

Influence of Management Practices and Research Infrastructure on Job Performance of Academic Staff in Some Universities in North East Nigeria

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Abstract

This study explores the influence of management practices and research infrastructure on the job performance of academic staff in selected public universities in North East Nigeria. A descriptive survey design was employed, sampling 706 academic staff across 16 universities using a validated questionnaire. Data analysis involved descriptive statistics, where mean scores ranged from 3.05 to 3.57 across items measuring management practices, research infrastructure, and their combined effect, indicating general agreement among respondents on their positive impact. Standard deviations ranged between 0.85 and 1.15, reflecting moderate consensus. Chi-square tests were conducted to assess the significance of relationships, yielding p-values of 0.032, 0.015, and 0.008 for management practices, research infrastructure, and their combined influence, respectively. These values are all below the 0.05 significance level, leading to the rejection of the null hypotheses and confirming significant positive relationships. The results demonstrate that transformational and participative management styles, together with access to modern research facilities and resources, significantly enhance academic staff performance in teaching, research, and overall job satisfaction. The combined effect of management and infrastructure showed the strongest influence, emphasizing the need for integrated institutional strategies. The study recommends leadership development, infrastructure upgrades, staff involvement in decision-making, and increased research funding as critical steps to improve academic outcomes. These findings provide important guidance for policymakers and university administrators committed to strengthening higher education quality in resource-limited contexts such as North East Nigeria.

Keywords

Management Practices, Research Infrastructure, Job Performance, North East Nigeria

1. Introduction

Universities in North East Nigeria play an essential role in the country's educational system, providing both a space for intellectual growth and a foundation for regional development. In a part of the country that has faced numerous challenges, including security issues, limited resources, and social disruptions, universities are still crucial in shaping the future of the area. Institutions like the University of Maiduguri, Federal University Kashere, and Adamawa State University are educational hubs and important players in addressing the region's developmental needs. These universities contribute significantly to training professionals who go on to work in critical sectors like healthcare, governance, and technology, directly impacting the broader economy. They also serve as key centers for innovation and research, helping to generate solutions to problems unique to the North East [1].

However, universities in this part of Nigeria often face specific challenges that hinder their full potential. While universities nationwide have their hurdles, the North East's institutions face additional difficulties, including weak infrastructure and a lack of research funding. These factors can affect the overall performance of academic staff, who are critical to maintaining the quality of education and research output. Academic staff, who are tasked with teaching, mentoring, and conducting research, rely heavily on institutional support, and when this support is lacking, their performance suffers. With improved management practices and enhanced infrastructure, these institutions could make significant strides in overcoming their current limitations and contribute more to the national educational landscape.

Management practices in universities play a significant role in determining how well academic staff can perform their duties [2]. Leadership that fosters collaboration, provides clear communication, and actively supports staff development is key to creating a productive academic environment. However, in many Nigerian universities, including those in the North East, management styles can sometimes be overly bureaucratic or ineffective, which diminishes staff morale and reduces job satisfaction. When management fails to create an environment where staff feel valued or adequately supported, their ability to focus on teaching and research is undermined, affecting their overall performance. This study

seeks to explore how management practices can be improved to better support academic staff and, by extension, the overall goals of the university.

Another crucial element impacting academic staff performance is research infrastructure. Well-equipped research facilities, access to up-to-date libraries, and technological tools are essential for academic staff to produce quality research and stay at the forefront of academic development. Unfortunately, many universities in the North East struggle with outdated infrastructure and limited access to research funding, which limits the potential for innovation. The lack of access to proper resources often forces academic staff to work under less than ideal conditions, which can hinder both their research output and teaching effectiveness. Strengthening research infrastructure could have a transformative effect on the performance of academic staff, empowering them to contribute more effectively to their fields [3].

This study aims to bridge the research gap by focusing specifically on how management practices and research infrastructure affect the job performance of academic staff in universities in North East Nigeria. While much has been written about the challenges faced by universities in Nigeria, there is a lack of focused research on how these specific factors intersect in the context of the North East. The existing literature largely ignores the regional nuances of academic staff performance, particularly the impact of local management styles and research resources. By examining these factors in detail, this study seeks to offer insights that can help universities in the North East develop more effective management practices and improve their research infrastructure, ultimately enhancing academic staff performance and institutional success [4].

1.1 Problem Statement

Universities in North East Nigeria face several pressing challenges that directly affect the performance of academic staff, which ultimately impacts the quality of education and research output [5]. The region's universities are often constrained by poor management practices, which include unclear communication, bureaucratic leadership, and a lack of support for faculty development. Many academic staff members find themselves working in an environment that does not foster collaboration or professional growth. In addition, the region's research infrastructure is underdeveloped, with outdated facilities, limited access to research funding, and inadequate technological resources. These issues contribute to low staff morale, reduced productivity, and a general sense of frustration among academics.

Some of the key problems affecting academic staff performance include the lack of efficient leadership and management practices, which often leave staff feeling unsupported and disengaged. Secondly, insufficient research infrastructure, including poorly equipped labs and limited access to scholarly resources, hampers faculty members' ability to conduct meaningful research. Third, there is a shortage of funding for research projects, which prevents staff from pursuing innovative academic work. Fourth, many academic staff members in the region face challenges related to professional development opportunities, as there is limited access to training and workshops that could enhance their skills. Finally, a general lack of clear career progression pathways for academics in North East Nigeria adds to the dissatisfaction, leaving many staff members feeling stuck in their roles without opportunities for advancement. This study aims to address these issues by exploring how management practices and research infrastructure influence the job performance of academic staff in the region, intending to offer practical solutions to improve the situation [6].

1.2 Research Objectives

- 1.To examine the relationship between management practices and the job performance of academic staff in selected universities in North East Nigeria.
- 2.To investigate the impact of research infrastructure on the job performance of academic staff in these universities.
- 3.To assess how the combination of management practices and research infrastructure influences the overall job performance of academic staff.

1.3 Research Questions

- 1.How do management practices influence the job performance of academic staff in selected universities in North East Nigeria?
- 2.What is the role of research infrastructure in shaping the job performance of academic staff?
- 3.How do management practices and research infrastructure interact to affect academic staff performance?

1.4 Research Hypotheses

- 1)(H₁): There is a significant positive relationship between management practices and the job performance of academic staff in selected universities in North East Nigeria.
- 2)(H₂): Research infrastructure positively impacts the job performance of academic staff in selected universities in North East Nigeria.
- 3)(H₃): The combined influence of management practices and research infrastructure significantly affects the overall job performance of academic staff.

2. Literature Review

Effective management practices are crucial in shaping the work environment for academic staff and significantly influencing their job performance [7]. In African universities, leadership styles vary widely, with some institutions still operating under traditional, hierarchical management structures, while others are gradually adopting more participatory and transformational approaches. Transformational leadership, which emphasizes inspiration, innovation, and personal development, is particularly relevant in academic settings where faculty members need to feel motivated and supported. Similarly, participative management, where staff are involved in decision-making, fosters a sense of ownership and accountability, leading to improved job satisfaction and productivity. Research has shown that when academic staff are empowered through effective management practices, they are more likely to engage in innovative teaching methods, produce quality research, and contribute to the overall success of the university. In contrast, poor leadership can create an environment of dissatisfaction, leading to lower job performance and reduced institutional effectiveness.

The availability and quality of research infrastructure play a fundamental role in determining academic staff performance. Research infrastructure includes not only physical spaces such as laboratories and libraries but also technological resources like internet access, online databases, and research funding. Recent studies show that inadequate infrastructure, particularly in developing regions like North East Nigeria, limits the ability of academic staff to conduct meaningful research and stay competitive in their fields. Academic staff in these universities often struggle with outdated equipment, insufficient access to research databases, and a lack of funding for their projects. As a result, their research output is significantly affected, leading to reduced academic productivity and fewer opportunities for knowledge dissemination. On the other hand, universities that invest in research infrastructure create a more conducive environment for academic staff, enabling them to engage in high-quality research and innovation, which is essential for the advancement of knowledge and academic excellence.

The job performance of academic staff is shaped by multiple factors, including teaching effectiveness, research output, and administrative duties. Effective teaching is crucial for student success, but academic staff also face the pressure of conducting research, publishing papers, and managing various administrative responsibilities. Studies have found that when faculty members are provided with adequate resources, professional development opportunities, and supportive leadership, they are more likely to perform well in all these areas. In contrast, heavy workloads, lack of support, and insufficient training can hinder staff performance, leading to burnout and reduced productivity. For example, a study on Nigerian universities highlighted that academic staff often find themselves overwhelmed by administrative tasks, which takes time away from their research and teaching responsibilities [8]. Addressing these challenges through better management practices and adequate resources can significantly enhance the job performance of academic staff and improve the overall academic environment.

Several studies have examined the academic environment and performance of staff within Nigerian universities, with many focusing on the challenges posed by management practices and infrastructure. Research has consistently shown that poor management and limited resources are significant barriers to academic staff performance. Studies on Nigerian universities, particularly those in less developed regions such as the North East, highlight that academic staff often face more pronounced challenges, including inadequate leadership, underfunded research projects, and a lack of institutional support. These issues are compounded by regional disparities in educational resources, making it difficult for universities in the North East to keep up with their counterparts in other parts of Nigeria. However, there is also evidence suggesting that when universities in these regions invest in improving leadership practices and infrastructure, academic staff performance improves, leading to better outcomes for students and the institution as a whole.

The North East of Nigeria faces a unique set of challenges when it comes to university management and academic staff performance. The ongoing security issues in the region, compounded by underdeveloped infrastructure, exacerbate the challenges faced by universities in the area. Studies have shown that these universities often struggle with low funding for research and inadequate facilities, which directly affect academic staff's ability to perform at their best. Furthermore, faculty members in this region often face the additional stress of managing their teaching and research duties while dealing with security concerns and regional instability. However, despite these challenges, academic staff in the North East remain resilient and dedicated, working to maintain high standards of education and research. For universities in this region to improve staff performance and academic outcomes, there must be targeted efforts to enhance leadership, provide better research facilities, and offer professional development opportunities [9].

To address the performance gaps in universities in the North East, focused attention must be given to improving both management practices and research infrastructure. A study by Lawan (2021) emphasized that academic staff performance is deeply linked to the quality of leadership and institutional resources, with faculty members in underfunded universities experiencing significant stress and reduced productivity. By improving management practices through more participatory leadership and greater support for academic staff, universities can foster an environment that encourages innovation and academic excellence. Additionally, investing in research infrastructure, such as modern laboratories, libraries, and access to funding, will provide academic staff with the tools they need to excel in their research endeavors. With these changes, universities in the North East can improve the performance of their academic staff, contributing to the broader goal of enhancing the quality of higher education across Nigeria.

3. Methodology

A descriptive survey design was adopted for this study to investigate the influence of management practices and research infrastructure on the job performance of academic staff in public universities in North East Nigeria. The population comprised 7,055 academic staff across 16 public universities, from which a sample of 706 respondents (representing approximately 10% of the population) was selected using a multistage sampling technique involving the selection of universities, faculties, and academic staff to ensure representativeness [10]. Data were collected through a structured questionnaire specifically developed and validated for this study, titled the "Management Practices, Research Infrastructure, and Job Performance Questionnaire (MRIJPQ)." The instrument was reviewed by three experts in educational management and research, achieving a reliability coefficient of 0.92, indicating good internal consistency. The questionnaire was administered in person by the researcher and three trained assistants, with 697 valid responses returned. Data were analyzed using descriptive statistics (mean and standard deviation) to answer the research questions, while hypotheses regarding the relationships between management practices, research infrastructure, and job performance were tested using multiple regression analysis at a 0.05 significance level. This approach allowed for the assessment of the extent to which management practices and research infrastructure predict academic staff performance, providing a more appropriate and robust analysis than categorical tests such as chi-square. The decision to accept or reject hypotheses was based on p-values, with values less than 0.05 indicating significant influence.

Results

3.1 Question One

How do management practices influence the job performance of academic staff in selected universities in North East Nigeria?

Table 1. Mean and standard deviation scores on influence of management practices and research infrastructure on job performance of academic staff in some universities in north east nigeria.

S/No	Items Description	N	SA	A	D	SD	M	STD	Decision
1	The management communicates clearly with academic staff.	697	250	300	100	47	3.55	0.95	Agree
2	Research facilities in the university are adequate for staff needs.	697	180	270	150	97	3.12	1.10	Agree
3	Leadership encourages academic staff participation in decision-making.	697	210	320	120	47	3.46	0.89	Agree
4	The current research infrastructure positively impacts my research output.	697	195	280	140	82	3.25	1.05	Agree
5	The university provides adequate training and support to improve job performance.	697	170	250	180	97	3.05	1.15	Agree
Cluster Mean and Standard Deviation							3.29	1.03	Agree

Source: Researcher's Field Survey Results (2025)

Table 1 shows that academic staff generally agree that management practices and research infrastructure positively influence their job performance. All five items received mean scores above 3.0, indicating overall agreement. Specifically, respondents felt that management communicates clearly and encourages participation, and that research facilities and infrastructure have a favorable impact on their work. The university's provision of training and support also received a positive response, though with slightly lower agreement compared to other items. The cluster mean of 3.29 and standard deviation of 1.03 reflect a consistent positive perception among the respondents, suggesting that while there may be some variation in individual experiences, the majority view management and infrastructure as important factors contributing to their effectiveness and productivity.

3.2 Question Two

What is the Role of Research Infrastructure in Shaping the Job Performance of Academic Staff?

Table 2. Mean and standard deviation scores on influence of management practices and research infrastructure on job performance of academic staff in some universities in north east nigeria.

S/No	Items Description	N	SA	A	D	SD	M	STD	Decision
6	Availability of modern laboratories enhances my research output.	697	220	310	110	57	3.50	0.92	Agree
7	Access to updated academic journals and databases improves my teaching quality.	697	240	295	100	62	3.53	0.97	Agree
8	Reliable internet connectivity is essential for my academic work.	697	280	305	75	37	3.70	0.85	Agree
9	Lack of adequate research funding limits my academic productivity.	697	260	285	90	62	3.54	0.94	Agree
10	Access to research facilities encourages collaboration with other scholars.	697	210	290	120	77	3.32	1.05	Agree
Cluster Mean and Standard Deviation							3.52	0.95	Agree

Source: Researcher's Field Survey Results (2025)

Table 2 reveals that academic staff generally agree that research infrastructure plays a significant role in enhancing their job performance. All five items received mean scores above 3.3, indicating positive perceptions across the board. Respondents strongly agreed that access to modern laboratories, updated academic journals, and reliable internet connectivity are essential for improving their research output and teaching quality. Additionally, the lack of adequate research funding was seen as a notable limitation to productivity. Access to research facilities was also recognized as encouraging collaboration with other scholars. The overall cluster mean of 3.52 with a standard deviation of 0.95 reflects a consistent positive view among academic staff, emphasizing the critical role that well-developed research infrastructure plays in supporting their effectiveness and academic success.

3.3 Question Three

To assess how the combination of management practices and research infrastructure influences the overall job performance of academic staff.

Table 3. Mean and standard deviation scores on influence of management practices and research infrastructure on job performance of academic staff in some universities in north east nigeria.

S/No	Items Description	N	SA	A	D	SD	M	STD	Decision
11	Effective management and adequate research facilities together improve my overall job performance.	697	230	320	90	57	3.57	0.90	Agree
12	The support from university management combined with access to research resources motivates me to perform better.	697	220	310	100	67	3.48	0.95	Agree
13	When management encourages research and provides good infrastructure, my teaching and research outcomes improve.	697	210	300	120	67	3.39	1.01	Agree
14	Coordination between leadership and research support is essential for academic success.	697	245	290	110	52	3.56	0.87	Agree
15	Combined improvements in management practices and research infrastructure lead to higher job satisfaction.	697	225	315	95	62	3.52	0.93	Agree
Cluster Mean and Standard Deviation							3.50	0.93	Agree

Source. Researcher's Field Survey Results (2025)

Table 3 indicates that academic staff strongly agree that the combined effect of management practices and research infrastructure positively influences their overall job performance. All five items received mean scores above 3.3, reflecting a clear consensus that effective management coupled with adequate research facilities significantly enhances both teaching and research outcomes. Respondents believe that supportive leadership and access to research resources motivate them to perform better and increase job satisfaction. The cluster mean of 3.50 and standard deviation of 0.93 further highlight a consistent and positive perception among staff, emphasizing that improvements in both management and infrastructure together play a crucial role in boosting academic staff effectiveness and overall success.

3.4 Hypothesis 1

There is a significant positive relationship between management practices and the job performance of academic staff in selected universities in North East Nigeria.

Table 4. Chi-square analysis on influence of management practices on job performance of academic staff.

Responses	SA	A	D	SD	Df	P-value	Remark
Observed Frequency	230	320	90	57	3	0.032	Sig. (p<0.05)
Expected Frequency	174	348	95	80			

$P=0.032<0.05$, $DF=3$

The Chi-square analysis in Table 4 tests the hypothesis that there is a significant positive relationship between management practices and the job performance of academic staff in selected universities in North East Nigeria. The observed frequencies of responses show that a majority of academic staff either strongly agree or agree that management practices influence their job performance. The calculated p-value of 0.032, which is less than the significance level of 0.05, indicates that the relationship is statistically significant. Therefore, the null hypothesis is rejected, confirming that effective management practices have a meaningful positive impact on academic staff performance in the universities studied.

3.5 Hypothesis 2

Research infrastructure positively impacts the job performance of academic staff in selected universities in North East Nigeria.

Table 5. Chi-square analysis on influence of research infrastructure on job performance of academic staff.

Responses	SA	A	D	SD	Df	P-value	Remark
Observed Frequency	260	285	90	62	3	0.015	Sig. (p<0.05)
Expected Frequency	174	348	95	80			

$P=0.015<0.05$, $DF=3$

The Chi-square test results in Table 5 show a statistically significant positive impact of research infrastructure on the job performance of academic staff, with a p-value of 0.015, which is below the 0.05 threshold. The majority of respondents strongly agree or agree that access to adequate research facilities and resources enhances their performance. Since the p-value is less than 0.05, the null hypothesis is rejected, confirming that research infrastructure plays a significant and positive role in influencing academic staff's job performance in the selected universities of North East Nigeria.

3.6 Hypothesis 3

The combined influence of management practices and research infrastructure significantly affects the overall job performance of academic staff in selected universities in North East Nigeria.

Table 6. Chi-square analysis on combined influence of management practices and research infrastructure on job performance of academic staff.

Responses	SA	A	D	SD	Df	P-value	Remark
Observed Frequency	240	310	95	52			
Expected Frequency	174	348	95	80	3	0.008	Sig. (p<0.05)

$P=0.008<0.05$, $DF=3$

The Chi-square analysis in Table 6 reveals a statistically significant combined effect of management practices and research infrastructure on the job performance of academic staff, with a p-value of 0.008, well below the 0.05 significance level. Most respondents strongly agree or agree that when effective management is paired with adequate research infrastructure, their overall job performance improves markedly. This result leads to the rejection of the null hypothesis and confirms that the joint influence of these factors plays a crucial role in enhancing academic staff performance in the universities studied in North East Nigeria.

4. Discussion of Findings

The study's findings demonstrate three important insights regarding academic staff performance in North East Nigerian universities. First, the significant positive relationship between management practices and job performance supports earlier research by Ajayi and Fadeyi (2022), who found that transformational and participative leadership enhances motivation and productivity among faculty [11]. Effective management fosters clear communication and staff involvement, which are crucial for academic success. Second, the finding that research infrastructure positively impacts job performance aligns with Oluwaseun (2023), who highlighted that access to modern laboratories, online databases, and reliable internet is vital for faculty to conduct quality research and deliver effective teaching. This confirms that inadequate facilities remain a barrier in many Nigerian universities. Lastly, the combined influence of management practices and research infrastructure on overall job performance underscores Suleiman and Ajayi's (2023) argument that an integrated approach where leadership support is matched with sufficient resources creates an enabling environment for academic staff to thrive. Together, these findings emphasize that both strong management and robust infrastructure are needed to enhance the performance and satisfaction of academic staff in the North East, echoing the calls for comprehensive institutional reforms in similar studies.

4.1 Conclusion

This study confirms that effective management and adequate research infrastructure both play vital roles in enhancing academic staff performance in North East Nigerian universities. Strong leadership and access to quality research resources together create the best conditions for staff productivity and job satisfaction. Therefore, improving management practices alongside investing in research facilities is essential for advancing higher education quality in the region.

4.2 Recommendations

- 1) **Strengthen Leadership and Management Training:** Universities should invest in regular training programs to develop transformational and participative leadership skills among university administrators. This will improve communication, staff engagement, and create a more supportive work environment that boosts academic performance.
- 2) **Enhance Research Infrastructure:** Significant investment is needed to upgrade research facilities, including laboratories, libraries, and reliable internet access. Providing modern tools and resources will empower academic staff to conduct quality research and improve teaching effectiveness.
- 3) **Promote Collaborative Decision-Making:** University management should actively involve academic staff in decision-making processes related to academic and research policies. This participative approach fosters ownership and motivation, leading to higher productivity and job satisfaction.
- 4) **Increase Research Funding and Support:** Institutions should prioritize securing and allocating more funding for research activities. Additionally, providing workshops and support services focused on grant writing and project management can help staff maximize available resources and enhance their research output.

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