programme category. Overall, the results show that a total of 249 training instances were recorded, of which 130 (52.2%) were locally sponsored programmes, while 119 (47.8%) were foreign-sponsored programmes. This relatively balanced distribution indicates that TETFund interventions support both local and international academic staff development pathways, which is consistent with the policy objective of strengthening institutional capacity through postgraduate education and advanced research training.

The distribution of programme types indicates that Master's degree training accounted for the largest proportion of training programmes, with 149 cases representing 59.8% of the total responses. Of these, 104 cases were locally sponsored, while 45 cases were sponsored abroad. This finding suggests that postgraduate training at the Master's level constitutes the most common pathway for academic staff capacity building in the sampled polytechnics. The predominance of Master's degree programmes reflects the strategic effort of tertiary institutions to upgrade the academic qualifications of lecturers who initially possess lower qualifications, particularly in polytechnic systems where many staff members begin their careers with first degrees or professional qualifications.

The emphasis on postgraduate training is consistent with the broader literature on academic staff development in higher education. According to Lim (2025), professional development programmes in universities—including postgraduate education and specialised training—play a crucial role in enhancing teaching quality and institutional productivity because they strengthen lecturers' subject knowledge, pedagogical competence, and research capabilities. Similarly, Umar, Maghra, and Candy (2024) observed that staff development programmes such as postgraduate education, seminars, conferences, and research training significantly improve teachers' job productivity and instructional effectiveness in educational institutions.

The results further indicate that doctoral degree programmes accounted for 64 cases (25.7%), all of which were sponsored through foreign training. This finding highlights the important role of international academic exposure in advanced research training for academic staff. Doctoral training abroad often provides access to better research facilities, advanced laboratories, and global academic networks that may not always be available locally. Exposure to international academic environments can therefore enhance research skills, innovation capacity, and teaching competence among academic staff.

The importance of doctoral training for academic staff development has been widely emphasized in the higher education literature. Le (2025) argues that the quality of academic staff is a critical determinant of higher education performance, and increasing the number of lecturers with doctoral qualifications significantly improves institutional research capacity and programme quality. Similarly, Menon (2024) notes that academic staff development programmes in universities are essential for strengthening scholarly competence and improving teaching and research outcomes across the higher education sector.

Another programme category identified in the results is Post-Doctoral training, which accounted for 6 cases (2.4%), all sponsored through foreign training programmes. Although the proportion is relatively small, post-doctoral training represents the highest level of academic development and is typically targeted at highly experienced academic staff

engaged in advanced research and scholarly leadership. Participation in post-doctoral programmes often enhances research productivity, international collaboration, and knowledge transfer within tertiary institutions.

In addition, Postgraduate Diploma (PGD) programmes accounted for 14 cases (5.6%), all of which were locally sponsored. PGD programmes typically serve as bridging qualifications for academic staff transitioning into postgraduate academic training or for individuals seeking specialization in new academic areas. The relatively small proportion of PGD programmes suggests that most staff development efforts are directed towards higher-level qualifications such as Master's and Doctoral degrees.

The findings also show that other forms of academic development programmes accounted for 16 cases (6.4%), which may include short-term professional training, research fellowships, conferences, or specialized certification programmes. These forms of training complement formal postgraduate education by enabling academic staff to update their knowledge and adopt innovative teaching methods.

The distribution of programmes observed in this study aligns with global trends in higher education, where academic staff development increasingly focuses on postgraduate education, professional training, and research capacity building. According to Salifu (2025), continuous professional development programmes significantly enhance teaching quality because they enable lecturers to adopt innovative pedagogical strategies and improve student learning outcomes. In addition, Olaifa et al. (2025) found that teacher professional development programmes, including postgraduate education and academic workshops, significantly improve teaching effectiveness and student academic performance in educational institutions.

Table 6: Summary of Program Distribution

Program Type	Local (N)	Chi-square Contribution	N / Table Total	Foreign (N)	Chi-square Contribution	N / Table Total	Total (N)	N / Table Total
PGD	14	0.056	0.056	0	6.691	0.000	14	0.056
Master's Degree	104	8.830	0.418	45	9.646	0.181	149	0.598
Doctorate Degree	0	33.414	0.000	64	36.502	0.257	64	0.257
Post-Doctorate Degree	0	3.133	0.000	6	3.422	0.024	6	0.024
Others	12	1.592	0.048	4	1.739	0.016	16	0.064
Total	130	—	0.522	119	—	0.478	249	1.000

Survey study, March 2025

Discussion of Stakeholder Recommendations for Improving TETFund Academic Staff Training Programmes

Table 7 presents the summary of stakeholder recommendations aimed at improving the effectiveness and sustainability of TETFund-sponsored academic staff training programmes in selected polytechnics in North Central Nigeria. The results indicate that stakeholders proposed several strategic areas of intervention, including financial planning, academic preparation, support networks, and employment opportunities, all of which are considered critical for maximizing the impact of academic staff development programmes in tertiary institutions.

The results show that financial planning received the highest number of recommendations, with 15 responses representing 30.6% of the total responses. This finding suggests that stakeholders perceive financial preparedness and adequate funding mechanisms as the most important factor in ensuring the success of academic staff training programmes. Financial planning is particularly important because academic training—especially postgraduate and international programmes—requires substantial financial resources for tuition, research activities, travel, and living expenses. According to Ogunode and Abubakar (2022), adequate funding and effective financial management are essential components of successful academic staff development programmes in Nigerian tertiary institutions. The authors argue that financial constraints often limit the number of academic staffs who can benefit from training programmes and reduce the overall effectiveness of capacity-building initiatives.

Similarly, Salmi (2022) emphasized that sustainable financing mechanisms are critical for strengthening higher education systems, particularly in developing countries where limited funding often constrains institutional development and academic staff capacity building. Effective financial planning therefore ensures that training programmes are properly funded and that beneficiaries can complete their programmes without financial disruptions.

The second most prominent recommendation identified in the results is the development of support networks, which accounted for 14 responses (28.6%). Support networks refer to institutional and professional systems that provide academic, administrative, and professional assistance to staff undergoing training programmes. These may include mentorship programmes, research collaboration platforms, professional associations, and institutional monitoring systems. The importance of support networks has been widely recognized in the literature on academic staff development. For instance, Altbach and de Wit (2023) noted that academic collaboration networks and institutional mentorship programmes play a crucial role in enhancing the professional growth and research productivity of academic staff in higher education institutions.

Closely related to support networks is the recommendation concerning academic preparation, which accounted for 10 responses (20.4%). Academic preparation refers to the readiness of academic staff to undertake advanced training programmes, particularly postgraduate studies and research-intensive programmes. Adequate preparation ensures that beneficiaries possess the necessary academic background, research skills, and methodological competence required for successful participation in advanced training programmes. According to Menon (2024), effective academic staff development programmes require proper preparation of participants through pre-training orientation, research skills development, and academic mentoring. Such preparation increases the likelihood of successful programme completion and improves the long-term impact of training on institutional performance.

Another important recommendation identified by stakeholders is the creation of employment opportunities, which also accounted for 10 responses (20.4%). This recommendation highlights the importance of ensuring that trained academic staff are effectively integrated into institutional structures after completing their training programmes. Employment opportunities in this context may include promotions, research leadership roles, administrative responsibilities, or opportunities to supervise postgraduate students. These opportunities allow institutions to fully utilize the knowledge and skills acquired through training programmes. According to Teferra (2022), higher education institutions in Africa must develop effective human resource policies that encourage the retention and productive engagement of trained academic staff in order to prevent brain drain and maximize the benefits of staff development initiatives.

Institution-level analysis shows that the recommendations were relatively evenly distributed across the sampled polytechnics, indicating a shared perception among stakeholders regarding the key factors required to improve academic staff training programmes. For example, Benue State Polytechnic, Ugbokolo emphasized financial planning and support networks, while Federal Polytechnic Nasarawa highlighted employment opportunities and support systems. Similarly, Federal Polytechnic Idah placed greater emphasis on academic preparation, while Plateau State Polytechnic, Barkin Ladi identified financial planning as the most critical area for improvement. These variations reflect institutional differences in priorities and operational contexts, but they collectively underscore the need for comprehensive strategies that address multiple dimensions of staff development.

The findings align with broader research on academic staff development in higher education systems. For instance, Le (2025) observed that effective academic staff development programmes require coordinated institutional strategies that integrate financial support, professional mentoring, research collaboration, and career development opportunities. Such integrated approaches help ensure that training programmes contribute meaningfully to institutional performance and academic excellence.

Table 7: Summary of Stakeholder Recommendations

Institution	Financial Planning	Academic Preparation	Support Networks	Employment Opportunities	Others	Total Responses	N / Table Total
Benue State Polytechnic, Ugbokolo	3 (0.022)	1 (0.381)	3 (0.071)	2 (0.015)	0	9	0.184
Federal Polytechnic, Bida	3 (0.124)	2 (0.083)	2 (0.036)	1 (0.245)	0	8	0.163

Institution	Financial Planning	Academic Preparation	Support Networks	Employment Opportunities	Others	Total Responses	N / Table Total
Federal Polytechnic, Nasarawa	2 (0.207)	1 (0.381)	3 (0.071)	3 (0.737)	0	9	0.184
Federal Polytechnic, Idah	2 (0.207)	3 (0.737)	2 (0.127)	2 (0.015)	0	9	0.184
Federal Polytechnic, Offa	2 (0.082)	2 (0.083)	2 (0.036)	2 (0.083)	0	8	0.165
Plateau State Polytechnic, Barkin Ladi	3 (0.737)	1 (0.041)	2 (0.048)	0 (1.224)	0	6	0.122
Total	15 (0.306)	10 (0.204)	14 (0.286)	10 (0.204)	0	49	1.000

Survey study, March 2025

CONCLUSION AND RECOMMENDATIONS

The study examined the challenges, impact, and quality of TETFund-sponsored academic staff training programmes in selected polytechnics in North Central Nigeria. The findings indicate that TETFund interventions have contributed significantly to academic staff development by improving teaching effectiveness, enhancing academic qualifications, and strengthening institutional human capital. The results show that a large proportion of trained academic staff were retained within their institutions and that the majority of respondents rated teaching methods of trained staff as adequate or very adequate, suggesting positive outcomes of the training programmes. However, the study also identified several challenges affecting the effectiveness of these programmes, particularly inadequate funding, infrastructural deficiencies, and limited research facilities. In addition, stakeholders emphasized the importance of financial planning, academic preparation, support networks, and employment opportunities as key factors for improving the effectiveness of academic staff development initiatives.

Based on these findings, the study recommends that TETFund and tertiary institutions increase financial support for academic staff development programmes in order to accommodate the growing demand for postgraduate training and professional development. There is also a need for improved research infrastructure and teaching facilities in polytechnics to enable trained academic staff to effectively apply the knowledge and skills acquired during their training. Furthermore, institutions should establish strong academic mentoring systems and professional support networks to assist staff undergoing training and to enhance research collaboration. Finally, polytechnics should implement effective staff retention and career development policies, including opportunities for promotion, research leadership, and professional growth, in order to maximize the institutional benefits of TETFund-sponsored training programmes and strengthen the overall quality of higher education in Nigeria.

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