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Facilities and Academic Staff Effectiveness in Universities in Osun State

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Abstract: *This study investigated the relationship between facilities and academic staff effectiveness in universities in Osun State, Nigeria. Specifically, it examined how ICT and infrastructural resources influenced teaching quality, research productivity, administrative efficiency, and overall job performance of academic staff. The study adopted a descriptive survey research design, with a sample of 240 respondents, including academic staff and Heads of Departments, drawn from three universities using a multi-stage sampling technique. Data were collected through two instruments: The Facilities Questionnaire (FQ) and the Academic Staff Effectiveness Questionnaire (ASEQ), both of which were validated by experts and demonstrated high reliability (FQ = 0.89; ASEQ = 0.83). Data were analyzed using descriptive statistics and Pearson's Product Moment Correlation at a 0.05 significance level. Findings revealed significant positive relationships between ICT facilities and academic staff effectiveness ($r = 0.703$, $p < 0.05$) and between infrastructural facilities and academic staff effectiveness ($r = 0.692$, $p < 0.05$). The study concluded that functional ICT resources, including computers, internet access, multimedia tools, and digital libraries, as well as well-maintained physical infrastructure such as lecture halls, laboratories, and libraries, significantly enhanced academic staff performance. It was recommended that universities invest in ICT and infrastructural development, provide continuous staff training, and implement integrated support systems to improve teaching, research, and administrative effectiveness.*

Keywords: academic staff effectiveness, ICT facilities, infrastructural facilities, universities, teaching quality, research productivity

INTRODUCTION

Universities are widely regarded as institutions for advanced learning and research, established primarily to cultivate skilled manpower necessary for national development. In Nigeria, universities are expected to produce the trained workforce required for the country's transformation from a developing to a developed nation. The ability of these institutions to meet such expectations is largely dependent on the effectiveness of their academic staff, whose performance directly influences institutional quality and outcomes

(Ajayi, et al., 2011). The success of universities is therefore inherently tied to the calibre, commitment, and dedication of their academic personnel, as these individuals are the backbone of higher education.

Academic staff are central to the functions of universities. They are responsible for teaching, conducting research, and providing a wide range of academic services, all of which are essential for achieving the objectives of tertiary institutions (Kasimu, et al., 2024). Academic personnel in Nigerian universities are typically categorized into Graduate Assistants, Assistant Lecturers, Lecturer II, Lecturer I, Senior Lecturers, Associate Professors/Readers, and Professors, each contributing uniquely to the institution's overall mission. The effectiveness of these staff members is critical, as universities cannot achieve their objectives without their active participation. Effective educators must demonstrate expertise, motivation, ethical conduct, and commitment, as the absence of these qualities can jeopardize the quality of the entire education system (Falola et al., 2018).

The role of academic staff extends beyond teaching to developing a competent national workforce across various sectors, including education, healthcare, business, and governance (Michulek et al., 2024). Their effectiveness is a significant determinant of the quality of education provided by universities, as substandard performance can destabilize the education system (Ajayi et al., 2011). Academic staff effectiveness can be measured through teaching, research, and community service, all of which collectively influence the contribution of institutions to societal development. In Nigeria, these responsibilities encompass lecturing, supervising student projects, conducting research, mentoring junior colleagues, and curriculum development, among other duties (FRN, 2013). Effective academic staff are those who can implement sound teaching strategies, carry out meaningful research, assess student learning, maintain discipline, and provide guidance beyond scheduled classes (Falola et al., 2020).

Teaching, a core responsibility, requires significant preparation, engagement, and flexibility. It involves classroom instruction, postgraduate supervision, individual consultations, and curriculum development (Falola et al., 2022). Research and development are also critical, as the quality and quantity of scholarly publications are often used to gauge institutional performance. Universities' reputations are heavily influenced by the relevance and quality of academic research (Falola et al., 2018). However, concerns have arisen regarding declining research quality, often referred to as the "decline effect," where initially robust findings are not reliably reproducible, indicating a deterioration in research output (Abdelwahed & Doghan, 2023).

Despite their critical roles, many academic staff in Nigerian universities demonstrate shortcomings in commitment and effectiveness. Some fail to prepare adequately for classes, rely on outdated teaching methods, or limit their availability to students outside scheduled sessions (Habeeb & Eyupoglu, 2024). Reports indicate that certain academic staff neglect essential responsibilities such as supervising examinations, often delegating these duties to postgraduate students, which can contribute to examination malpractice (Falola et al., 2020; Ogunode & Ibrahim, 2024). Others involve students in activities such

as documenting results or calculating grades, further undermining the credibility of academic processes. These gaps in professionalism threaten the attainment of universities' broader objectives.

Community service is another key obligation for academic staff, including participation on advisory boards, peer reviewing, and coordinating public educational initiatives. Yet, many academics are insufficiently engaged in these activities (Habeeb & Eyupoglu, 2024). Furthermore, some prioritize private business ventures over institutional responsibilities, often due to inadequate compensation and poor incentives for research and publishing (Ajayi et al., 2011; Ogunode & Akpakwu, 2023). This lack of focus diminishes academic productivity, hinders professional development, and limits the generation of high-quality research outputs. Financial constraints, familial obligations, and limited opportunities for professional advancement further exacerbate these challenges (Ogunjobi et al., 2023: Michulek et al., 2024).

The work environment, particularly the availability and quality of facilities, plays a significant role in academic staff effectiveness. Information and Communication Technology (ICT) facilities, for example, are critical tools for teaching, research, and collaboration. Effective integration of ICT in university operations has the potential to enhance productivity, streamline instructional delivery, and facilitate access to global knowledge networks. Studies indicate that ICT resources improve institutional efficiency, administrative processes, and teaching quality (Bassey, 2013; Stephen, 2010). At the University of Maiduguri, for instance, ICT-driven administrative systems have been shown to enhance efficiency in document processing and management tasks (Ibrahim, et al., 2016). Similarly, the use of Microsoft Word and other digital tools in schools has been found to save time, reduce costs, and improve overall administrative effectiveness (Kingsley, 2013).

Nonetheless, ICT adoption is often limited by insufficient training, poor digital literacy among academic staff, and inadequate infrastructural support (Idowu, et al., 2017; Adeyemi & Mary, 2013; Ajegbelen, 2016). Research highlights the need for continuous professional development and training in digital skills to enable lecturers to effectively utilize ICT tools for research, teaching, and communication. The absence of sufficient computer systems and multimedia resources further hampers academic staff performance, with staff-to-computer ratios in many departments falling far below the optimal one-to-one standard (Adeyemi & Mary, 2013).

Infrastructural facilities, encompassing lecture halls, laboratories, libraries, and offices, are equally critical to academic staff effectiveness. Adequate infrastructure promotes a conducive teaching and learning environment, enhances research capacity, and improves administrative efficiency (Ogunode & Ibrahim, 2024; Ajayi, 2024; Ogunode & Akpakwu, 2023). Conversely, inadequate infrastructure, such as outdated facilities, insufficient classrooms, or poorly equipped laboratories, creates barriers to effective work performance, resulting in low motivation, reduced job satisfaction, and diminished productivity (Olasupo, 2017; Olatunji, 2013). Studies have demonstrated a strong

correlation between the availability of functional infrastructure and enhanced teaching, research output, and overall academic staff performance (Olasupo, 2017; Ajayi 2024).

Research also underscores the importance of ICT and infrastructural resources in fostering collaboration, innovation, and efficiency in academic activities. Functional resources support programme implementation, enable access to essential teaching materials, and facilitate engagement in research and community service activities (Ogunode & Ibrahim, 2024; Agboze, et al., 2012; Bongotons & Onyenwe, 2010). When adequately provided, these facilities enhance staff morale, motivation, and commitment, contributing to improved institutional effectiveness. Given the centrality of academic staff in achieving universities' educational and developmental objectives, it is imperative to examine the influence of facilities on their work effectiveness. Adequate ICT infrastructure, well-equipped laboratories, libraries, and modern classrooms not only facilitate teaching and research but also enhance job satisfaction and productivity. Inadequate provision of these resources, on the other hand, undermines staff performance and threatens the quality of higher education in Nigeria (Ogunode & Ibrahim 2024).

In view of these considerations, this study seeks to investigate the relationship between facilities and academic staff effectiveness in universities in Osun State. The research will explore how infrastructural and ICT resources influence the productivity, teaching quality, research output, and overall job performance of academic staff.

The following research hypotheses are formulated for this study

1. There is no significant relationship between ICT facilities and academic staff effectiveness in universities
2. There is no significant relationship between infrastructural facilities and academic staff effectiveness in universities

RESEARCH METHODS

The study adopted a descriptive survey research design to investigate the relationship between facilities and academic staff effectiveness in three universities in Osun State, Nigeria. The population of the study comprised all academic staff in the selected universities, including both lecturers and Heads of Departments (HODs). Specifically, a total of 240 respondents, including academic staff and HODs, were selected to participate in the study. The sample was drawn using a multi-stage sampling procedure to ensure representative coverage across the institutions.

In the first stage, the three universities in Osun State were purposively selected to reflect both federal and state-owned institutions. In the second stage, academic departments within each university were stratified, and a proportionate sample of academic staff was selected from each department. Additionally, the Heads of Departments were purposively included in the study to provide assessments of the academic staff effectiveness. The final sample consisted of 240 respondents, ensuring that both the perspectives of individual academic staff and evaluative insights from HODs were captured.

Two research instruments were employed for data collection: the Facilities Questionnaire (FQ) and the Academic Staff Effectiveness Questionnaire (ASEQ). The FQ consisted of two sections: Section A collected bio-data of the respondents, while Section B comprised 10 items focused on ICT and infrastructural facilities. A four-point Likert scale was used for responses, ranging from Strongly Agree to Strongly Disagree. The ASEQ also had three sections. Section A obtained demographic information, Section B collected additional data regarding the academic staff being assessed, and Section C contained 20 items measuring academic staff effectiveness in areas such as teaching, research, and community service. A five-point Likert scale was used, ranging from Excellent to Poor.

To ensure validity, both instruments were reviewed by experts in Educational Management and Test and Measurement. The experts assessed face validity by evaluating whether the instruments appropriately measured the intended variables and checked for clarity, removing any potentially confusing items. Content validity was also ensured by confirming that the items adequately represented the theoretical constructs underlying facilities and academic staff effectiveness. Reliability of the instruments was established using the test-retest method. The FQ and ASEQ were administered to 20 academic staff and 2 HODs in a university outside the study sample. The responses from the two administrations, conducted two weeks apart, were correlated using Pearson's Product Moment Correlation. The FQ yielded a reliability coefficient of 0.89, while the ASEQ had a coefficient of 0.83, indicating high reliability for both instruments.

Permission was obtained from the management of each selected university before administering the questionnaires. Data collection was carried out through direct delivery and recovery of the instruments to ensure high response rates. The data collected were analyzed using descriptive and inferential statistics. Hypotheses were tested using Pearson's Product Moment Correlation at a 0.05 level of significance to determine the relationships between facilities and academic staff effectiveness.

RESULTS

Hypothesis 1: There is no significant relationship between ICT facilities and academic staff effectiveness in universities

Table 1: Relationship between ICT facilities and academic staff effectiveness in universities

Variables	N	Mean	Stand Dev	r-cal	P-value
ICT Facilities	231	15.11	2.29	0.703*	0.000
Academic Staff Effectiveness	231	84.18	4.23		

*P<0.05

Table 1 showed that the r-cal value of 0.703 is significant at 0.05 level of significance because the P-value (0.000) < 0.05. The null hypothesis is rejected. This implies that there

was a significant relationship between ICT facilities and academic staff effectiveness in universities.

Hypothesis 2: There is no significant relationship between infrastructural facilities and academic staff effectiveness in universities

Table 2: Relationship between infrastructural facilities and academic staff effectiveness in universities

Variables	N	Mean	Stand Dev	r-cal	P-value
Infrastructural Facilities	231	10.37	1.87	0.692*	0.000
Academic Staff Effectiveness	231	84.18	4.23		

*P<0.05

Table 2 showed that the r-cal value of 0.692 is significant at 0.05 level of significance because the P-value (0.000) < 0.05. The null hypothesis is rejected. This implies that there was a significant relationship between infrastructural facilities and academic staff effectiveness in universities.

DISCUSSION

The study established that there is a significant relationship between the availability of ICT facilities and the effectiveness of academic staff in universities. Academic staff depend on ICT tools including computers, internet connectivity, multimedia resources, software applications, and digital libraries to facilitate contemporary teaching methods, conduct research, disseminate knowledge, and manage student information. When these ICT resources are accessible and functional, staff performance and productivity are naturally enhanced. This conclusion is supported by prior research. Bassey (2013) demonstrated that the use of computer systems improves accuracy and operational efficiency in school management, indicating a clear link between ICT utilisation and staff effectiveness. Similarly, Audu and Gungul (2014) found that information systems improve administrative decision-making by providing access to critical institutional data. Stephen (2010) reported that ICT tools enhance instructional quality and streamline administrative processes. Ibrahim, et al. (2016) highlighted the benefits of ICT-driven systems in the University of Maiduguri for administrative efficiency, while Kingsley (2013) showed that programs such as Microsoft Word save time and enhance administrative workflows. Bassey and Otu (2016) further confirmed that ICT availability significantly impacts administrators' efficiency, and Kayode et al. (2019) indicated that access to ICT resources combined with relevant training improves overall staff effectiveness.

However, several studies point to challenges in ICT utilisation. Idowu, et al. (2017) observed that many academic staff have low ICT literacy, while Bongotons and Onyenwe (2010) reported inadequate ICT resources in teacher education programs. Agboze, et al. (2012) also highlighted that limited staff training and poor infrastructure restrict effective ICT usage. These challenges do not contradict the positive relationship between ICT

facilities and staff effectiveness but underscore the need for improved infrastructure, continuous training, and technical support. Universities must therefore expand ICT infrastructure, provide regular professional development, and strengthen technical support systems to enhance research productivity, teaching quality, administrative efficiency, and overall institutional competitiveness in Nigeria.

The study also revealed a significant relationship between infrastructural facilities and academic staff effectiveness. This is because teaching, research, and administrative responsibilities are heavily dependent on the quality and availability of physical infrastructure. Facilities such as lecture halls, laboratories, libraries, office spaces, power supply, and ICT centres form the backbone of academic work. Literature corroborates this finding. Ajayi (2024) reported a strong correlation between infrastructural facilities and both academic staff effectiveness and students' academic achievement. Ogunode and Ibrahim (2024) found that inadequate infrastructure, including poorly maintained lecture halls, ICT centres, and libraries, hinders teaching, research, and learning, thereby undermining staff performance. Ogunode and Akpakwu (2023) similarly established that well-maintained infrastructure positively influences staff effectiveness, while inadequate facilities reduce research productivity and motivation.

Olasupo (2017) highlighted that access to functional research facilities significantly improves research output, partnerships, and publication rates. Studies by Omoniyi and Ogunsanmi (2012) and Bello (2011) further emphasize that lecturers cannot perform effectively without adequate teaching and learning resources. Falola et al. (2022) found that deficiencies in libraries, offices, laboratories, and teaching aids negatively affect academic staff performance, while Olatunji (2013) noted that poor infrastructural conditions create an unhealthy academic environment, reducing job effectiveness. Although, Ajayi (2024) indicated that resource conditions account for only part of the variance in job effectiveness, physical infrastructure consistently emerged as a key determinant.

The implication of these findings is clear: universities must prioritise infrastructural development in policy formulation and budgeting. Strategic investments in modern classrooms, research laboratories, libraries, ICT resources, and office facilities are essential to enhancing academic staff motivation, teaching quality, research productivity, and overall institutional effectiveness.

CONCLUSION

The study established that both ICT and infrastructural facilities have a significant positive impact on academic staff effectiveness in universities. Functional ICT resources, including computers, internet access, multimedia tools, and digital libraries, enhance teaching, research, administrative efficiency, and overall productivity. Similarly, well-maintained physical infrastructure such as lecture halls, laboratories, libraries, and office spaces provides the essential environment for effective academic engagement. Conversely, deficiencies in either ICT or infrastructural resources hinder staff performance, reduce

research output, and compromise teaching quality. Therefore, the provision of adequate facilities is critical for enhancing academic staff effectiveness, improving institutional outcomes, and ensuring the delivery of high-quality education in Nigerian universities.

Recommendations

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

1. Universities should invest in expanding and upgrading ICT facilities, ensuring access to modern computers, reliable internet, software applications, and digital resources, while also providing continuous training to enhance staff digital literacy and productivity.
2. Policymakers and university management should prioritise infrastructural development by constructing and maintaining functional lecture halls, laboratories, libraries, and office spaces, creating a conducive environment for teaching, research, and administrative duties.
3. Institutions should implement integrated support systems that combine ICT resources, well-maintained facilities, and technical assistance to foster academic staff motivation, encourage research output, and improve overall job effectiveness.

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