

**IMPACT OF FUNDING RESEARCH AND PUBLICATIONS ON PUBLIC
UNIVERSITIES ACADEMIC STAFF PERFORMANCE IN NORTH-CENTRAL
NIGERIA**

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Abstract

This study investigated the impact of Funding Research and Publications on Public Universities Academic Staff Performance in North-Central Nigeria. One objective, one research question and one hypothesis were formulated to guide the study. A descriptive survey research design was used. The population of the study comprised 7,745 academic staff from the 13 public universities in the study area. The sample consisted of 198 academic staff in line with Research Advisors. The instrument used for data collection was the Public University Funding and Academic Staff Performance Questionnaire. The instruments were validated by two experts in Educational Measurement and Evaluation unit, Department of Educational Foundations and one expert from Economics Department from University of Jos, with a validity index of 0.74. The Cronbach Alpha Method was used to determine the reliability of the instrument, which yielded an index of 0.84. Data collected were analyzed using mean and standard deviation to answer the research question and the one sample t-test was used to test the formulated hypothesis at 0.05 level of significance. The findings revealed that funding for research and publications have moderate impact on academic staff performance in universities in North-Central Nigeria. Based on the findings, it was recommended that public universities funding by Government in North-Central Nigeria should be increased for fostering an environment conducive for academic research and publications.

Keywords: Academic Staff, Funding, Publications, Public Universities, Research

Introduction

The allocation of funds to education has to do with the quality of educational outcomes. High-income countries often allocate substantial portion of their budgets to education, reflecting their commitment to their educational system for developing human capital. For example, Scandinavian countries like Norway, Sweden, and Denmark allocate over 20% of their national budgets to education, aligning closely with United Nations Education Scientific and Cultural Organization's (UNESCO's) recommended standard of 26% of budget allocation to education (UNESCO, 2021). This robust funding can be an evident in their high-quality education systems, characterized by well-equipped schools, high teacher salaries, and extensive support services for staff research and publications.

Sub-Saharan Africa countries face unique challenges in education funding. For instance, Nigeria has consistently failed to meet the UNESCO benchmark for budget allocation to education. Between 2014 and 2023, the Federal Government of Nigeria allocated an average of only 7% of its national budget to education; this is far below the recommended 26% (Susanta, 2023). This low budgetary allocation negatively affects the running of education from primary to university levels

An important area of any university education resource is funding. The funding crisis occurring in university education in most countries over the years has led many universities to minimize the extravagant spending nature for the fact that they have limited funds to do more. Association of College and Research Libraries (2024) revealed that underfunding of the universities in Nigeria from 2013 to 2023 was linked to the depression in the country's economy, evident in the downward trend in oil and non-oil exports, with rising import bills. Ogbogu (year?) further revealed that government funding seems to be insufficient to maintain university performance in teaching, learning, and research.

Globally, the performance of academic staff is closely linked to the availability and adequacy of funding. Research indicates that well-funded educational systems tend to have higher academic outcomes. For instance, in high-income countries with substantial education funding, there is generally a better teacher-student ratio, higher teacher salaries, and better academic performance among students (**Organization for Economic Co-operation and Development, 2020**). In contrast, in low-income countries where funding is insufficient, challenges such as overcrowded classrooms, underpaid teachers' salaries, and inadequate learning materials are prevalent, which negatively affects educational performance (UNESCO, 2022).

In Nigeria, the relationship between funding and university performance is evident. Insufficient funding could lead to poor infrastructure, low teachers quality, and limited resources, all of which may negatively impact academic staff performance. Academic staff performance, which includes teaching quality and research output, might be directly influenced by the availability of resources such as research grants, professional development opportunities, and adequate facilities. Inadequate funding results in decreased morale, lower productivity, and decline in the overall quality of teaching and research (Harvey & Kevwe, 2023; Igben & Etadafe, 2023).

The Tertiary Education Trust Fund (TetFund) was established to provide supplementary support to public tertiary institutions in Nigeria. Despite significant increases in TetFund allocations from N303 billion in 2010 to N470.9 billion in 2021 (Academic Staff Union of Universities, 2023), this funding still covers only about 0.21% of the total needs of universities. This directly impacts research capabilities, staff development, and essential student services, leading to diminished performance among both academic staff and students.

TetFund's contribution, while growing, remains insufficient to fully meet the diverse needs of universities, resulting in continued challenges and underperformance (TetFund, 2021). The allocation of funds to public universities for crucial programs and facilities such as research and publications, scholarships, salaries, library facilities, classroom facilities, instructional materials, office facilities, conferences, workshops, seminars, and in-service training may play a pivotal role in influencing the performance of both academic staff and students. Adequate funding of these areas can greatly enhance educational outcomes, drive innovation, and improve the overall quality of higher education.

Research and publications are fundamental to the role of universities in advancing knowledge, fostering economic and technological development, and enhancing the overall performance of academic staff. Research, as defined by Creswell (2017), is a systematic process of collecting, analyzing, and interpreting information to answer questions or solve problems, while Kothari

(2014) describes research as careful investigation aimed at discovering new facts or validating existing knowledge. Universities are often leading in creating new products, services, and technologies through innovative research efforts that benefit society at large. However, the ability of academic staff to contribute effectively to these advancements can be significantly hindered by insufficient funding for research. Sufficient funding and resources are essential for conducting high-quality research that can lead to valuable publications. Without proper funding, academic staff may struggle to engage in in-depth investigations, limiting their ability to produce impactful research outcomes. Publications are the formal dissemination of research findings to the scholarly community (Africa University Research Report, 2023). They are essential for sharing knowledge, establishing academic credibility, and contributing to the academic discourse. For academic staff, publishing their research in reputable journals is not only a measure of individual success but also reflects the overall research interest and performance of the institutions.

Public universities in Nigeria play a crucial role in advancing higher education, fostering research, and promoting innovation, which are essential for the nation's socio-economic development. However, despite their importance, these institutions face severe financial challenges that hinder their ability to deliver quality education and research. Unlike universities in high-income countries, which benefit from stable and substantial government funding, Nigerian public universities are heavily reliant on government allocations that are often inadequate, inconsistent, and subject to economic fluctuations.

For instance in 2023, Nigeria allocated approximately ₦1.5 trillion to the entire education sector, but this amount falls significantly short of the financial requirements needed to address the infrastructural deficits, improve the quality of education, and enhance research capabilities in public universities. The inadequate funding has led to many universities lacking adequate resources for research, leading to a situation where African universities, including those in Nigeria, contributing minimally to global research outputs. For instance, funding limitations have affected academic staff ability to engage in research, attend international conferences, and participate in professional development programs such as workshops and seminars.

Despite attempts by the Nigerian government to address these issues through policy reforms, including increased budgetary allocations and partnerships with private organizations, funding gaps remain pervasive. The misalignment between available resources and institutional needs has distorted the functions of teaching, learning, and research in Nigerian universities, resulting in diminished academic performance and limited opportunities for both students and academic staff to thrive. By focusing on variables such as funding for research and publications, this study aims to provide a comprehensive analysis of how various forms of funding influence the performance and outcomes of these institutions on the performance of academic staff in North-Central Nigeria.

Objective of the Study

The objective of this study was to examine the impact of Funding Research and Publications on Public Universities Academic Staff Performance in North-Central Nigeria

Research Questions

The following research question was answered in the study:

1. How has the funding of research and publications impacted academic staff performance in Universities of North-Central Nigeria?

Research Hypothesis

The following hypothesis was postulated and tested at 0.05 level of significance:

- 1: There is no significant impact of funding research and publications on academic staff performance of Universities in North-Central Nigeria.

Literature Review

Research as a creative and systematic work undertaken to increase the stock of knowledge involves the collection, organization and analysis of evidence to increase understanding of a topic characterized by a particular attentiveness to controlling sources of bias and error. A research work may be an expansion on past work in the field to test the validity of instruments, procedures, experiments, and to replicate the elements of prior projects or the project as a whole (Bloch & Sorensen, 2015).

The funding of research in universities worldwide especially in Sub-Saharan Africa has become a major problem for both public and private universities because of severely constrained financial budgets coupled with other competing demands. However, a number of reports dealing with this issue have been presented. When fund is inadequate, there could be challenge for research and publications which may impact the effective teaching and learning for academic performance of university staff. Insufficient financing of universities has been one of the main challenges confronting university education (Central Bank of Nigeria, 2023). Adequate funding could be required to maintain the standard of staff by embarking on educational research and publications for the purpose of performance of academic staff of universities. Without sufficient funding, the set educational goals and objectives may never be accomplished. **Cuesta, Glewwe, and Krause (2022)** reported that Nigeria's little research output is likely a reflection of the low priority given to research and development by government decision-makers through policy implementation and that universities in Nigeria use only 1.3% of their budget on research due to poor funding.

Brown and Martinez (2018) investigated the effects of research and publications funding on academic staff performance in the University of California. Cross-sectional survey research design was employed to guide the study. The population consisted of 1,050 lecturers, from which a sample of 120 lecturers was selected using a simple random sampling technique. The instrument used for data collection was a Questionnaire, which consisted of five rating scale types. Data collected for the research were analyzed using simple percentages to answer the research questions. The study found that research and publications funding had significant impact on staff performance, as evidenced by the positive results in terms of improved research output and quality.

Similarly, Chen and Patel (2023) investigated the longitudinal analysis of research and publications funding effects on teachers' performance in South East universities, Nigeria. Three objectives guided the study. The study adopted descriptive survey research design with a target population of 6,939 lecturers in South East universities. Stratified simple random technique was used. The sample size was 386. One research question and one hypothesis guided the study. Questionnaire was used to illicit information for data analysis. The research questions was answered using mean and standard deviation, hypothesis was formulated and tested with one-way

ANOVA and Minitab software technique at 0.05 level of significance. The findings showed that, funding to a high extent has no significant influence on teachers' performance on research and publications in universities of South East, Nigeria.

Garcia and Wang (2018) conducted a study on the impact of research and publications funding on lecturers performance in university of Lagos, Akoka, Yaba and federal college of education (technical) Akoka, Yaba. Four objectives guided the study. It adopted the descriptive survey research design for the study. Data for the study were gathered from primary and secondary sources. The study had a sample of 250 respondents drawn through simple random sampling technique from a population of 1,354 lecturers. Secondary data were derived from textbooks, journal articles, monographs, research reports, magazines and newspapers. Data were analyzed using simple percentage to answer research questions, and complimented by content analysis of documents. The results showed that there is a significant impact of research and publications funding on the lecturers performance.

What emerged from the reviewed literature showed that none of the studies conducted on the funding of research and publications of academic staff in public Universities were conducted in North-Central Nigeria, the present study not only addressed these knowledge gaps but also contributed a more comprehensive understanding of how strategic public university funding of research and publications can optimize educational outcomes for academic staff in Nigerian public universities.

Theoretical Framework

This study was anchored on the system theory as propounded by Buckley (1967). The System Theory of Input-Process-Output posits that systems can be understood through their components and their interactions. According to this theory, systems receive inputs, which are transformed through a process, resulting in outputs. Inputs are the resources or stimuli that enter the system, while processes represent the activities or transformations that occur within the system, and outputs are the outcomes or products produced by the system. Input is something put into a system or expended in its operation to achieve output or a result. Within the context of systems theory, the input is what is put into a system and the output is the result obtained after running an entire process or just a small part of a process. Because the outputs can be the results of an individual unit of a larger process, outputs of one part of a process can be the inputs to another part of the process.

In the context of this study, the input can be the funding of research and publications, while the output includes the performance of academic staff in terms of knowledge, ability, or intellectuals categorized as a cognitive, psychomotor, and affective domain. Input-output analysis is a technique used in Economics for tracing resources and products within an economic structure. The structure is what the universities are, whereas the process is what the universities do and output is what the universities achieved. Government adjustments are intended to reduce, maintain, or increase the budget allocation of the universities. This underscores the relevance of the theory on the impact of Funding Research and Publications on Public Universities Academic Staff Performance in North-Central Nigeria

Methodology

This study adopted a descriptive survey research design due to its capacity to collect data from a random sample of the target population within a short time. Anikweze (2012) disclosed that another reason for adopting the descriptive survey research design, rather than other designs, is that while the statistical relationship of interest may be thought to be causal, the researcher cannot manipulate the dependent variable due to practical or ethical constraints. Consequently, the study must rely on the descriptive survey research design strategy. The descriptive survey research design also allows for the examination of the study in a natural setting without manipulation of variables, facilitating an investigation into the problem at hand. Additionally, this design was deemed appropriate for the study because it involved a large population, focusing on the impact of Funding Research and Publications on Public Universities Academic Staff Performance in North-Central Nigeria.

The population of this study consists of 7,745 academic staff from 13 Public Universities in North-Central Nigeria (National University Commission, 2023). The study used Taro Yamane formula to determine the sample size for the study. The sample of the study was 198 from the population of 7,745 for the study. Furthermore, academic staff from the six universities in the study area was used as sample for the study. The study adopted stratified sampling technique to select the sample. The justification for using the stratified sampling technique is that it allows for the representation of distinct subgroups within a heterogeneous population, leading to more precise estimates and insights.

The study developed and adapted the “Public University Funding and Academic Staff Performance Questionnaire (PUFASPQ)” as the instrument for the study. The questionnaire was designed to gather comprehensive data from respondents in Universities of North-Central Nigeria. A cut-off point of 2.50 was used for decision making under the descriptive statistics. The mean scores of 2.50 and above was accepted as having impact while mean scores of less than 2.50 were rejected as public university funding of research and publications has no impact on academic staff performance in North-Central Nigeria. The Boundary for Decision Making was 1.00-1.49 (no impact), 1.50-2.49 (low impact), 2.50-3.49 (moderate impact), 3.50- 4.00 (high impact). This scoring system allows for quantifiable insights into the impact of academic staff regarding the funding-related factors that affect their work and effectiveness.

The instrument was subjected to experts’ judgment for validation. Two experts in Educational Measurement and Evaluation unit, Department of Educational Foundations and one expert in Economics Department from the Faculty of Education and Social Sciences respectively, University of Jos, validated the instruments by checking the appropriateness and relevance of the items, clarity and size of print. The logical consensus of the experts was obtained using face and construct validity. The study obtained the logical or concessional validity index of 0.74 for the study from main survey. This inspired confidence that the instrument was valid enough for carrying out the research (Anikweze, 2012).Cronbach Alpha coefficient method of estimating reliability was employed to compute the coefficient of internal consistency of 0.84.

The study employed descriptive statistics of mean and standard deviation to answer the research question while inferential statistics of one-sample t-test was used to test the hypothesis at 0.05

level of significance.

Results

Research Question 1: To what extent has the funding of research and publications impacted academic staff performance in North-Central Universities? Responses on the extent of the impact of funding research and publications on academic staff performance in Universities were collected from the sampled academic staff and presented in Table 1.

Table 1: Mean and Standard Deviation of Academic Staff on the Extent of the Impact of Funding Research and Publications in Universities. N= 198; Cut-off point of 2.5.

Items	SA	A	D	SD	SD error		S.D	Remark
					\bar{x}	\bar{x}		
With public University funding, I may publish more articles, thereby enhancing my performance.	41	38	77	42	3.39	0.07	0.04	Moderate impact
With public University funding, my performance in research and publications may be high.	130	16	43	9	3.35	0.07	0.97	Moderate impact
With public University funding, I may publish more books of abstracts, which would enhance my performance.	130	16	42	10	3.34	0.07	0.98	Moderate impact
With public University funding, I may publish more articles in journals, which may enhance my performance.	130	16	40	12	3.33	0.07	0.99	Moderate impact
With public University funding, I may publish more textbooks, thereby enhancing my performance.	129	16	3	50	3.13	0.09	0.29	Moderate impact
Mean of means					3.31			

Data in Table 1 shows the mean and standard deviation of academic staff regarding the impact of funding for research and publications in universities. It is evident that the items reflecting the positive effects of public University funding on publishing and research received strong agreement. The items indicate that funding enables staff to publish more articles, thereby enhancing their performance (3.39). Other notable findings include the belief that funding contributes to high performance in research and publications (3.35) and facilitates the publication

of books of abstracts (3.34) and textbooks (3.33). The item regarding publishing more textbooks also reflects agreement, with a slightly lower mean score of 3.13.

The aggregate mean score of 3.31 is greater than the criterion mean of 2.5. Therefore, the implication is that academic staff believe that funding for research and publications have moderate impact on the academic staff output and overall performance. All items were classified with the remark moderate impact, which underscores that while respondents acknowledge the benefits of public university funding, they view these benefits as moderately influential rather than overwhelmingly strong.

Hypothesis

Hypothesis 1: There is no significant impact of funding of research and publications on academic staff performance of Universities in North-Central Nigeria. Table 2 shows the summary of one-sample t-test analysis of funding research and publications on academic staff performance.

Table 2: Summary of One-Sample t-test Analysis of Funding Research and Publications on Academic Staff Performance in Universities.

One-sample test	N	\bar{x}	SD	Test value	t	df	Sig. (2-tailed)	Mean difference
Research and publications	198	3.11	0.89	(test value = 2.5)	9.63	197	0.000	0.61

Table 2 shows the one-sample t-test analysis ($t = 9.63$, $df = 197$, $p = 0.000 \Rightarrow p < 0.05$) which revealed that the mean score (3.11) were significantly higher than the test value (2.5), with a mean difference of 0.61, indicating that there is significant impact of funding research and publications on academic staff performance leading to the rejection of Hypothesis 1.

Discussion of Findings

The results of research question one indicated a moderate impact of funding with the mean of 3.31 on the academic staff performance in research and publications. Furthermore it was observed from hypothesis one that, the null hypothesis, which posited that funding research and publications does not have a significant impact on academic staff performance, was rejected. The statistical analyses showed that the mean rating is significantly different from a neutral or null value; this implied that funding for research and publications has a significant positive impact on staff performance. This finding does not align with the views of Chen and Patel (2023), who revealed that funding research and publications negatively impacts teachers' performance. On the other hand however, Garcia and Wang (2018) found that there is a high significant impact of research and publications on the performance of lecturers.

Conclusion

Based on the findings of this study which showed that research and publications significantly improved academic staff performance, with a t-test ($t = 9.63$, $p = 0.000$) which demonstrated that the mean score of 3.11 was higher than the hypothesized value of 2.5, leading to the rejection of

the null hypothesis, it was concluded that Funding for research and publications enhances academic staff performance, emphasizing the need for increased funding allocations. This implied that financial support for research activities plays a crucial role in enhancing academic staff output, particularly in research and publications.

Recommendations

Based on the findings of the study, it was recommended that, given the significant impact of public university funding on academic staff involvement in research and publications' activities, it is essential that the government re-evaluates the allocation and utilization of funds for these areas. University managements should prioritize strategic funding initiatives that promote quality research output. Additionally, efforts should be made to minimize administrative burdens associated with securing funding, ensuring that these do not negatively affect academic staff performance.

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