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Measurement of Air Quality and Determination of Pollution Levels around Traffic Hotspot in Ikot Ekpene Urban, Ikot Ekpene

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Abstract

Road transportation is identified as the largest contributor to urban air pollution which accounts for about 3.7 million pre matured death from 2012 to 2024. This study aims at assessing the air quality around the major traffic hotspots in Ikot Ekpene Urban. Empirical research design was employed for the study, and the hotspots were geospatially identified. The air quality was measured using highly sensitive digital portable meters. From the result, mean value of Nitrogen Dioxide is at 0.1, Sulphur Dioxide (SO₂) at 0.1, Hydrogen Sulphide (H₂S) at 0.12, Carbon Monoxide (CO) at 2.9, Ammonia (NH₃) at 2.6, Chlorine Gas (Cl₂) at 0.16, Hydrogen Cyanide (HCN) at 1, Total Volatile Organic Compounds (TVOC) at 2.2, Formaldehyde (CH₂O) at 14.7, and Particulate Matter (PM_{2.5}, PM_{2.10}) at 66.63 and 110.966 respectively. This reveals that the available Nitrogen Dioxide (0.1) in the atmosphere exceeded the limits set by Federal Ministry of Environment which is 0.6, while other parameters are within their limits. These findings provide baseline for proactive approach to public transportation planning. The urgency for transport plan, traffic management scheme, and the necessity of a shelterbelt to curtail the accumulation of air pollutants around the traffic hotspot.

Keywords: air quality, traffic hotspots, road transportation, environmental sustainability.

Introduction

The impact of traffic flow on air quality around traffic hotspots has called for critical response at local, regional and global level. Air pollution and its impact have led to diverse challenges facing humanity, especially health. The rate of air pollution has increased exponentially from the time of industrial revolution, and the major cause has been attributed to anthropogenic factors. (Usip, 2021). Amongst the anthropogenic factors, transportation has been identified as the highest contributor to urban air pollution, generating over 40% of Green House Gases (Swanson, 2019).

Road transportation has a significant impact on the environment, it is a major user of energy, and burns most of the world's problem. This results in air pollution, and it is a significant contributor to global warming through emission of carbon dioxide. Within the transport sector, road transport is the largest contributor to global warming (Ng, & Kim, 2021; Likens, Keene, William, Miller, John, Galloway & James, 1987).

Around 91% of the world's population lives in places where air quality levels exceed World Health Organization's limits (World Health Organization [WHO], 2022). Fumes from automobiles and friction from roads have significantly led to high rate of air pollution, thereby affecting the urban biophysical environment. The concentration of these pollutants in traffic hotspots have been identified to pose a serious health challenge to people operating businesses in, or passing through the traffic hotspots area. With over 51% of the Nigerian population living in urban environment, more people are continually being exposed to polluted air, thereby increasing the rate of complications and fatalities resulting from contamination of the atmosphere.

Ikot Ekpene has witnessed a rapid change in its urbanisation structure, with an astronomical move from 143,077 people in 2006 according to National Population Census to a projected population of 253,234 in 2025. Furthermore, the expansion of road infrastructure has ushered in increased urban activities, and traffic flow, especially around the Ikot Ekpene Plaza Environment. This work therefore assesses the air quality around the traffic hotspot in Ikot Ekpene Plaza.

Statement of the Problem

Road transportation is identified as the largest contributor to urban air pollution, and the concentration of these pollutants increase the risk for cardiovascular and respiratory disease, stroke, chronic obstructive pulmonary disease, cancer and adverse birth outcomes, and also are associated with higher death rates. Ambient air pollution, made of high concentrations of small and fine particulate matter, is the greatest environmental risk to health – causing more than three million premature deaths worldwide every year, United Nations (2016).

More than 80 per cent of people living in urban areas are exposed to air quality levels that exceed guidelines set by the World Health Organization (WHO). The populations in low-income cities are the most at risk for respiratory diseases and other long-term health problems. Decline in urban air quality increases the risk of stroke, heart disease, lung cancer, and chronic and acute respiratory diseases, including asthma (WHO, 2022).

A recent World Bank study, the *Cost of Air Pollution in Lagos* (2022), estimates that illness and premature deaths due to ambient air pollution caused losses of \$2.1 billion in 2018, representing about 2.1% of Lagos State's GDP. In the same year, it caused an estimated 11,200 premature deaths, the highest in West Africa. According to Kemper and Chaudhuri, 2020, children under age five were the most affected as it accounted for 60 percent of total deaths. The adults suffered from heart disease, lung cancer, and chronic obstructive pulmonary disease.

With over 60% of urban air pollution attributed to road transportation, traffic hotspots in urban areas have been identified with higher concentration of pollutants (Kampa & Castanas, 2008). Assessment of air quality around traffic hotspot in Ikot Ekpene plaza, therefore becomes imperative given increased traffic flow and other human activities in the area.

Aim and Objectives

The aim of the research is to assess air quality around traffic hotspot in Ikot Ekpene Plaza. The objectives include to:

- i. Geospatially identify the traffic hotspot in Ikot Ekpene Plaza;
- ii. measure air quality around the hotspot; and
- iii. assess the level of air pollution around the hotspot.

Literature Review

Conceptual Overview

Air quality describes the condition of the atmosphere concerning the presence and concentration of pollutants that can negatively affect human health, the environment, and material integrity (World Health Organization [WHO], 2019). In urban areas, road transport is a dominant source of air contaminants such as nitrogen oxides (NO_x), carbon monoxide (CO), hydrocarbons, sulfur dioxide (SO_2), and particulate matter ($PM_{2.5}$ and PM_{10}) (Frey et al., 2022).

Locations where vehicular activities are concentrated such as intersections, roundabouts, and bus terminals often experience elevated pollutant concentrations and are therefore, referred to as traffic hotspots (Usip, 2021). The determination of

air pollution levels around these hotspots is essential for understanding how transport activities, urban design, and meteorological conditions interact to shape air quality outcomes. Theoretically, this relationship is underpinned by a convergence of environmental, transport, and human exposure frameworks, which together explain how pollutants are generated, dispersed, and experienced in the urban atmosphere.

Theoretical Review

Gaussian Dispersion Theory

Gaussian Dispersion Theory underpins most scientific models used in predicting the spatial distribution of pollutants emitted from point or line sources. The term "Gaussian dispersion" refers to the German mathematician Carl Friedrich Gauss, who first developed a two-parameter exponential function in 1809 in connection with studies of astronomical observation errors (Turner, 1994). The theory assumes that pollutants disperse following a normal distribution, with concentrations decreasing as distance from the source increases. This model has been widely used in air quality assessments to estimate pollutant concentrations around roads, intersections, and industrial zones.

In traffic hotspot studies, it explains how pollutants accumulate under stagnant atmospheric conditions and how dispersion is affected by wind direction and speed. Models such as American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) and California-based Line Source Dispersion Model (CALINE) rely on this theory to simulate concentration gradients

Theoretical Linkage to the Study

The theory assumes that the concentration of a pollutant at any point is determined by the emission rate of the pollutant, the meteorological conditions, and the distance from the source. It models the spatial spread of pollutants from the source, and this provides the framework for this study which measures the level of concentration of air pollution at the traffic hotspot in Ikot Ekpene plaza compared to a control station. It underpins the scientific and practical rationale for determining air pollution levels around high-traffic areas in urban centres.

Traffic Congestion and Hotspot Formation

Traffic congestion arises when the number of vehicles on a roadway exceeds its capacity, creating a demand for space greater than what the infrastructure can accommodate. This condition occurs when traffic volume surpasses available road space or when demand approaches the maximum capacity of the roadway. Persistent congestion on a given route often leads to the emergence of traffic

hotspots. Usip (2021) describes traffic hotspots as areas characterised by intense vehicular activity and frequent congestion, particularly during peak hours.

Several factors can intensify congestion, most of which either reduce road capacity or increase the number of vehicles required to transport people and goods (Federal Highway Administration [FHWA], 2022; Transport and Traffic Planning Associates, 2021). The presence of diverse transport modes—such as trucks, buses, private cars, minibuses, tricycles, motorcycles, and non-motorised vehicles—competing for limited carriageway space complicates traffic management and frequently triggers congestion within these hotspots.

The absence of lane demarcation and dedicated routes for public and non-motorised transport, combined with weak policy implementation, limited infrastructure, and socio-economic challenges, exacerbates congestion in many developing cities. Additional contributors include poor road design and maintenance, aggressive driving behaviour, inadequate traffic information systems, and fragmented governance among multiple agencies (Manoj, Kranti, & Pritkana, 2021; Usip, 2021; Bull, 2003). Hotspots also develop at intersections, checkpoints, traffic lights, or areas with poor road conditions, unexpected traffic surges, or rapid land-use and socio-economic changes.

Air Quality Parameters and Vehicular Emissions

Air quality parameters define the acceptable concentration limits of air pollutants considered safe for human health and environmental quality. When these limits are exceeded, pollutants pose risks to public health and ecological balance. Urban transportation, particularly road traffic, is a major source of elevated pollutant concentrations. Research indicates that pollutant levels are typically higher in areas such as motor parks and traffic hotspots compared to schools, markets, religious centres, and residential areas (Ogunseye, Ajayi, & Lawal, 2018). Emenike and Orjinmo (2017) attributed these elevated concentrations to the cumulative effects of frequent vehicular activities at such locations.

According to the World Health Organization (WHO, 2019), major pollutants associated with road transport include nitrogen dioxide (NO_2), sulfur dioxide (SO_2), hydrogen sulfide (H_2S), carbon monoxide (CO), ammonia (NH_3), chlorine gas (Cl_2), hydrogen cyanide (HCN), total volatile organic compounds (TVOCs), formaldehyde (CH_2O), and particulate matter ($\text{PM}_{2.5}$ and PM_{10}). These substances become hazardous only when their concentrations exceed stipulated thresholds (WHO, 2019).

In Nigeria, the Federal Ministry of Environment (1991) established national limits for certain air pollutants: 0.04–0.06ppm for nitrogen dioxide, 0.01–0.1ppm for sulfur dioxide, 10–20ppm for carbon monoxide, 200 ppm for ammonia, and 250mg/m³ for

particulate matter. These standards serve as benchmarks for assessing ambient air quality in urban environments.

Empirical Literature

Batterman, (2014) in the work points to busy road junctions and intersections as areas where traffic-related air pollution (TRAP) tends to concentrate the most. Measurements taken at these high-flow points usually show much higher levels of nitrogen oxides (NO_x), carbon monoxide (CO), black carbon (BC), ultrafine particles (UFP), and fine particulate matter ($\text{PM}_{2.5}$) compared to nearby non-traffic areas, especially during rush hours (Blanco et al., 2022; Frey et al., 2022). These sharp rises in pollution are largely the result of vehicles idling in queues, repeated acceleration and braking, and the high number of diesel-powered and heavy-duty vehicles, all of which emit more pollutants per kilometre travelled (Karin & Shubham, 2020).

Advanced monitoring efforts—using both fixed roadside sensors and mobile monitoring systems—have helped to shed light on how air pollution behaves around intersections (Vardoulakis, Solazzo, & Lumbreiras 2011). Fixed monitors record changes in concentration throughout the day, while mobile devices capture how pollution levels drop sharply within 50 to 200 metres of the junction. Findings from these studies show that concentrations of UFP and BC often rise when traffic lights change and queues build up, demonstrating how stop-and-go driving directly influences emission levels (Usip & Edem, 2022).

Analyses of pollutant composition reveal distinct emission patterns at junctions. Studies using black carbon monitors and gas analysers show higher amounts of freshly emitted particles and gases close to intersections than along open roadways (Batterman, 2014). The presence of heavy-duty vehicles further amplifies levels of NO_x and BC, a trend repeatedly confirmed in various field measurements.

To explain these patterns, several researchers have combined real-world traffic counts, vehicle type data, and weather information in dispersion models such as AERMOD and near-field Gaussian systems (Vardoulakis et al., 2011). These models generally reproduce the pollution gradients found near intersections, although their precision decreases in areas with complex urban layouts—like narrow street canyons—or when traffic flow changes rapidly. This underlines the importance of using detailed, time-specific data to ensure model accuracy (Frey et al., 2022).

Recent experiments at busy intersections suggest that improving signal timing, limiting idling through better flow control, and adding features such as roadside greenery or barriers can reduce people's exposure to pollutants (Usip & Edem, 2022; World Health Organization [WHO], 2019). The effectiveness of these measures varies depending on the pollutant, but reductions are often greatest for UFP and BC,

which are closely linked to idling vehicles. Even with these advances, important gaps remain. Long-term studies that directly connect short bursts of pollution at intersections with health impacts are still scarce. There is also little empirical data from developing cities, where mixed vehicle types and informal driving habits are common. In addition, non-exhaust emissions—like particles from tyres, brakes, and suspended dust—are not yet fully accounted for in many intersection studies (Batterman, 2014).

In summary, existing research confirms that heavily trafficked junctions are critical zones of elevated air pollution. These sites are influenced by driving behaviour, vehicle composition, and road design. Moving forward, future studies should aim to integrate on-site monitoring with modelling tools and evaluate practical interventions under real urban conditions to guide cleaner and healthier transport planning (WHO, 2019).

The Study Area

Ikot Ekpene urban is an historic town otherwise referred to as Raffia City. The urban area is also the headquarters of Ikot Ekpene Local Government Area, as well as the regional headquarters of Ikot Ekpene Senatorial District in Akwa Ibom State. The city is a nodal town which lies between the major traffic corridors providing convergence for routes to Uyo, Aba, Umuahia, Abak and Calabar. The radial road pattern obtainable in the city converges at Ikot Ekpene Plaza, thereby creating a serious traffic hotspot. Figure 1 shows the major road pattern in Ikot Ekpene, and the major traffic hotspot in the city.

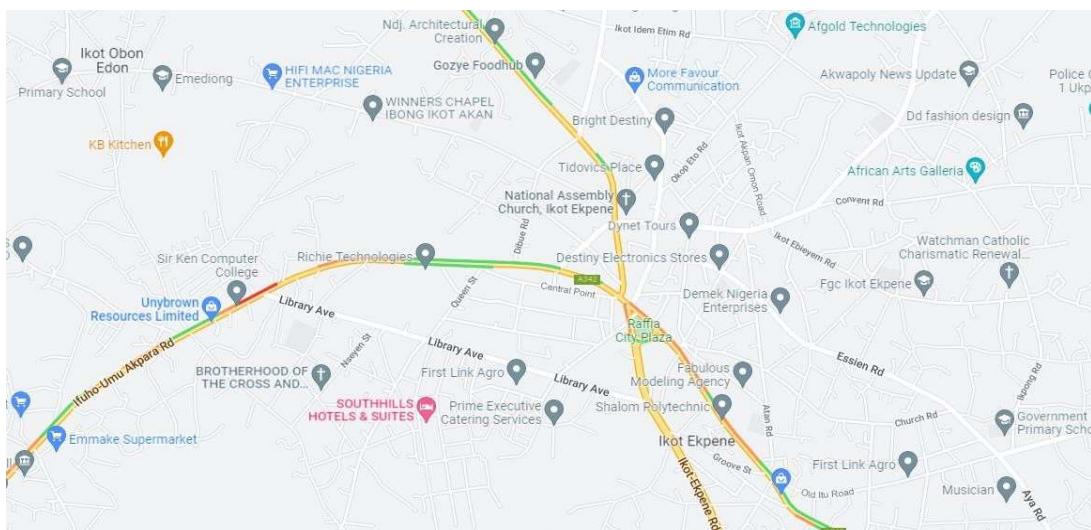


Fig. 1: Ikot Ekpene Road Pattern

Source: Google Earth (2025)

Specifically, the traffic hotspot is the area between Umuahia road and Aba Road converges at the plaza. The hotspot witnesses high traffic flow as it serves as a connection spot for Aba and Umuahia roads which lead to the two most important cities in Abia State, Uyo Road which leads to Uyo the Akwa Ibom State capital, and Abak Road which leads to another major town, Abak. The immediate environment has been cleared of temporary motor parks, however, street trading, hawking, touting still dominate activities in the environment which complicates the hotspot. Different means of road transportation are used in the city, ranging from articulated vehicles, private vehicles, public means of transportation such as buses, taxis, minibuses, tricycles, motor cycles and bicycles.

Methodology

This study adopted empirical research design which addresses the plan, and strategy of investigation of issues related to air pollution around the foremost traffic hotspot in Ikot Ekpene urban environment. Purposive sampling was adopted as the convergence of Aba Road, Umuahia Road and Uyo Road formed the sample point for air quality measurement. Measurements were taken too at Queen Street by Library Avenue to serve as control point.

The air pollutants measured include Sulphur dioxide (SO₂), Nitrogen dioxide (NO₂), Hydrogen Sulphide (H₂S), Carbon monoxide (CO), Ammonia (NH₃), Chlorine (Cl₂), Hydrogen Cyanide (HCN), and suspended particulate monitor (SPM). The measurements were taken for two weeks, from 1st of July to 15th of July 2025. The Highly sensitive digital portable meters were used in the measurement of gaseous pollutants as presented in Table 1.

Table 1
Gaseous emissions and noise measuring instruments

Parameter	Equipment	Range	Alarm levels
Sulphur dioxide (SO ₂)	SO ₂ Crowcon Gasman S/N: 19648H	0-10ppm	2.0ppm
Nitrogen dioxide (NO ₂)	NO ₂ Crowcon Gasman S/N: 19831N	0-10ppm	3.0ppm
Hydrogen sulphide (H ₂ S)	H ₂ S Crowcon Gasman S/N: 19502H	0-50ppm	10ppm
Carbon monoxide (CO)	CO Crowcon Gasman S/N: 19252H	0-500ppm	50ppm
Ammonia (NH ₃)	NH ₃ Crowcon Gasman S/N: 19730H	0-50ppm	25ppm
Chlorine (Cl ₂)	Cl ₂ Crowcon Gasman S/N: 19812H		

0-5ppm

0.5ppm

Hydrogen Cyanide (HCN)	Crowcon Gasman S/N: 19773H	0-25ppm	5ppm
Suspended particulate monitor (SPM)	Haz-Dust TM	0.1-200 10 μ g/m ³	+1-0.0210 μ g/m ³
<hr/>			
monitor			

The above instruments were used to determine the concentration of the selected gases at the traffic hotspot and the control station. GIS was utilised to acquire and prepare the necessary maps, while level of concentration of the gases was measured against the standard set by World Health Organization, and Federal Ministry of Environment.

Analysis

The geospatial location of the traffic hotspot in Ikot Ekpene

The location of the hotspot is presented in fig. 2.

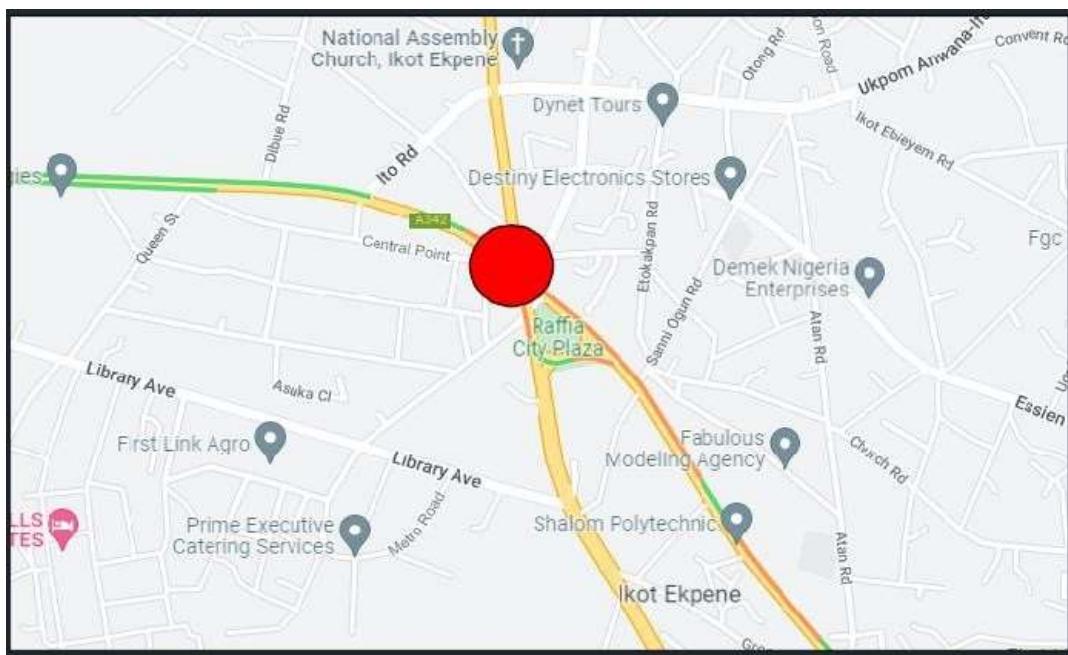


Fig. 2: Ikot Ekpene major traffic hotspot

The road traffic hotspot is the environment where Aba Road, Umuahia Road, and Uyo Road converge in Ikot Ekpene Plaza. The development of the Ikot Ekpene Plaza provides short by-passes which regulate traffic flow in the city centre.

Measurement of Air Quality around the Hotspot

Table 2 Cumulative mean value of air quality measurements

Sample	NO ₂	SO ₂	H ₂ S	CO	NH ₂	Cl ₂	HCN	TVOC	CH ₂ O	PM _{2.5}	PM _{2.10}
Code	(ppm)	(ppm)	(ppm)	(ppm)	(ppn)	(ppm)	(ppm)	(mg/m ³)	(mg/m ³)	(mg/m ³)	(mg/m ³)
AQ1	0.1	0.1	0.1	3.4	2.55	0.2	0.85	2.45	0.4	72.65	126.6
Control	0.0	0	0	1.1	0.9	0.1	0.2	1.9	0.2	73.4	129.5
MEAN	0.1	0.1	0.1	3.4	2.55	0.2	0.85	2.45	0.4	72.65	126.6
MIN.	0.1	0.1	0.1	3.4	2.5	0.2	0.8	2.4	0.4	71.8	124.7
MAX.	0.1	0.1	0.1	3.4	2.6	0.2	0.9	2.5	0.4	73.5	128.5
SD	0	0	0	0	0.070711	0	0.070711	0.070711	0	1.202082	2.687006
FMENV limit (1991)	0.04- 0.06	0.01- 0.1	-	10.0- 20.0	200.0						- 250(ug/m³)

The measurements were taken for fifteen days, in the mornings and in the evenings, from the 1th of July to 15th of July, 2025. Table 2 and figure 3 show the cumulative mean value of the recordings taken for the 15 days.

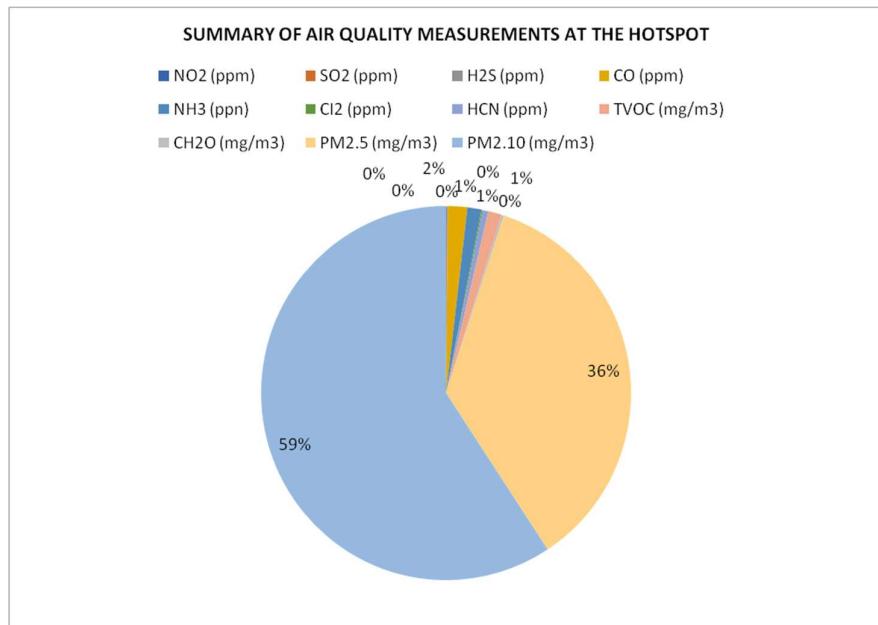


Fig. 3: Air quality level around the traffic hotspot

From Table 2, the level of nitrogen dioxide (NO_2), 0.1ppm has exceeded the limits, and sulphur dioxide (SO_2) 0.1ppm present in the atmosphere around the hotspot environment is at the brink of exceeding the limits stipulated by Federal Ministry of Environment. The control stations recorded no traces of the gases.

The mean value (3.4) of Hydrogen Sulphide (H_2S) in the atmosphere in the hotspot environment is within the stipulated limit. This is applicable also for Carbon Monoxide (CO), Ammonia (NH_3), Chlorine Gas (Cl_2), Hydrogen Cyanide (HCN), Total Volatile Organic Compounds (TVOC), Formaldehyde (CH_2O), and Particulate Matter (PM2.5, PM2.10) respectively.

Furthermore, the result also revealed that the air quality at the control station were far less polluted compared to the hotspot environment.

Assessment the Level of Air Pollution around the Hotspot

Findings from the study revealed higher concentration of air pollutants around the traffic hotspot in Ikot Ekpene Plaza when compared to the control station which witnessed less traffic.

Of all the air pollutants measured, the level of Nitrogen Dioxide (NO_2), and Sulphur Dioxide (SO_2) were the most dominant pollutants in the atmosphere when compared to others, and they exceeded the limits set by Federal Ministry of Environment, World Health Organization and National Institute for Occupational Safety and Health (NIOSH).

The meteorological records revealed an ambient environment which will encourage ambient air quality in the city if anthropogenic activities are moderated.

Conclusion

With the increasing cases of air pollution related health challenges and fatality globally, the need for ambient air quality in urban environment is imperative. Some of the gases measured have exceeded permissible exposure limits set by Federal Ministry of Environment, World Health Organization and National Institute for Occupational Safety and Health (NIOSH). This therefore calls for quick response such as development of transportation plan to address the decaying urban air quality witness around Ikot Ekpene Plaza.

Recommendations

- There is urgent need for the sensitisation of the public, vendors, and transport workers about the health risks associated with exposure to outdoor air pollution. Continuous exposure to pollutants such as Nitrogen Dioxide (NO_2), and Sulphur Dioxide (SO_2) which is found to be significant at the

traffic hotspot is highly detrimental to human health as it exposes the human system to risk of health challenges such as cardiovascular and respiratory disease, stroke, chronic obstructive pulmonary disease, cancer and adverse birth outcomes.

- There is an urgent need for public transportation plan, policy and scheme in Ikot Ekpene. This will regulate the operation of mass transit, and further reduce traffic congestion which contributes significantly to air pollution. Good traffic management plan, which will reduce idling of vehicles, a major contributor to high Nitrogen Dioxide (NO₂), and Sulphur Dioxide (SO₂) in the atmosphere, will be guaranteed by a good transportation plan. Furthermore, an overpass is required to connect Aba Road and Uyo Road to ease traffic demand at the plaza as more articulated vehicles ply the route which also connects Cross River State to Abia State.
- Shelterbelt is required as buffer along the roads around Ikot Ekpene Plaza to help absorb pollutants from the air and act as a physical barrier. Also, community-based initiatives and awareness campaigns about air pollution and its effects should be encouraged.

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Agent Banking and Poverty Alleviation: An Empirical Study from Nigeria**Uduak Joseph Akpabio^{1*}****Sunday Akpan Ekere¹****&****Etieneobong Okopide Akpan¹**

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Abstract

Poverty remains a major socio-economic challenge in Nigeria despite several government interventions to promote financial inclusion. Many rural and low-income earners are grappling with lack of access to formal financial services and limited participation in economic activities. However, the impact to bridge the financial services gap between the banked, unbanked and underbanked through third-party agents is uncertain. This is where this study is motivated to examine the extent to which agent banking contributes to poverty alleviation in Nigeria. The study adopted ex post facto research design, while data was sourced from CBN statistical bulletins. The statistical technique was simple regression. Findings of the study have revealed that agent banking has no significant effect on human capital development. Similarly, the rising poverty profile of the people negates poverty reduction in the country. The study therefore, recommends that the Central Bank of Nigeria (CBN), in collaboration with the Nigerian Communications Commission (NCC), should regulate fees and charges imposed by telecom providers on agent banking transactions to curtail high cost that may discourage usage. Again, CBN should control processes, relationship and interest rates on loans by Fintech agency banking operators in Nigeria.

Keywords: agent banking, poverty alleviation and human capital development, financial inclusion, automated teller machine.

Introduction

The desire to grow earnings and market share has been an important objective of any banking establishment. In order to achieve poverty alleviation, financial inclusion, as a strategy, is being identified as a cardinal objective for the introduction of agent banking. Agent banking is gaining importance, as a contemporary business model by which financial institutions bring their services closer to the people at the grass root and in far-flung remote rural areas (Chude & Chude, 2014).

Agent banking also helps banks to divert existing customers from crowded branches thus providing a “complementary” and often more convenient channel of delivering banking products and services to under-banked and unbanked segments of the population. Other financial institutions especially in developing economies use agency banking to reach an additional client segment or geography underserved by financial or banking coverage. (Afande & Mbugua, 2015).

The Central Bank of Nigeria (2013) defined agent banking as the provision of financial services to a third party (agent) on behalf of a licensed deposit taking financial institution and mobile banking operator (principal). It is also meant to promote financial inclusion. The term ‘agent banking’ can as well be defined as the process whereby an agent or operator, acts in some capacity on behalf of a financial institution. (Chude & Chude, 2014).

According to Ivantury et al. (2006), agent banking and mobile banking operations could be of benefit to the clients in the following ways; lower transaction cost by being closer to clients home, customers can therefore make withdrawals or deposit little amounts without incurring extra costs like transport to a bank's branch, longer hours of operations since this businesses operate for longer hours than banks, shorter lines than in branches, more accessible for illiterates and the very poor who might feel intimidated in branches. Therefore, customers save on time that they would otherwise have had to make a trip to a bank's branch, and the time they have to wait in line to be served.

Business operations are also made easier, with more flexibility, employment opportunities, training and mentorship. Subsistence earnings customers frequently feel more relaxed performing their transactions at their local agent, which is in contrast to going to a physical bank's branch. To add to this, agent bankers and mobile banking operators, can depend on available retail banking facilities, which converts to reduced launching and operating costs.

CBN had initiated steps to unlock financial services to non-core licensed banking operators. To add to this, guidelines for the regulation of agent banking and mobile banking operators, were issued by CBN (CBN, 2013). The guideline provides for categorisation based on an agent's banking data base which is subdivided into

super-agent, sole agent and sub agent. Financial services are made available via channels such as restaurants, provision stores, filling stations and various other retail outlets. Furthermore, the guideline allows the operators to offer the following services: cash deposits and withdrawals, transfers, bills collection and payment, balance inquiry, account opening and documentation (Nwankwo & Nwankwo, 2014).

Owing to the evolving competition and advancement in the financial system in the present period has resulted in all banks researching on how to innovate on the feasible methods to expand and enhance clients' accessibility and profitability with a view to still command their market share. As a follow through, Agent-banking has been recommended by the CBN as one of the viable strategies towards of providing broader service delivery by banks to customers.

Additionally, most regions in Africa generally and Nigeria specifically have financial service providers finding it hard and pointless to plant branches in the hinterlands, which makes for the requirement of third parties (Agents) to deliver banking services to individuals in those regions. The setback is on how to create a connection between agent banking and customers accessibility to foster financial inclusion in Nigeria considering their existence, spread, size and availability of IT infrastructure which has called for this study.

A comprehensive economic growth cannot be achieved without consummating clear and targeted agenda to reduce poverty via access to finance. Against this back drop, the study seeks to discuss the fundamentals of agent banking towards the paramount goal of poverty alleviation.

Statement of the Problem

The initiation of agency banking has generated some recognition to Nigeria because of various types of service rendered by agency banking. Some of the services provided by agency banking include but not limited to account opening balance enquiry, deposit and cash withdrawal, mini-statements generation, funds transfer (local), bills payment, taxes payments, tenement rates, utilities, subscriptions, payment of salaries, collection of bank mails and cheque book request and collection, stop cheque, block cards. However, most of these services rendered through agency banking in the country are hindered by different issues, such as poor network service which, most of the time, lead to incomplete transactions, which constitute a problem between the agent and the Nigerian (Akighir et al. 2020).

Likewise, agency banking provides services at a reduced charge to Nigerians which supplements financial inclusion by spreading banking and financial services to the under banked and unbanked residents. However, agency banking exposes agent

bankers to higher expenses, especially in the form of charges by the bank, cost of renting an office, payment of government tax, rates, electricity bills and this may have an adverse effect on the operators of agency banking in the country (Ulokoaga, 2020).

Additionally, agency banking also helps ensure quick service are offered to study in payment of their fees and levies. However, most students make complaints of network failure which most Nigerians accounts will debit without getting the needed service and this most of the time delayed the students in undertaking other activities of the day (Ogbebor, 2018). Finally, it is observed that, despite the continued adoption of agency banking by assorted banks in Nigeria, there is no empirical proof that displays how agency banking sway poverty alleviation in Nigeria with the use of the proxies adopted in this study.

Objectives of the Study

The main objective of this study is to analyse, based on evidence, the impact agent banking will have on alleviation of poverty in Nigeria. The specific objectives of the study are:

- i. To examine the effect of agent banking on human capital development in Nigeria
- ii. To evaluate the impact of agent banking on poverty reduction in Nigeria

To guide the study, two research questions were asked:

- i. How do agency banking affect human development index (HDI) in Nigeria?
- ii. How do agency banking impact on poverty reduction index in Nigeria?

This resulted in the following Research Hypotheses:

H0₁: Agency banking has no significant effect on human development index (HDI) in Nigeria.

H0₂: Agency banking has no significant impact on poverty reduction index in Nigeria.

Literature Review

Concept of Agent Banking

Agent banking is a delivery channel in which banks or licensed financial institutions appoint third-party individuals or entities to provide financial services on their behalf, particularly in areas without a formal bank presence (Central Bank of Nigeria [CBN], 2013). According to Investopedia (2021), an agent bank performs financial

services for another bank or consortium of banks, including deposits, withdrawals, and fund transfers. The concept emerged as a response to the need for cost-effective and inclusive financial systems.

In Nigeria, the Central Bank of Nigeria (CBN) formally introduced the agent banking model in 2012 under its *National Financial Inclusion Strategy (NFIS)*. The approach seeks to bridge the gap between the banked and unbanked populations by leveraging digital platforms and agent networks to enhance accessibility and promote a cash-lite economy (CBN, 2020).

Mechanisms and Models of Agent Banking

Agent banking in Nigeria operates through various channels, including Automated Teller Machines (ATMs), Point of Sale (POS) terminals, mobile banking, and internet banking. These channels enable customers to perform transactions conveniently and at lower costs. According to the Nigerian Communications Commission (NCC, 2022), there were over 226 million active mobile subscriptions in Nigeria, representing a strong foundation for agent-based financial service expansion.

CBN has licensed several mobile money operators and super-agents to drive inclusion and competition. Companies such as Opay, Paga, Palmpay, and NowNow provide mobile payment solutions and agent networks across the country. These platforms complement deposit money banks, particularly in underserved areas, by offering faster and more flexible financial services (Nairametrics, 2023).

Financial Inclusion and its Link to Agent Banking

Financial inclusion refers to the process of ensuring access to useful and affordable financial products and services that meet the needs of individuals and businesses—transactions, savings, credit, and insurance—delivered responsibly and sustainably (World Bank, 2018). It is a cornerstone for reducing poverty, promoting entrepreneurship, and achieving inclusive economic growth.

Agent banking plays a crucial role in advancing financial inclusion by extending formal banking services to populations traditionally excluded from the financial system. Through agent networks, customers in remote communities can open accounts, deposit and withdraw funds, transfer money, and pay bills without visiting bank branches. According to CBN (2021), agent banking has contributed significantly to the reduction of financially excluded adults in Nigeria—from 46.3% in 2010 to 36.8% in 2020. However, persistent barriers such as infrastructural deficits, weak digital literacy, and transaction costs continue to limit full inclusion.

Challenges of Agent Banking in Nigeria

Despite its potential, agent banking in Nigeria faces several constraints. These include limited POS infrastructure, poor interoperability between service providers, and weak regulatory enforcement in rural areas (Olayemi, 2020). Network failures, inadequate cash float management, and lack of financial literacy among agents also hinder smooth operations. Addressing these bottlenecks requires collaborative efforts between the CBN, financial institutions, and telecommunication firms to strengthen the digital ecosystem.

Theoretical Framework

This study is underpinned by the **Technology Acceptance Model (TAM)** (Davis, 1989) and the **Diffusion of Innovations Theory** (Rogers, 1962). TAM suggests that an individual's decision to adopt technology is influenced by perceived usefulness and ease of use. The Diffusion of Innovations Theory explains how new technologies spread through social systems over time. These theories jointly justify how awareness, trust, and perceived benefits shape the adoption of agent banking and its subsequent impact on financial inclusion, poverty reduction, and human capital development in Nigeria.

Empirical Review

Agent Banking and Financial Inclusion

Empirical studies consistently highlight the positive role of agent banking in enhancing financial inclusion. Aduda and Kalunda (2012) found that agency banking in Kenya significantly improved access to financial services among rural dwellers. In Nigeria, Okoye and Ezejiofor (2021) reported that agent banking positively influenced financial inclusion, although infrastructural challenges constrained its efficiency. Similarly, Inegbedion and Obadiaru (2020) confirmed that mobile banking and POS usage have expanded financial access, particularly in semi- urban communities.

Agent Banking and Poverty Reduction

Empirical evidence on the effect of agent banking on poverty reduction remains mixed. Chima and Chukwu (2019) observed that agent banking enhanced small-scale business operations, facilitated micro-savings, and improved household income. However, Olayemi (2020) found that despite increased access, high transaction charges and network failures reduced its overall poverty reduction potential. These findings suggest that while agent banking promotes inclusion, its impact on poverty is conditional on affordability and consistency of service.

Agent Banking and Human Capital Development

Onuoha and Otu (2021) revealed that agent banking has contributed to job creation and entrepreneurship, as many young Nigerians now operate as agents or provide support services within the ecosystem. Adebayo (2022), however, argued that many agents lack adequate training and financial literacy, limiting the broader developmental outcomes of the sector.

Comparative Studies

Evidence from other developing countries reinforces the transformative role of agent banking. Mwangi and Brown (2020) found that agent banking in Tanzania reduced operational costs for banks while improving accessibility. Similarly, Bhatt and Chatterjee (2021) observed that mobile and agent banking in India significantly accelerated financial inclusion among low-income households.

Summary of Empirical Gaps

Although most prior studies affirm the positive relationship between agent banking and financial inclusion, few have comprehensively examined its simultaneous effects on human capital development and poverty reduction in Nigeria. Furthermore, many existing studies focus on accessibility metrics rather than socio-economic outcomes. This study seeks to fill this gap by empirically evaluating the extent to which agent banking influences financial inclusion, human capital development, and poverty reduction within the Nigerian context.

Method

The *ex-post facto* research design was used for the study. The data was obtained from CBN statistical bulletin. The data covered from 2010 to 2022. Hypothesis 1 and 2 were analysed using simple regression.

The model for hypothesis 1

$$HCD = F(AB)$$

$$HCD = \beta_0 + \beta_1 AB + Ut$$

Where:

HCD = Human capital development proxy by Human capital development index

AB = Agent Banking proxy by Automated Teller Machine

μ = error term

α = is the intercept

β_1 = are the parameters estimate or coefficients in the equation

it = firm i, time t

A priori expectation for the regression parameters $\beta_0 = \beta_1 > 0$,

The model for hypothesis 2

PRI = F(AB)

PRI = $\beta_0 + \beta_1 AB + \mu$

Where:

PRI = Poverty reduction proxy by poverty reduction index

AB = Agent banking proxy by Automated Teller Machine

μ = error term

α = is the intercept

β_1 = are the parameters estimate or coefficients in the equation

it = firm i, time t

A priori expectation for the regression parameters $\beta_0 = \beta_1 > 0$,

Result and Discussion

Simple Regression Result for Hypothesis One

Dependent Variable: HCD

Method: Simple Regression

Date: 03/24/24 Time: 12:14

Sample (adjusted): 1 13

Included observations: 13 after adjustments

Table 1

Simple regression result for hypothesis one

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AB	1.019265	1.117281	0.912272	0.5321
C	1.104327	1.042168	1.059643	0.2097
R-squared	0.502347	Mean dependent var		1.927521
Adjusted R-squared	0.501026	S.D. dependent var		3.192751
S.E. of regression	3.192382	Akaike info criterion		11.19276
Sum squared resid	3.119206	Schwarz criterion		12.19261
Log likelihood	-2.102932	Hannan-Quinn criterion.		19.19020

F-statistic	0.102831	Durbin-Watson stat	1.192717
Prob(F-statistic)	0.293000		

Source: E-Views 12 computation

From the simple regression results as shown in Table 1, the adjusted R-squared of 0.501026 revealed that 50% of the total variations in the dependent variable agent banking (AB) was accounted by the explanatory variable (human capital development), while the remaining 50% was explained by the stochastic variable in the model. Also, a unit increase in agency banking (AB) will increase human capital development by 1.019265 units.

Decision on Hypothesis 1

H0₁: Agent banking has no significant effect on human development index (HDI) in Nigeria

The p-value (0.5321) of agent banking in Table 1 is greater than 0.05. Hence, the null hypothesis (H_{01}) was accepted and the alternative hypothesis rejected that agent banking has no significant effect on human development index (the proxy for human capital development) in Nigeria.

Simple Regression Result for Hypothesis Two

Dependent Variable: PRI

Method: Simple Regression

Date: 03/24/24 Time: 12:14

Sample (adjusted): 1 13

Included observations: 13 after adjustments

Table 2

Simple regression result for hypothesis two

Variable	Coefficient	Error	Std.	t-Statistic	Prob.
AB	1.012375	1.829311			
C	1.120431	1.021087	0.553418 1.097292		0.7871 0.1176

R-squared	0.528277	Mean dependent var	1.910911
Adjusted R-squared	0.512031	S.D. dependent var	3.110751
S.E. of regression	2.110982	Akaike info criterion	4.124936
Sum squared resid	1.123236	Schwarz criterion	5.192831
		Hannan-Quinn	
Log likelihood	-2.132102	criterion	1.138940
F-statistic	0.119203	Durbin-Watson stat	1.135467
Prob(F-statistic)	0.212080		

Source: E-Views 12 computation

From the simple regression results as shown in table 2, the adjusted R-squared of 0.512031 revealed that 49% of the total variations in the dependent variable agent banking (AB) was accounted by the explanatory variable (poverty reduction index), while the remaining 49% was explained by the stochastic variable in the model. Also, a unit increase in agent banking (AB) will increase poverty reduction index by 1.012375 units.

Decision on Hypothesis 2

H₀₂: Agent banking has no significant effect on poverty reduction in Nigeria

The p-value (0.5321) of agent banking in Table 2 is greater than 0.05. Hence, the null hypothesis (H₀₂) was accepted and the alternative hypothesis rejected that agent banking has NO significant effect on poverty reduction in Nigeria.

Summary of Finding

The study revealed that:

- i. Agency banking has no significant effect on human capital development in Nigeria.
- ii. Agency banking has no significant impact on poverty reduction in Nigeria.

Conclusion

Agency banking has become one of the essential services in the banking industry in bringing services nearer to the Nigerians. This includes remote areas where banking service have been barely available. The introduction of agency banking by CBN in 2013 is seen as a solution to problems encountered by clients of financial services in

country in the hands of Deposit Money Banks and Micro Finance Banks in the process of carrying out their financial transactions.

However, most of these services rendered through agency banking in Nigeria is hampered by diverse issues such as poor network service which always led to incomplete transaction and generates problems between the agent and the clients. Hence, the study examined the relationship between agent banking and poverty alleviation in Nigeria.

Recommendations

The following recommendations were made by the researcher:

- CBN in collaboration with the Nigerian Communications Commission (NCC) should regulate the fees and charges earned by Telecom providers of network to agency banking as this contributes to cost of transactions.
- CBN should regulate and reduce the charges on agency banking transactions.
- CBN should control the interest rates on loans provided by Fintech Agency Banking operators.

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Culture, Consent, and Silence: Addressing Marital Sexual Violence and Victim-blaming in South-South Nigeria

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Abstract

Sexual violence within matrimony remains one of the least recognised yet most pervasive form of gender-based violence (GBV), with profound physical, psychological, and social consequences that undermine women's wellbeing. In Nigeria, cultural expectations, patriarchal norms, and religious interpretations often normalise coerced sex in marriage and silence survivors. This study explores lived experiences of marital sexual violence in South-South Nigeria, focusing on Oron (Akwa Ibom State), Ugep (Cross River State), and Yenagoa (Bayelsa State). Guided by Culture of Silence theory, it examines how silence is sustained and how community-level strategies may foster change. The study employed a qualitative design with 29 participants-survivors, community and religious leaders, selected through purposive and snowball sampling methods. Data were collected through semi-structured interviews, document analysis of policy texts and NGO reports to contextualise survivor narratives and institutional responses. Thematic analysis identified recurrent patterns, while ethical safeguards including informed consent and confidentiality were strictly observed. Findings revealed the existence of normalisation of sexual violence as "marital duty," patriarchal and religious reinforcement of silence, victim-blaming, emergent voices of change, and institutional gaps. The study contributes empirically by centring survivor voices, theoretically by extending Freire's framework to marital contexts, and practically, by informing community-based intervention.

Keywords: marital sexual violence, culture of silence, patriarchy, South-South Nigeria

Introduction

Sexual violence is one of the gravest violations of human rights, with consequences that extend beyond individual trauma to broader social and cultural structures. The United Nations (2006, p. 6) defines sexual violence as “Any sexual act, attempt to obtain a sexual act, or acts directed against a person’s sexuality using coercion, regardless of the relationship to the victim.” Forms of sexual violence include rape, sexual assault, harassment, coercion, and exploitation. Within Nigeria, these forms are widespread, but their most insidious expression is often found within matrimony, where silence, cultural norms, and patriarchal expectations normalise abuse and render it invisible. While this study focuses on marital sexual violence, it also recognises that other forms of sexual violence intersect with similar cultural and structural dynamics (Ojemeiri, Aondover, & Aruaye, 2022).

Despite progressive legislation such as the Violence Against Persons (Prohibition) Act of 2015, survivors continue to face barriers to justice and protection. Reports indicate that enforcement remains inconsistent, especially at state and community levels (Amnesty International, 2021). According to UN Women (2022), 13.2% of Nigerian women aged 15-49 reportedly experienced physical and/or sexual violence by an intimate partner in the preceding year, with the South-South region reflecting particularly troubling trends. In many of these communities, sex, as one participant explained, is viewed as one of the core things women “bring to the table” in marriage, reinforcing male entitlement and making resistance appear illegitimate. This cultural framing, combined with patriarchal and religious pressures, silences survivors and sustains abuse.

Patriarchy, religious expectations, and cultural silence converge to shape how sexual violence is perceived and addressed in Nigerian communities. Research demonstrates that women’s roles are often constructed around chastity, obedience, and silence, while men’s authority is reinforced by cultural and religious traditions (Chimuanya & Uyah, 2025). Within Christian and patriarchal contexts in the South- South, teachings that emphasise marital submission are sometimes interpreted in ways that obscure issues of consent, thereby deepening the culture of silence around marital rape and abuse (Uroko, 2025). Survivors who attempt to speak out risk secondary victimisation-blame, rejection, and stigmatisation-further discouraging disclosure.

Local scholarship on marital sexual violence is growing but remains limited in scope and geography. For example, Kazeem and Sunday (2025) document coercive strategies used to obtain sex in intimate relationships and highlight the continuing under-recognition of marital rape in Nigeria-pointing to the need for deeper, context-sensitive inquiry. Meanwhile, civil society organisations have become crucial front-line actors: the Mirabel Centre (Nigeria’s first Sexual Assault Referral

Centre) reports that they supported more than 9,000 survivors with medical and psychosocial services, and WARDC continues to provide pro bono (free-of-charge legal) support for women facing gender-based violence. Although institutional responses such as the Akwa Ibom State Gender-Based Violence Management Committee (AKSGBVMC) exist, survivors' lived realities demonstrate that such structures have yet to achieve meaningful grassroots penetration. For instance, while Akwa Ibom has domesticated the Violence Against Persons (Prohibition) Law and established a state-level GBV committee, gaps remain in outreach and survivor-centred responsiveness (Invictus Africa, 2024). Recent policy announcements, such as the creation of a special offences court for sexual and domestic violence cases (Udonquak, 2025), further demonstrate state-level recognition of the problem but also highlight the distance between institutional frameworks and community realities.

This study therefore positions itself at the intersection of cultural anthropology, critical pedagogy, and gender justice, amplifying the voices of survivors of sexual violence in marital contexts while also engaging the perspectives of community and religious leaders. By foregrounding survivor narratives and examining the patriarchal and cultural discourses that sustain silence, the study contributes not only to academic knowledge but also to advocacy for systemic change.

Accordingly, the study is guided by the following objectives to:

- i. Understand the lived experiences of survivors of sexual violence in navigating cultural expectations, religious values, and patriarchal norms.
- ii. Identify community-level strategies for addressing sexual violence by challenging harmful cultural narratives and reducing victim-blaming.

From these objectives, two research questions emerge:

- i. How do survivors of sexual violence in Oron (Akwa Ibom State), Ugep (Cross River State), and Yenagoa (Bayelsa State) experience and navigate cultural expectations, religious values, and patriarchal norms, particularly within matrimony?
- ii. What community-level strategies exist or can be developed in Oron, Ugep, and Yenagoa to address sexual violence, challenge harmful cultural narratives, and reduce victim-blaming?

By bridging survivor testimonies with community-level insights, this work contributes to the global discourse on sexual violence while situating the issue within the lived realities of the South-South Nigerian context. Ultimately, it aims to inform both scholarship and practice, promoting survivor-centred interventions and community transformation.

Literature Review

Conceptual Review

Sexual violence refers to any act of a sexual nature carried out without consent, through coercion, intimidation, or force, and includes rape, assault, harassment, and sexual exploitation (United Nations, 2006). Within matrimony, such violence assumes distinctive forms because cultural, religious, and patriarchal ideologies often disguise coercion as a legitimate marital right (Kazeem & Sunday, 2025). "Marital sexual violence" thus encompasses all sexual acts within marriage that occur without the freely given consent of one partner. In the South-South Nigerian context, this abuse is sustained by cultural narratives that define sexual submission as a wife's duty and silence as virtue (Uroko, 2025). Patriarchy functions as a system that privileges male authority in both private and public spaces, while religious interpretations reinforce obedience and endurance as expressions of faith and morality.

Cultural and Religious Dimensions of Marital Sexual Violence

The normalisation of sexual violence within marriage in Nigeria is closely linked to patriarchal and religious constructs. In many communities, sexual access to a wife is considered an inalienable marital right, supported by selective interpretations of scripture and traditional teachings. Chimuanya & Uyah (2025) observed that patriarchal and faith-based discourses on social media reinforce this ideology, presenting female submission as a moral expectation while silencing dissenting or reformist voices. Similarly, Uroko (2025) highlighted how cultural expectations of silence and endurance sustain a pattern of gendered oppression, particularly in Christian-dominated southern Nigeria, where resistance is often framed as sin or rebellion. These beliefs not only legitimise marital coercion but also shape communal attitudes that discourage survivors from speaking out.

Institutional and Policy Context

Despite legislative progress, such as the Violence Against Persons (Prohibition) Act (2015), enforcement remains inconsistent. Amnesty International (2021) and Invictus Africa (2024) document persistent gaps in implementation and public awareness, noting that survivors often encounter insensitive law enforcement and inadequate protection. The Akwa Ibom State Gender-Based Violence Management Committee (AKSGBVMC) and other state-level mechanisms represent important advances but remain limited in reach, especially in rural and semi-urban communities. These institutional weaknesses compound the effects of cultural silence, leaving survivors without meaningful redress or rehabilitation.

Empirical Insights and Emerging Gaps

Empirical studies consistently demonstrate that cultural and religious expectations intersect to perpetuate silence and under-reporting. Kazeem and Sunday (2025) found that coercive sexual acts within intimate relationships remain under-recognised as violence due to entrenched norms around marital sex. NGOs such as the Mirabel Centre and Women Advocates Research and Documentation Centre (WARDC) provide evidence of these challenges through case data and advocacy reports showing that survivors struggle to access justice and psychosocial support. While these studies and interventions illuminate structural and cultural barriers, few have examined marital sexual violence in specific regional contexts such as the South-South, where religion, culture, and patriarchal values uniquely converge. This gap underscores the need for deeper, context-sensitive inquiry—an area to which the present study contributes.

Theoretical Framework

Culture of Silence Theory

This study is anchored in Paulo Freire's Culture of Silence theory (Freire, 1970), which posits that oppression is maintained when marginalised groups internalise dominant ideologies and are denied opportunities for critical reflection. Freire conceptualises silence not merely as absence of speech but as a socially constructed condition in which individuals learn to accept injustice as inevitable.

Applied to the present study, the theory illuminates how South-South Nigerian women are socialised into obedience and endurance through patriarchal traditions and selective religious teachings. The expectation that a woman's sexual availability constitutes her marital duty exemplifies Freire's notion of structural oppression, where cultural norms suppress awareness and resistance.

Freire's emphasis on conscientisation—the awakening of critical consciousness through dialogue and education—guides the interpretation of emergent voices of change identified in this research. The framework thus provides a lens for connecting personal narratives of silence to broader systems of domination, while offering a pathway for transformation through community-based education, advocacy, and reinterpretation of cultural values.

Materials and Methods

This study was carried out in selected communities in the South-South region of Nigeria, specifically Oron in Akwa Ibom State, Ugep in Cross River State, and Yenagoa in Bayelsa State. These locations were chosen because of their cultural and

religious diversity, as well as the persistence of patriarchal traditions that often shape marital relationships and responses to sexual violence.

Oron, a coastal community in Akwa Ibom State, is predominantly inhabited by the Oron people, a subgroup of the Ibibio ethnic nationality. Traditional leadership is vested in village heads and council elders who mediate domestic and communal conflicts. Christianity—mainly Catholic and Pentecostal denominations—dominates religious life, promoting moral codes that emphasise marital obedience and female chastity. Although exposure to urban influences and education has introduced some shifts, traditional gender ideologies remain deeply ingrained, particularly in rural areas where sexual topics are considered private or taboo.

Ugep, located in Cross River State, is the cultural heart of the Yakurr ethnic group. The community is renowned for its Leboku New Yam Festival, which celebrates fertility, family honour, and continuity—values that reinforce traditional gender roles. The social order is hierarchical, with elders and male heads of households exercising authority in both public and private spheres. Women's identities are often defined through their domestic and reproductive roles, while religious life blends Protestant Christianity with traditional customs. Marital issues, including sexual relations, are generally viewed as private matters that should not be discussed outside the home.

Yenagoa, the capital of Bayelsa State, represents a semi-urban mix of traditional Ijaw culture and modern socio-economic influences. As the administrative hub of the Niger Delta, it hosts a wide range of Christian denominations; Anglican, Pentecostal, and Charismatic churches among them. Despite its urban character, patriarchal structures remain dominant, with men occupying key roles in both religious and traditional institutions. In many Ijaw families, women are expected to maintain respect and endurance in marriage, and challenging male authority, especially in sexual matters, remains socially discouraged. Economic pressures and oil-related migration have also introduced new vulnerabilities for women, including exposure to domestic and sexual abuse.

Across all three sites, patriarchal traditions, religious interpretations, and cultural norms converge to sustain silence around sexual violence within matrimony. Discussions about sex or consent in marriage are considered inappropriate, and women who question their husbands' authority risk being labelled rebellious or unfaithful. This shared ethnographic context provides the socio-cultural foundation for understanding the persistence of marital sexual violence and the mechanisms through which silence and stigma are reproduced in South-South Nigeria.

The total sample consisted of 29 participants, distributed across the three locations: 10 from Oron, 9 from Ugep, and 10 from Yenagoa. Survivors of sexual violence were interviewed alongside community and religious leaders.

Participants were recruited through a combination of purposive and snowball sampling. Survivors were selected purposively to ensure that the study captured lived experiences of sexual violence within matrimony, while snowball sampling was used to identify additional participants through referrals, given the sensitivity and stigma surrounding the subject. The sample included 15 survivors of marital sexual violence, 8 community leaders, and 6 religious leaders. The community leaders comprised village heads, women's group coordinators, and youth leaders who represent traditional and civic structures within their respective communities. The religious leaders were drawn from Christian denominations, predominantly Catholic, Pentecostal, and Mainline Protestant churches, which are the dominant faith groups across the study sites. These leaders were included because of their significant influence in shaping cultural expectations, sustaining silence, and framing responses to sexual violence within marriage.

Data collection relied on semi-structured in-depth interviews, which allowed participants to speak freely about their experiences and perspectives. Survivors recounted personal encounters of marital sexual violence, while leaders reflected on cultural, religious, and patriarchal narratives that sustain silence and discourage open discussions on consent within marriage. In addition to interviews, a limited document analysis was undertaken, focusing on two key sources: The United Nations' 2006 Study on Violence Against Women, which provides an authoritative definition and categorisation of sexual violence, including marital contexts; and the Amnesty International 2021 report on sexual violence in Nigeria, which highlights the systemic and structural challenges survivors face. These documents were analysed to provide international and national context for the findings, and to situate participants' narratives within broader policy and advocacy debates.

All interviews were transcribed and analysed using thematic analysis. Transcripts were carefully coded and recurring patterns were grouped into themes that aligned with the research objectives and questions. An inductive approach was adopted to allow themes to emerge from participants' accounts, while insights from document analysis were used to triangulate and strengthen the credibility of the findings.

Ethical considerations guided all stages of the research. Informed consent was obtained from every participant, and confidentiality was maintained by anonymising their identities and securely storing data. Given the sensitivity of the topic, interviews were conducted in a manner that was ethically sensitive and methodologically neutral. It adhered to trauma-informed research principles

designed to ensure participants' emotional safety while maintaining objectivity. The researchers remained reflexive throughout the process; acknowledging potential biases and taking deliberate steps to minimise their influence on data collection and interpretation to enhance the validity and reliability of the findings. Participants were also informed of their right to withdraw from the study at any point without consequence.

Results

The study analysed data from 29 in-depth interviews conducted with survivors of sexual violence, community leaders, and religious leaders across Oron, Ugep, and Yenagoa. The analysis yielded several interconnected themes that highlight experiences of sexual violence within matrimony, situated within broader cultural and religious frameworks.

Theme 1: Normalisation of Sexual Violence within Marriage

Survivors frequently described forced sexual relations as an unavoidable "marital duty." Cultural expectations and religious teachings reinforced silence, leaving many women unable to resist.

"In our marriage, he said my body is his right...that, that is what I bring to the table. If I refuse, it means I am not a good wife" (Survivor, p. 4, Oron).

"My pastor told me a woman cannot deny her husband. I cried, but I kept quiet" (Survivor, p. 9, Ugep).

Theme 2: Patriarchal and Religious Discourses Reinforcing Silence

Community and religious leaders often acknowledged the existence of marital sexual violence but refrained from naming it as "rape." Instead, patriarchal traditions and selective religious interpretations emphasised obedience.

"In our tradition, a woman cannot deny her husband. That is how peace is maintained" (Community elder, p. 11, Ugep).

"The Bible says the wife must submit. So, sometimes, even if it is forceful, it is still part of marriage" (Religious leader, p. 16, Yenagoa).

Theme 3: Victim-Blaming and Secondary Stigmatisation

Survivors who attempted to disclose abuse often faced blame or dismissal. Instead of receiving protection, many were told to endure, pray, or preserve family honour.

"When I told my aunt, she said: 'It is shameful to say such things about your husband. Endure it.'" (Survivor, p. 7, Oron).

"One church elder told me that if I was truly prayerful, my husband would change. So, the fault was mine" (Survivor, p. 18, Yenagoa).

Theme 4: Emergent Voices of Change

Amid entrenched silence, some community and religious leaders particularly younger ones offered counter-narratives that challenged harmful norms. These perspectives pointed toward community-level strategies for addressing sexual violence.

“We cannot continue to tell women to keep quiet. If there is no consent, it is wrong—even in marriage. I now preach this openly” (Religious leader, p. 22, Yenagoa).

“As leaders, we must change the story. Education in schools and churches is the way to start breaking the silence” (Community youth leader, p. 13, Ugep).

Theme 5: Document Analysis Insights

Document analysis reinforced the findings of this study. The United Nations (2006) report underscores that marital sexual violence is often invisible within cultural and religious frameworks, while Amnesty International (2021) notes systemic failures in protecting survivors in Nigeria. Together, these documents provide context for participants’ experiences of silence, stigma, and limited avenues for justice.

Table 1*Summary of Results*

S/N	Theme	Sub-Theme	Illustrative Quotes	Linked Objective
1.	Normalisation of sexual violence within marriage	Marital duty as justification	"In our marriage, he said my body is his right... that, that is what I bring to the table. If I refuse, it means I am not a good wife" (Survivor, p. 4, Oron).	Objective 1
		Religious justification	"My pastor told me a woman cannot deny her husband. I cried, but I kept quiet" (Survivor, p. 9, Ugep).	Objective 1
2.	Patriarchal and religious discourses reinforcing silence	Tradition of obedience	"In our tradition, a woman cannot deny her husband. That is how peace is maintained". (Community elder, p. 11, Ugep)	Objective 1
		Scriptural interpretations	"The Bible says the wife must submit. So, sometimes, even if it is forceful, it is still part of marriage" (Religious leader, p. 16, Yenagoa).	Objective 1
3.	Victim-blaming and secondary stigmatisation	Family dismissal	"When I told my aunt, she said: 'It is shameful to say such things about your husband. Endure it.'" (Survivor, p. 7, Oron).	Objective 1
		Spiritualising abuse	"One church elder told me that if I was truly prayerful, my husband would change. So, the fault was mine" (Survivor, p. 18, Yenagoa).	Objective 1
4.	Emergent voices of change	Recognition of consent in marriage	"We cannot continue to tell women to keep quiet. If there is no consent, it is wrong – even in marriage. I now preach this openly" (Religious leader, p. 22, Yenagoa).	Objective 2
		Community education as strategy	"As leaders, we must change the story. Education in schools and churches is the way to start	Objective 2

			breaking the silence” (Community youth leader, p. 13, Ugep).
5.	Document analysis insights	Global and national evidence	UN (2006) notes marital sexual violence is culturally invisible; Amnesty International (2021) shows systemic failures in Nigeria. Objective 1 & 2

Discussion

The findings of this study highlight the complex intersection of culture, patriarchy, and religion in shaping how sexual violence is experienced and understood within matrimony in South-South Nigeria. Survivors' narratives and leaders' reflections demonstrate that sexual violence in marriage is not only normalised but also sustained by powerful cultural and religious discourses that construct women's sexuality as a resource for male entitlement.

Marital Duty and the Commodification of Women's Sexuality

One of the most striking findings was the normalisation of coerced sex within marriage, framed as a wife's "duty" or "obligation." In the study area, participants repeatedly suggested that sex is one of the most significant contributions women "bring to the table" in marriage. This reflects a commodified view of women's bodies, where their value is tied to sexual availability rather than autonomy. Such narratives are consistent with Chimuanya and Uyah (2025), who observed that patriarchal traditions in Nigeria perpetuate gendered power imbalances by positioning women as subordinate and sexually obligated. Globally, the United Nations (2006) notes that marital rape remains one of the least recognised yet most widespread forms of sexual violence, precisely because of such cultural constructions of women's roles.

Religion, Patriarchy, and the Culture of Silence

Religious interpretations also played a central role in sustaining silence. Survivors' accounts revealed that Christian teachings on submission were often invoked to legitimize forced sex. This echoes Uroko (2025), who argued that Nigerian religious institutions sometimes reinforce patriarchy by framing women's endurance of abuse as virtuous. The reluctance of leaders to name marital rape as violence reflects what Amnesty International (2020) identified as a systemic failure in Nigeria: the invisibility of marital sexual violence in both law and community practice. Together, these cultural and religious discourses converge to produce a culture of silence, where disclosure is discouraged and survivors face secondary stigmatisation.

Victim-Blaming and the Burden of Silence

The study also revealed persistent patterns of victim-blaming. Survivors who attempted disclosure were often told to "endure" or to pray, rather than seek justice. Such responses not only silence women but also reproduce trauma. According to UN Women (2022), this aligns with global trends, where underreporting of intimate partner violence is driven by stigma and social pressures. In the South-South, however, this burden is compounded by the expectation that a woman's worth in marriage is tied to her ability to satisfy her husband sexually-making resistance appear culturally illegitimate.

Emergent Voices and Community Strategies

Despite these challenges, some participants offered counter narratives that reflect Objective 2 of this study: identifying strategies for change. Younger leaders emphasised the importance of education in schools, churches, and communities to redefine marital consent and dismantle harmful narratives. Such emergent voices of change are promising, reflecting what scholars describe as "cultural reinterpretation" - where religious and traditional discourses are re-examined to promote gender justice. This aligns with international advocacy efforts, such as those by UN Women, which stress that ending sexual violence requires both policy reform and grassroots cultural transformation.

Institutional Gaps and the Need for Responsiveness

At the state level, structures such as the Akwa Ibom State Gender-Based Violence Management Committee (AKSGBVMC) demonstrate government recognition of the problem and commitment to addressing it. However, the experiences shared by participants in this study indicate that such structures are not yet sufficiently visible or accessible at the grassroots. Survivors in rural and semi-urban communities continue to face silence, stigma, and limited avenues for help. This gap underscores the need for institutions to move beyond policy presence to active outreach and survivor-centred responsiveness, ensuring that interventions reach those most affected.

Conclusion

By centring survivors' lived experiences, this study contributes to the global discourse on marital sexual violence, an area often underexplored in African scholarship. It demonstrates that in South-South Nigeria, sexual violence within matrimony is normalised through cultural and religious narratives that commodify women's sexuality. At the same time, it identifies community-based strategies - particularly education, reinterpretation of religious teachings, and institutional outreach - as entry points for change. These findings not only deepen understanding

of the cultural underpinnings of marital rape but also provide actionable insights for advocacy and intervention at the community level.

Recommendations

Based on the findings, the following recommendations are proposed:

- **Community education and awareness:** The study found that cultural expectations and community-level silence perpetuate marital sexual violence. To counter this, grassroots education programs should be developed to redefine marital consent as a human right. These initiatives should integrate community dialogues, media sensitisation, and local advocacy led by traditional and women's groups to dismantle the notion of sex as a woman's "duty" or sole contribution to marriage.
- **Religious reinterpretation and engagement:** Findings revealed that religious narratives often reinforce silence and justify abuse under the guise of obedience. Religious leaders across denominations should be engaged to promote survivor-centred interpretations of scripture, emphasising mutual respect, consent, and dignity within marriage. Faith-based organisations can also serve as safe spaces for confidential counselling and public advocacy.
- **Strengthening legal enforcement:** The study identified weak enforcement of existing legal frameworks such as the Violence Against Persons (Prohibition) Act (2015) and its state-level adaptations. Training programs for police officers, judicial staff, and healthcare providers are needed to build sensitivity, ensure accountability, and improve responsiveness in handling marital sexual violence cases.
- **Support services for survivors:** Survivors' testimonies indicated gaps in access to psychosocial and legal support. Establishing community-based safe spaces and expanding existing services such as counselling, legal aid, and emergency shelters will improve access to justice and healing. Partnerships between NGOs like the Mirabel Centre and state agencies should be strengthened to ensure continuity of care.
- **Institutional responsiveness and outreach:** The findings highlighted limited grassroots engagement by state-level institutions. The Akwa Ibom State Gender-Based Violence Management Committee (AKSGBVMC) and related bodies should enhance outreach to rural and semi-urban areas through regular community consultations and mobile response teams. Survivor feedback mechanisms should be integrated into program design to ensure contextually relevant interventions and greater accountability.

Limitations and Future Research

While this study provides valuable insights into the cultural and religious dimensions of marital sexual violence in South-South Nigeria, it is limited by its qualitative scope and small sample size. The reliance on self-reported experiences may also have been influenced by social desirability bias and the sensitivity of the subject matter. Future research should employ mixed-method approaches and larger, comparative samples across regions to explore variations in marital sexual violence and the effectiveness of community-based interventions. Further ethnographic studies could also investigate how evolving gender discourses, particularly through social media and youth activism, reshape norms of silence and consent within marriage.

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Comparative Analysis of Macro Elemental Compositions of the Juice and Seeds of *Morinda Citrifolia* Fruit

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Abstract

Morinda citrifolia fruit has been used mostly as drug supplement in most communities and as such needs to know the elemental compositions is necessary. Base on the analysis the following results were obtained. The seeds and the juice were subjected to analysis using standard methods proposed by Association of Analytical Chemists (AOAC, 2000) and Atomic Absorption Spectrophotometer (AAS). The results in milligrams per 100 grams (mg/100g) on the seeds were: 60.707 \pm 0.009 sodium, 31.017 \pm 0.015 calcium, 78.054 \pm 0.076 magnesium, 107.353 \pm 0.095 phosphorus, and 116.641 \pm 0.213 potassium while the concentration on the juice were; 37.406 \pm 0.008 sodium, 33.552 \pm 0.016 calcium, 54.389 \pm 0.001 magnesium, 76.074 \pm 0.069 phosphorus and 68.246 \pm 0.024 potassium respectively. Comparing the result obtained from the analysis on WHO Recommended Dietary Intakes (RDI), phosphorus and potassium was significant in both the seeds and the juices. This was followed by magnesium and sodium, while calcium contained moderate amount in both samples. The results suggest that the plant is a valuable source of essential elements, and is sufficient in addressing macronutrient deficiencies. Therefore, the plant is a good dietary supplement.

Keyword: macro element, comparative, juice, seeds, morinda citrifolia

Introduction

Plants are of great medicinal values, which are of therapeutic benefit in the treatment of diseases in human's history. They contained chemical components, (and these are natural products) which sometime, have pharmacological or biological activity that can be useful in treating various diseases. In this manner, they are the active components that are not only of most traditional medicines but also, many modern medicines (Oruk, A. E et al., 2020). These chemical constituents when isolated from the plants are produced by primary and secondary metabolites. Primary metabolites are very useful to the survival of plants and human beings, while secondary metabolites are not essential for the survival, but they provide organisms that produce them an evolutional advantage (Marlstone et al., 1992).

Metals play important role in the metabolism of the body system and as such, they are vital components of all organisms. They are divided into minerals with multiple functions in every cell, such minerals are sodium (Na), Potassium (K), Calcium (Ca), Magnesium (Mg) and also essential minerals with limited functions mostly as cofactors for enzymes and they are Zinc (Zn), Iron (Fe), Copper (Cu), Nickel (Ni), Cadmium (Cd), Chromium (Cr), Vanadium (V), Molybdenum (Mo).

Minerals may occur in concentrations of grams per kilogram (Kg) biological mass, while essential elements make-up only milligram (Mg) or microgram (μg) amount per kg. Humans get their daily needed amounts of minerals mainly by food in-take and to a minor extent by drinking water. Though, the body has effective regulating mechanisms, which guarantee mineral homeostasis. However, essential elements always have a narrow range between daily requirement and toxicity. A healthy and well-balanced diet always provides essential elements needed by the body. Unbalanced diets consumption causes deficiencies of essential elements in the body with subsequent development of diseases (Mudgal et al., 2010).

Morinda citrifolia (Noni) are herbs grown mostly in all tropical areas of the world, and it is easily distributed by animals that eat its fruits. This fruit contains over a hundred non digestible seeds in a single fruit and it grows in all types of soil between coastal sides and up to heights of 500-600m (Takahashi & Shoji, 2002).

Morinda citrifolia plays important role in maintaining health and also cure many kinds of diseases. Since 1996, *Morinda citrifolia* products mainly the fruit juice, are available as health food worldwide, the fruit juice and the leaf tea were recently approved by European Union law as a novel food (Pande et al., 2005).

Morinda citrifolia is a shrub of about 5-6 m tall, with grey-brown bark. Its twigs are more or less square in cross-section and broad based at the apex, which measures

up to 2cm wide. The leaves are large and arranged in opposite pairs to each other that reach up to 25cm long by 13cm wide (Morton, 2002).

The fruit is a multiple fruit consisting of fused drupes with each containing seeds. They are green, transitioning through pale-yellow to white or grey, and when ripe, they emit a pungent odour similar to blue cheese. They are irregularly ellipsoid or ovoid of 9 x 6cm (Jones, 2008).

However, complete phytochemical compositions of *Morinda citrifolia* have not been fully reported, but about 200 phytochemicals were identified and isolated in *Morinda citrifolia*. These include 5, 7-AC P7- 8. (Malaysian Medicinal Plants book; Krishnaiah et al., 2012).

Some volatile compounds were identified in *Morinda citrifolia* ripe fruit such as organic acid and hexanoic acids, alcohols (3-methyl-3-butene-1-1-ol) esters (methyloctanoate and methyl deconoate) ketones (2-heptanone) and lactones (E)-6- dodecenol-lactone (Krishnaiah et al., 2012).

Natural Preservation

Morinda citrifolia as a novel food ingredient under the name of Noni fruit puree, but food industry only picked interest in Tahitian *Morinda citrifolia* due to its leaf, fruit and root antioxidant properties, which are the same as vitamin E. They contain butylated hydroxytoluene (a phenol derivative), which has a natural preservative activity. They are effective in blocking warmed over flavour in formally stewed beef pies. This happens by reducing lipid oxidation, which also helps in colour stability and shelf-life of the final aerobically wrapped pies (Nathan et al., 2012).

Juice

Fresh *M. citrifolia* (Noni) juice is obtained by compressing the fruit immediately after harvesting, while homemade juice is prepared by allowing the fruits to decompose naturally and the commercial juice is made by fruit fermentation (Nelson, 2006 & Brown, 2012). The chemical composition of Noni juice depends majorly upon the method of juice extraction. The physicochemical screening of the fermented Indian Noni fruit indicates its contents of anthraquinones, saponins, and scopoletin, while the bioactive screening of Thai *Morinda citrifolia* fermented fruit juice shows superior vitamins such as vitamins C, B1, B2, B3 and B12. The American *Morinda citrifolia* fruit also shows some concentration of alkaloid, anthraquinones, antioxidant, essential oils, flavonoids, saponins, scopoletin and sugar (Satwadhar, 2011; Brown, 2012).

Natural Source of Medicines

Morinda citrifolia as a natural source for the medicinal production was done by using a bioreactor cultivation technology to produce specific medicinal compounds at a

rate similar or superior to natural grown *Morinda citrifolia*. Result obtained proved that casual root cultures of *Morinda citrifolia* could be used for the commercial production of biotechnology-based chemical such as rubiadin, flavonoids, phenolics and anthraquinones (Baque et al., 2012). However, the aqueous root extract of Indian *Morinda citrifolia* was also used in nanobiotechnology, for the synthesis of ecological noble metal. Gold nanoparticles were prepared by mixing *Morinda citrifolia* root aqueous extract with aqueous solution of chloroauric acid to produce gold nanoparticles. This preparation was predicted to have a higher anticancer activity due to its smaller size (12.17 – 38.26 nm) (Suman et al., 2014).

Anti-microbial and Antiseptic Activity

The anti-microbial activity of Tahitian *Morinda citrifolia* fruit in methanol partitioned with n – butanol extract was assessed in an in-vitro assay on *Escherichia* oil, *Candida albicans* and *Staphylococcus aureus*. *Candida albican* was the most sensitive to *Morinda citrifolia* antimicrobial activity, while *Staphylococcus aureus* sensitivity was the lowest. This activity was due to the rich iridoid present in the fruit (West et al., 2012).

Antioxidant Activity

Australian *Morinda citrifolia* fruit juice indicates an anti-oxidant activity of 2.8 and 1.4 times higher when compared to vitamin C and pycnogenol. Its antioxidant activity is the same with that of grape seed powder (Krishnaiah et al., 2015).

Anti-cancer Activity

Morinda citrifolia natural components are mostly reported as a natural anticancer cure where sulphated polysaccharide stops metastasis by destabilising the interaction between glycosaminoglycan and certain protein (Liu et al., 2000). Damnacanthal inhibits the formation of tumours either by interfering with the growth of ras gene activation, or by increasing apoptosis in human colorectal cancer cell lines. Alizarin has an antiangiogenic effect by blocking blood circulation to malignant tumours. Limonene prevents mammary liver and lung cancers by stimulating thymus gland to secrete more T cells which destroys the carcinoma cells. While ursolic acid inhibits the growth of cancerous cells and induces apoptosis by modulating the body immune process (Lv et al., 2011).

Mineral Element

In nutrition, mineral is a chemical element, some are essential for life while most of them are not. Minerals are one of the four groups of essential nutrients; others are vitamins, fatty acids, and amino acid. The five major or macro minerals in human body are calcium (Ca), Phosphorus (P), Potassium (K), Sodium (Na) and Magnesium (Mg). while the remaining ones are called trace or minor minerals, they are Iron (Fe), Chloride (Cl), Cobalt (Co), Copper (Cu), Zinc (Zn), Manganese (Mn),

Molybdenum (Mo), Iodine (I) and Selenium (Sc) among others. Plants obtain minerals from the soil, when eating the plants, then the minerals move from the plant to human body, this is called food chain (Zoroddu et al., 2019).

Materials and Methods

Samples were obtained from a farmland in Ukana Uwa East and brought for identification by a botanist in Akwa Ibom State Polytechnic, Ikot Osurua. The fruit samples were washed and kept in a polythene bag for five days for proper fermentation before extracting the fermented juice for analysis, while the seeds were sun dried for seven days and were grounded into powder. Both samples were labelled accordingly for further analysis.

Digestion of Samples

1gram of each sample was weighed into different 50 milliliters standard flask as concentrated 10 milliliters of nitric acid and 20 milliliter of HCl solution were added to each digestion flasks. They were heated using heating mantled until the solution with brown fumes changed to yellow colour, which indicate the completion of the digestion. The digested samples were allowed to cold and were diluted with deionised water of 30 milliliters, filtered and the volume of the filtrate were made up to 100cm³ with deionised water, then the digested samples were stored in the sample bottles. Two different major methods were used for the analysis: (i) Atomic Absorption Spectrophotometer (AAS), (ii) Association of Analytic Chemists (AOAC, 2000).

Results

The results for the comparative analysis of elemental composition of seeds and juice of *Morinda citrifolia* fruit in milligrams per 100 grams are shown in the Tables below:

Table 1.0

Elemental composition of the seeds of Morinda citrifolia

Parameters	Concentration milligrams (mg/g)	World Health Organization Recommended Dietary Intake
Sodium (Na)	60.707 ± 0.009	>2000
Calcium (Ca)	31.017 ± 0.015	1000-1200
Magnesium (Mg)	78.054 ± 0.076	310-420
Phosphorus (P)	107.353 ± 0.095	700
Potassium (K)	116.641 ± 0.213	3500

Data are mean ± Standard deviation of triple determination

Table 2.0

Elemental composition of the juice of Morinda citrifolia

Parameters	Concentration milligrams (mg/g)	World Health Organization Recommended Dietary Intake
Sodium (Na)	37.406 ± 0.008	>2000
Calcium (Ca)	33.552 ± 0.016	1000-1200
Magnesium (Mg)	54.389 ± 0.001	310-420
Phosphorus (P)	76.074 ± 0.069	700
Potassium (K)	68.246 ± 0.024	3500

Data are mean ± Standard deviation of triple determination

Discussion

When comparing the results obtained from both samples; the seeds and the juice from *Morinda citrifolia* fruit, it was found out that some significant changes in their concentration in milligram per 100 grams, when also comparing out results by putting side by side with other results obtained from other researchers and World Health Organisation's recommended dietary intake. The results highlight the nutritional importance of the seeds and the juice of *Morinda citrifolia* fruit.

The sodium content in the seed is 60.707 ± 0.009 while that of the juice are 37.406 ± 0.008 and the WHO recommendation is greater than 2000 mg/day. These values show a minimal contribution to the daily limit, making both seeds and the juice suitable for low-sodium diets since they do not exceed the required daily limit. When comparing with result obtained by Singh et al. (2017), its concentration in the juice were a little higher (55.34 mg/100g). The difference may be due to different environmental conditions.

Knowing the importance of sodium in the body and being the principal cation in extracellular fluids, it regulates plasma volume and acid-based balance. It also takes part in the maintenance of Osmotic pressure of the body fluids, while preserving normal irritability of muscles and cell permeability. It activates nerve and muscle function, and is involved in Na^+/K^+ ATPase, maintenance of membrane potentials, transmission of nerve impulses and the absorptive processes of monosaccharides, amino acids, pyrimidines, and bile salts (Hays & Swenson, 2015). Sodium deficiency causes retardation in growth and increased level of sodium in the serum, which is called hypernatraemia and this occurs in cushion's diseases.

Calcium concentration in both samples was 31.017 ± 0.015 in seeds, which means, it can be consumed in order to maintain a certain level of calcium (33.552 ± 0.016). These values were lower than the WHO recommendation of 1,000 to 1,200mg/day. Sharma and Gupta's (2020) reports showed that the juice concentration were 35.12mg/100g with a little in the present results. The variation may be as a result of environmental impact, storage, or handling of the fruits.

Calcium functions as a constituent of bones and teeth, as well as the regulation of nerves and muscle. It coagulates the blood, activates the conversion of prothrombin to thrombin and also in milk clotting. It is vital in enzymes activation such as adenosine triphosphatase (ATPase), succinic dehydrogenase, and lipase. A reduced extracellular blood calcium increases the irritability of nerve tissue and very low levels can develop spontaneous discharges of nerve impulse that leads to retany and convulsions (Hays & Swenson, 2015).

Calcium absorption in the body system needs calcium binding proteins and this is regulated by vitamin D, through sunlight, parathyroid hormone and thyrocalcitonin. Thyrocalcitonin brings down plasma calcium and phosphorus levels, while parathyroid hormone helps in increasing them. Dietary calcium is absorbed only in the upper small intestine by the duodenum and the amount absorbed is based on the source. Calcium-phosphorus ratio, intestinal pH, lactose intake and dietary levels of calcium, phosphorus, vitamin D, Iron, aluminium, manganese and fat, which is based on the assumption that greater the needs, the more efficient the absorption.

Magnesium found in both the seeds and juice and their concentrations are 78.054 ± 0.076 and 54.389 ± 0.001 , while the WHO recommendation is between 310 – 420 mg/day (Jones & Carter, 2021).

Magnesium concentration in the seeds alone is 80.5mg/100g, which indicate a little difference in this analysis. Magnesium is an active component in enzyme systems which thymine pyrophosphate is a cofactor. Oxidative phosphorylation is greatly reduced in the absence of magnesium. It is an essential activator in phosphate-transferring enzymes, myokinase, diphosphopyridine nucleotide kinase and creatine kinase. It also activates pyruvic acid carboxylase, pyruvic acid oxidase and the condensing enzymes for the reactions in the citric acid cycle. Magnesium is also in bones, teeth among others (Murray et al., 2020).

Health condition of a digestive system and the kidneys plays a role in influencing magnesium status in the body. One-third to one and a half of dietary magnesium are absorbed into the body in the intestine and transported through the blood to cells and tissues. Gastrointestinal disorders can reduce absorption and as such, Crohn's disease may develop. The disorders can deplete the body storage of magnesium, which may lead to magnesium deficiency in the body.

Phosphorus contents in both the seeds and the juice are 107.353 ± 0.95 and 76.074 ± 0.069 respectively, while WHO's recommendation is 700mg/day. Comparing with previous work done by Johnson et al. (2020), it was found that 105.20mg/100g are in the seeds; a little bit higher than the current result. This may be as a result of environmental factors. The presence of phosphorus in a large quantity shows that *M. citrifolia* is a good source of phosphorus. It functions as a constituent of bones, teeth, adenosine triphosphate (ATP), phosphorylate metabolic intermediates and nucleic acid. It is involved in buffering action (Phosphate buffers), in the formation of high energy compounds (example, adenosine triphosphate - ATP) and in the synthesis of phospholipids and phosphoproteins.

Its involvement is in every form of energy exchange inside living cells in the formation or breaking of high energy bonds that links oxides of phosphorus to carbon or to carbon-nitrogen compound (Hays & Swenson, 2015; Malhotra, 2018; Murray et al., 2020). Vitamin D may be involved in the control of phosphorus absorption and serum levels that is regulated by the kidney re absorption. Much availability of phosphorus in the soil stimulates early growth and speed up maturity in the plants. Phosphorus is an important macro nutrient because it plays a part in energy transfer in both plants and other living organisms.

Potassium contents are 116.641 ± 0.213 in the seeds while 68.246 ± 0.024 were found in the juice and the WHO recommended daily intake is 3,500 mg/day. In Lee et al. (2018) work, it is shown that the concentration in the seeds was 12g and in the juice, 70.45 mg/100g. The difference in both results may be as a result of some factors, such as soil potassium, water availability, post-harvest treatment or processing techniques. Potassium is the main cation in the intracellular fluid. It also functions in acid-base balance it regulates osmotic pressure, conduction of nerve impulse, muscle contraction, cell membrane function and Na^+/K^+ -ATPase. It is needed during glycogenesis, it plays a role in basic cellular enzymatic reaction, as well as regulates aldosterone metabolism.

Potassium deficiency affects the collecting tubules of the kidneys, which results in the inability to concentrate urine, and it also causes alterations of gastric secretions and intestinal motility (Streeten & Williams, 2012). Potassium is critically useful in maintaining electrolyte balance in the body.

Conclusion

The research highlights the nutritional potential of *Morinda citrifolia* fruits in both the seeds and the juice by comparing their elemental compositions. The results obtained indicated that, the seeds contained higher levels of sodium, calcium, magnesium, phosphorus and potassium, while the juice concentration is low. When the results of this study are compared with World Health Organization's (WHO), Recommended Dietary Intake (RDI), the parameters are moderate, which shows that the noni fruit can be used as dietary supplement. The findings also highlight the importance of the seeds that are sometimes, discarded as waste products.

Recommendations

Sequel to the above results obtained from comparative analysis of both juice and seeds of *Morinda citrifolia*, it is suggested as follows:

- Since the plant contains five essential macro elements (as enumerated earlier) that could handle macro nutrients deficiencies, making the plant a potential

dietary supplement based on World Health Organization's (WHO), Recommended Dietary Intake (RDI) is a right step in the right direction.

- Proper characterisation analysis should be carried out on the plant. This should involve the government and pharmaceutical industries for clinical purposes.

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**Pidgin English Interference in the Teaching and Learning of English Language
in Nigeria: A Study of Selected Secondary Schools
in Uyo Metropolis, Akwa Ibom State**

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Abstract

This study investigates the impact of linguistic interference on the teaching and learning of Standard English in Nigeria, focusing specifically on selected secondary schools within Uyo Metropolis, Akwa Ibom State. It explores how the influence of mother tongues and local linguistic patterns affect learners' grammatical accuracy, pronunciation, and overall communicative competence. Adopting a descriptive survey design, the study employed questionnaires and classroom observations to collect data from English language teachers and students. The findings indicate that mother tongue interference substantially impedes effective English language acquisition, resulting in recurrent errors in both spoken and written communication. Contributing factors include inadequate teacher preparation, insufficient exposure to Standard English, and limited access to instructional materials. The study concludes that enhancing teacher expertise, broadening students' linguistic exposure, and integrating contrastive linguistic approaches into classroom instruction are vital strategies for reducing interference. Consequently, it recommends sustained professional development for teachers, the implementation of sound language policies, and improved pedagogical practices that foster communicative competence among Nigerian secondary school learners.

Keywords: linguistic interference, mother tongue, language learning, secondary education, Nigeria

Introduction

Language serves as a fundamental means of communication, social interaction, and cognitive development, enabling individuals to articulate ideas, share experiences, and preserve culture (Crystal, 2003). In Nigeria, English holds a central position as the official language and the principal medium of instruction at all levels of education (Adegbija, 2004; Bambose, 1995). It also functions as the language of administration, commerce, and scholarship. However, English coexists with numerous indigenous languages and Nigerian Pidgin English (NPE), which together shape the country's rich multilingual landscape (Igboanusi & Peter, 2005).

Nigerian Pidgin English, a creolised form of English spoken widely across different social groups, facilitates communication among people of diverse linguistic backgrounds (Faraclas, 1996). Although it enhances social cohesion, its growing use has raised concerns about interference with students' acquisition and use of Standard English (Elugbe & Omamor, 1991). This concern is particularly evident in secondary schools within urban areas such as Uyo Metropolis in Akwa Ibom State, where Pidgin has become the predominant language of peer interaction. The linguistic overlap between Pidgin and Standard English has resulted in noticeable interference in students' speech, writing, and comprehension (Olaoye, 2013). Teachers also encounter challenges in maintaining linguistic precision, as some unconsciously use Pidgin expressions in classroom communication (Akande & Salami, 2010).

Consequently, this influence contributes to the declining performance of students in English Language examinations (such as West African Examinations Council [WAEC], 2021). While Pidgin English serves as an effective medium of informal interaction, it often impedes the development of Standard English proficiency in formal education (Okon, 2014). The interference typically manifests through grammatical inaccuracies, non-standard vocabulary, and erroneous pronunciation, which hinder learners' linguistic competence (Oluwole, 2008). Despite the interventions of teachers, curriculum developers, and policymakers, the challenge of Pidgin interference remains persistent in English Language education (Bambose, 2018).

The study sets to examine the extent to which Nigerian Pidgin English interferes with the teaching and learning of English Language in selected secondary schools within Uyo Metropolis, Akwa Ibom State. Specifically, the study seeks to:

- (a) identify the main areas of linguistic interference;
- (b) examine the attitudes of teachers and students towards the use of Pidgin English; and

(c) propose strategies to reduce its adverse impact on English Language proficiency.

The research also aims to suggest pedagogical approaches that promote effective language learning in multilingual settings.

To address these objectives, the following research questions are formulated:

- i. To what extent does Pidgin English interfere with students' mastery of Standard English in secondary schools?
- ii. In which linguistic areas—grammar, vocabulary, pronunciation, or writing—is the interference most evident?
- iii. What are teachers' and students' perceptions of the influence of Pidgin English on English Language learning?
- iv. What strategies can be adopted to minimise the effects of Pidgin English interference in English classrooms?

Based on these questions, the study seeks to describe the relationship between students' exposure to Pidgin English and their performance in Standard English without testing any hypotheses. The significance of this study lies in its potential contribution to improving English Language pedagogy in Nigeria. Findings will enable teachers, curriculum planners, and language policymakers to understand the depth of Pidgin interference and design appropriate remedial strategies (Ogunmodimu, 2015). Furthermore, the study will benefit students by enhancing their awareness of language boundaries and strengthening their competence in Standard English. It will also enrich the body of knowledge on language contact and bilingual interference in multilingual societies (Weinreich, 1953; Trudgill, 2000).

The scope of this study is limited to selected secondary schools within Uyo Metropolis, including both public and private institutions. It focuses primarily on the influence of Nigerian Pidgin English on students' use of Standard English in grammar, pronunciation, vocabulary, and writing. Other sociolinguistic variables, such as code-switching and cultural influences, are discussed only in relation to their impact on English Language learning.

Operational Definitions

- **Pidgin English** – A simplified linguistic variety derived from English and indigenous Nigerian languages, used as a medium of interethnic communication (Faraclas, 1996).
- **Interference** – The transfer of linguistic features from one language (Pidgin English) to another (Standard English), resulting in non-standard usage or structural deviation.
- **Standard English** – The accepted and formal variety of English employed in education, official communication, and academia (Crystal, 2003).
- **Teaching and Learning** – The structured processes through which knowledge and language skills are imparted and acquired in educational settings (Oluwole, 2008).

Literature Review

Conceptual Framework

The concept of language interference refers to the transfer of linguistic elements from one language into another, often leading to deviations or errors in the target language (Weinreich, 1953). In multilingual societies such as Nigeria, interference arises when the grammatical structures, vocabulary, or pronunciation of indigenous languages and Nigerian Pidgin English (NPE) influence learners' use of Standard English (Adegbija, 2004; Bamgbose, 1995). Nigerian Pidgin English, which developed as a contact language during the colonial period, has grown into a widespread medium of informal communication among speakers from diverse linguistic and ethnic backgrounds (Faraclas, 1996). It is now spoken across all social classes and age groups, serving as a unifying linguistic variety that symbolises national identity and social cohesion (Elugbe & Omamor, 1991). However, its increasing prevalence among students—particularly in urban areas such as Uyo Metropolis—has made it a critical factor influencing the acquisition and use of Standard English in educational settings (Igboanusi & Peter, 2005).

Nigerian Pidgin English exhibits distinct linguistic and structural characteristics that differentiate it from Standard English. It is marked by simplified grammar, minimal inflection, reduced tense marking, and the incorporation of lexical items from indigenous languages (Akande & Salami, 2010). For instance, expressions such as I dey go ("I am going") or He don come ("He has arrived") illustrate a more

economical tense and aspect system than that of Standard English. While this simplicity enhances communicative efficiency, it often leads to confusion among learners who are expected to produce grammatically accurate Standard English sentences (Olaoye, 2013). Within classroom contexts, this overlap presents challenges for teachers who must continually address interference-related errors while reinforcing correct grammatical usage (Ogunmodimu, 2015).

English occupies a pivotal role in Nigerian education as the medium of instruction, a compulsory subject, and a prerequisite for academic advancement (Bamgbose, 2018). Nevertheless, the widespread familiarity with Pidgin English among students frequently diminishes their ability to distinguish between informal and formal linguistic registers (Oluwole, 2008). The influence of Pidgin English on Standard English usage is evident in both oral and written communication, where learners often replicate Pidgin syntax, pronunciation, and vocabulary (Okon, 2014). Such interference results in errors including inappropriate verb conjugation, omission of articles, and use of non-standard lexical items.

Teachers' and students' attitudes towards Pidgin English also shape language outcomes. While some view it as a legitimate expression of cultural identity, others perceive it as an impediment to academic achievement (Akande & Salami, 2010). The sociolinguistic environment in which learners operate—dominated by Pidgin in peer conversations, entertainment, and media—further reinforces these patterns (Olaoye, 2013). Consequently, there is a pressing need for pedagogical frameworks that recognise the linguistic realities of Nigerian classrooms while fostering mastery of Standard English.

A comprehensive understanding of the interaction between Pidgin English and Standard English is essential for developing effective instructional strategies. By examining how interference operates in speech and writing, educators can design classroom practices that minimise its negative impact and promote communicative competence among Nigerian students (Trudgill, 2000; Weinreich, 1953). Such an approach not only supports linguistic proficiency but also enhances learners' ability to navigate both formal and informal language contexts with confidence.

Theoretical Framework

Interference theory

This study is underpinned by several linguistic and educational theories that illuminate the processes of language contact, interference, and learning. The principal foundation is the Interference theory proposed by Weinreich (1953), which explains how linguistic structures from one language may intrude into another when bilingual or multilingual speakers alternate between languages. In

multilingual societies such as Nigeria, the continual interaction between Nigerian Pidgin English (NPE) and Standard English gives rise to lexical, phonological, and syntactic interference that shapes learners' communicative competence (Igboanusi & Peter, 2005). According to Weinreich, such interference occurs when individuals transfer rules and patterns from a familiar linguistic system into a new one, resulting in deviations from the target language norm.

Contrastive Analysis Hypothesis

Complementing this is the Contrastive Analysis Hypothesis (CAH) proposed by Lado (1957), which attributes errors in second-language learning to structural disparities between the learner's first language (L1) and the target language (L2). The theory maintains that linguistic similarities between the two languages facilitate acquisition, whereas differences produce learning difficulties and predictable errors. Within the Nigerian context, the grammatical, phonological, and lexical dissimilarities between Pidgin English and Standard English often account for recurring interference in students' speech and writing (Olaoye, 2013; Akande & Salami, 2010). The CAH therefore provides a valuable framework for understanding how the linguistic distance between these varieties contributes to systematic errors in learners' use of Standard English.

Behaviourist Theory of Language Learning

The Behaviourist theory of language Learning, advanced by B. F. Skinner (1957), further informs this study. This theory emphasises imitation, repetition, and reinforcement as central processes in the acquisition of language skills. From a **behaviourist perspective**, constant exposure to Pidgin English reinforces its linguistic patterns and expressions in students' everyday communication (Oluwole, 2008). As a result, learners internalise Pidgin forms and may find it difficult to suppress them in formal English contexts. Behaviourist principles thus explain how habitual language practices shape linguistic performance and contribute to persistent interference in learners' spoken and written English.

Additionally, Sociolinguistic Perspectives on Language Use offer insights into the social dynamics of language variation and choice. Scholars such as Labov (1972) and Trudgill (2000) emphasise that language behaviour is deeply influenced by social identity, group membership, and communicative purpose. In Nigeria, the widespread use of Pidgin English in informal domains reflects social solidarity and ease of interaction (Elugbe & Omamor, 1991; Faraclas, 1996). However, this pervasive use also influences learners' linguistic attitudes, resulting in the normalisation of Pidgin structures even in formal academic contexts. In settings where Pidgin dominates peer communication and popular media, students are more prone to transfer non-standard features into their formal writing and speech (Ogunmodimu, 2015).

The interplay between language contact and language learning thus becomes evident. Frequent code-switching and code-mixing between Pidgin and English exposes learners to overlapping linguistic systems that impede mastery of Standard English (Bamgbose, 2018). This theoretical orientation underscores that linguistic interference is both a cognitive and sociocultural phenomenon, demonstrating the need for pedagogical approaches that recognise Nigeria's multilingual realities while promoting proficiency in Standard English for educational and professional advancement.

Methodology

Research Design

This study adopted a **descriptive survey research design**, suitable for examining existing conditions, opinions, and attitudes without manipulating variables (Creswell & Creswell, 2018). This design enabled the systematic collection of quantifiable data on the influence of Nigerian Pidgin English on the teaching and learning of English. It also facilitated exploration of both lecturers' and students' perceptions and attitudes towards the use of Nigerian Pidgin English in classroom settings.

The descriptive approach allowed for objective presentation of facts and patterns as they naturally occurred. The method provided a clear understanding of how language interference manifests in teaching-learning interactions. Using this method, the researcher identified trends, relationships, and variations in linguistic behaviour without altering the classroom context.

Population and Sample

The population comprised all English language teachers and **senior secondary school students** (SS1-SS3) in public and private secondary schools within Uyo Metropolis, Akwa Ibom State. To ensure fair representation, a **stratified random sampling technique** was employed. Six secondary schools were selected to reflect diversity in school ownership and academic environment.

Three schools were public: Community Comprehensive Secondary School, Four Towns; Aka Community Secondary School; and West Itam Secondary School. Three were private: Nigerian Christian Institute, Redemption Academy; and Monef High School.

From these schools, 120 students **and** 12 teachers participated. The sample was stratified by gender to ensure proportional representation.

Table 1

Frequency distribution of demographics of respondents

School Name	Male Students	Female Students	Teachers	Total Participants	% of Sample
Community Comprehensive Sec. Sch.	10	10	2	22	17.2%
Aka Community Sec. Sch.	8	12	2	22	17.2%
West Itam Sec. Sch.	10	10	2	22	17.2%
Nigerian Christian Institute	8	12	2	22	17.2%
Redemption Academy	10	8	2	20	15.6%
Monef High School	10	8	2	20	15.6%
Total	56	60	12	128	100%

Research Instruments

Three instruments were used:

- Structured questionnaires** for students and teachers, addressing language interference patterns, attitudes towards Pidgin English, and strategies for improving Standard English proficiency.
- Classroom observation checklist**, providing qualitative insights into classroom language behaviour.
- Semi-structured interview guides** for teachers, capturing in-depth perspectives.

Validity and Reliability of Instruments

Draft instruments were reviewed by experts in Applied Linguistics **and** Language Education at the University of Uyo. Revisions improved clarity, accuracy, and relevance. A pilot test in two schools outside the study area yielded a Cronbach's Alpha coefficient **of 0.82**, indicating satisfactory internal consistency (Field, 2013).

Data Collection Procedure

Data were collected by the researcher, assisted by trained research assistants. Participants were briefed on the study's purpose, assured of confidentiality, and informed that participation was voluntary.

Data Analysis Techniques

Data were analysed using descriptive techniques. Responses were examined to identify recurring ideas, expressions, and patterns of Nigerian Pidgin usage, revealing its influence on teaching and learning. The descriptive approach ensured findings reflected authentic experiences without manipulating variables.

Table 2

Analysis of Nigerian pidgin phrases Usage

Pidgin Phrase	Students (Frequency)	Students (%)	Teachers (Frequency)	Teachers (%)	Total (%)
"How far?"	30	25%	3	25%	25%
"Wetin dey happen?"	25	20.8%	2	16.7%	20%
"I no sabi"	20	16.7%	2	16.7%	16.7%
"Make we do am"	15	12.5%	3	25%	14.8%
"Abeg"	10	8.3%	1	8.3%	8.3%
Others	20	16.7%	1	8.3%	15.2%
Total	120	100%	12	100%	100%

Descriptive Analysis:

- The most frequently used phrase among students and teachers was **"How**

far?", representing 25% of total responses.

- Teachers tended to use phrases like “**Make we do am**” more proportionally than students, suggesting a facilitative role in classroom communication.
- Phrases like “**I no sabi**” and “**Wetin dey happen?**” reflected common expressions of uncertainty or inquiry.
- Overall, Nigerian Pidgin was actively employed by both students and teachers to aid comprehension and interaction, indicating its influence on classroom communication.

Presentation, Analysis, and Discussion of Findings

Demographic Characteristics of Respondents

The analysis commenced with an overview of respondents' demographic information, which covered gender, age, class level (for students), and teaching experience (for teachers). The study sample consisted of **200 students** (60% female and 40% male) and **20 English Language teachers** holding qualifications ranging from the Nigeria Certificate in Education (NCE) to Bachelor's and Master's degrees.

Most of the teachers reported between five and fifteen years of teaching experience, suggesting adequate professional expertise and familiarity with classroom linguistic dynamics. A large proportion of students indicated that Pidgin English was widely spoken in their homes and communities, thereby creating a linguistic environment conducive to interference. This demographic background provided essential context for understanding the extent and nature of Pidgin English influence on learners' proficiency in Standard English.

Patterns of Pidgin Interference in Spoken and Written English

The findings revealed significant evidence of interference from Pidgin English in both spoken and written forms of English. Teachers and students alike identified numerous cases where Pidgin structures were directly transferred into English communication. In oral expression, students frequently used constructions such as “I dey go”, “He don come”, and “I no get” instead of the Standard English forms “I am going”, “He has come”, and “I do not have”. Written tasks equally reflected these patterns through frequent grammatical errors, article omissions, and inappropriate verb usage.

More than 75% of teachers agreed that students' habitual use of Pidgin outside the classroom adversely affected their written and spoken English performance. Statistical analysis further indicated a strong positive correlation between students' frequency of Pidgin use and their lower academic achievement in English, confirming that interference is a central factor in the observed decline in language proficiency.

Linguistic Areas Affected by Pidgin Interference

Pidgin interference was most prominent in three linguistic areas include **grammar**, **pronunciation**, and **vocabulary**. Students often simplified grammatical constructions, overgeneralised verb tenses, and displayed errors consistent with Pidgin syntactic norms. Pronunciation errors, such as rendering “**think**” as “**tink**” and “**three**” as “**tree**”, illustrated phonological substitution influenced by Pidgin phonetics. Teachers noted that the restricted vocabulary of Pidgin English limited students’ ability to express complex or abstract ideas in Standard English. This overdependence on Pidgin lexical items inhibited vocabulary expansion and hindered the development of academic discourse skills. Students’ admissions that they preferred speaking Pidgin with peers further demonstrated the role of social **environments in reinforcing non-standard linguistic habits**.

Attitudes toward Pidgin English

The attitudes of teachers and students toward Pidgin English were mixed. Some teachers acknowledged that Pidgin could serve as a facilitative tool in bridging comprehension gaps, particularly in heterogeneous classrooms. However, most teachers cautioned that its overuse in academic contexts diminished learners’ mastery of Standard English and promoted linguistic complacency. Students, on the other hand, viewed Pidgin as a natural, expressive medium of social interaction, though many recognised that it was inappropriate for formal or academic communication. This divergence in attitudes reflects the sociolinguistic tension between Pidgin’s role as a language of identity and its perceived threat to formal linguistic competence.

Comparison with Existing Literature

The study’s findings are consistent with those of **Adegbite (2003)**, **Ezenwafor (2012)**, and **Ufot (2019)**, who all identified Pidgin interference as a persistent linguistic challenge in Nigerian schools. Like these earlier studies, the present research confirms that interference extends beyond linguistic structure to encompass sociocultural and attitudinal dimensions. However, it also highlights the specific situation in **Uyo Metropolis**, where both social exposure and linguistic environment intensify the prevalence of Pidgin English among students.

Implications of the Findings

The findings of this study underscore the urgent need for context-specific instructional strategies that acknowledge the multilingual dynamics of Nigerian classrooms. To address the persistent interference of Pidgin English, lecturers of English should undergo regular professional development focused on contemporary language-teaching methodologies and effective approaches to error

analysis and correction. Additionally, learners should be provided with increased and meaningful exposure to authentic models of Standard English through diverse channels such as extensive reading, participation in interactive language activities, and engagement with quality media content. Sustained implementation of these practices is likely to foster learners' communicative competence and contribute significantly to improving the overall standard of English Language education in Nigeria.

Summary of Findings

The study revealed that Nigerian Pidgin English exerts a considerable influence on the teaching and learning of Standard English among secondary school students in Uyo Metropolis. The analysis demonstrated that students who regularly communicate in Pidgin tend to transfer its grammatical structures, lexical items, and phonological patterns into their English use. This transfer leads to persistent linguistic errors in both oral and written communication.

Findings indicated that **grammatical interference** was the most prominent, with students frequently omitting articles, misapplying verb tenses, and simplifying sentence structures based on Pidgin syntax. **Phonological interference** was also prevalent, as Pidgin pronunciation features often replaced English phonemes, resulting in speech patterns inconsistent with Standard English norms. Teachers' reports and classroom observations confirmed that, although Pidgin English enhances informal communication and supports peer interaction, it simultaneously obstructs learners' acquisition of accurate Standard English forms.

The results further showed that **teachers' occasional use of Pidgin during lessons** is to simplify explanations and promote understanding, unintentionally reinforced non-standard expressions among students. The linguistic environment, characterised by frequent exposure to Pidgin in social settings and limited engagement with Standard English, was identified as a major factor contributing to declining proficiency levels.

Overall, the findings highlight the urgent need for **pedagogical strategies** that balance communicative efficiency with linguistic precision. Strengthening teachers' linguistic awareness, increasing students' exposure to authentic Standard English models, and encouraging deliberate differentiation between formal and informal language use are essential measures for improving English Language competence in Nigerian secondary schools.

Conclusion

This study investigated the influence of Nigerian Pidgin English on the teaching and learning of Standard English in selected secondary schools within Uyo Metropolis, Akwa Ibom State. The primary objectives were to determine the extent of linguistic interference, identify the specific areas most affected, examine teachers' and students' attitudes towards the use of Pidgin, and recommend strategies for enhancing English Language proficiency. Data gathered through questionnaires, classroom observations, and interviews revealed that the pervasive use of Pidgin English contributes significantly to grammatical, phonological, and lexical errors in students' oral and written communication. Although Pidgin functions as an accessible and expressive medium of informal interaction, its increasing prevalence in academic contexts undermines learners' mastery of Standard English.

The study successfully achieved its aims by exposing the **patterns, causes, and pedagogical implications** of Pidgin interference in English Language classrooms. The findings confirm that linguistic environment and habitual language use are decisive factors influencing English proficiency among Nigerian learners, aligning with earlier studies such as Adegbite (2003) and Ufot (2019). The implications for English Language teaching are substantial. Teachers must acknowledge that, while Pidgin English represents an important aspect of students' linguistic identity and cultural expression, it simultaneously presents instructional challenges that require systematic and informed approaches.

In response, English Language pedagogy should incorporate **contrastive analysis techniques** between Pidgin and Standard English, enabling learners to identify structural differences and self-correct interference errors. Furthermore, continuous professional development for teachers, the **implementation of English-only policies** during instructional periods, and increased exposure to Standard English through reading, audio-visual media, and oral language practice are essential measures for improvement.

Ultimately, mitigating Pidgin interference will not only enhance students' academic performance but also promote **greater communicative competence and linguistic confidence**. Strengthening proficiency in Standard English is vital for empowering Nigerian students to engage effectively in national and international discourse, thereby advancing their academic, professional, and social mobility in an increasingly globalised world.

Recommendations

Based on the findings of this study, several recommendations are proposed to mitigate the persistent problem of Pidgin English interference in the teaching and learning of Standard English within Nigerian secondary schools.

Recommendations for English Language Teachers

English Language teachers should employ deliberate pedagogical strategies that highlight contrastive analysis between Pidgin English and Standard English. They should draw learners' attention to the structural, phonological, and lexical distinctions between the two language varieties, thereby aiding students in internalising the grammatical and communicative norms of Standard English. Teachers must serve as consistent linguistic models by refraining from using Pidgin English during formal instruction. Additionally, pronunciation drills, vocabulary-building exercises, and creative writing tasks should be regularly incorporated to strengthen linguistic accuracy and fluency. Teachers are also encouraged to attend professional development workshops, seminars, and in-service training designed to enhance their capacity to address linguistic interference and promote communicative competence among learners.

Recommendations for Curriculum Developers and Policy Makers

Curriculum developers should incorporate linguistic awareness and error analysis components into the English Language curriculum. In line with Akindele, (2015) the curriculum should explicitly address interference patterns arising from Pidgin English usage and provide practical strategies for remediation. Language policy should reinforce the use of Standard English as the sole medium of instruction and assessment, while recognising the sociolinguistic realities of Nigerian classrooms. The Ministry of Education should prioritise the recruitment of qualified English Language teachers and provide continuous professional support through periodic training programmes.

Recommendations for Schools and Educational Stakeholders

School administrators should implement effective language management policies that limit the use of Pidgin English within the school environment. Such policies should encourage the consistent use of Standard English in both formal and informal interactions. Parents also have a critical role to play by supporting English language development at home and modelling appropriate usage. In addition, educational stakeholders, including non-governmental organisations (NGOs), professional language associations, and community-based groups, should collaborate to organise language improvement programmes, debates, and competitions that foster students' interest and proficiency in English.

Through the combined efforts of teachers, policymakers, schools, and the wider community, the negative effects of Pidgin English interference can be substantially reduced. This collective approach will ultimately enhance students' mastery of Standard English and contribute to improved academic achievement and communicative competence across Nigerian secondary schools.

Implications for Future Research

The findings of this study open several promising directions for further exploration into the phenomenon of Pidgin English interference in the teaching and learning of the English Language in Nigeria. One key area for future investigation lies in examining the **cognitive mechanisms** that underpin code-mixing and language transfer among bilingual and multilingual learners. Such studies could analyse how variables such as **age, linguistic exposure, and language background** influence the extent of interference, as well as how **metalinguistic awareness training** might assist learners in distinguishing between Pidgin and Standard English structures.

Future **longitudinal research** is also recommended to determine how continuous exposure to Standard English through formal instruction impacts the gradual reduction of interference over time. Additionally, **comparative studies** conducted across Nigeria's diverse regions and linguistic backgrounds would offer deeper insights into the differing patterns of Pidgin English interference. Given the linguistic variations between the South-South, South-West, and North-Central zones, such investigations could reveal whether interference is more pronounced in areas where Pidgin serves as the dominant lingua franca.

Moreover, studies comparing **rural and urban schools** would help identify environmental and sociolinguistic factors that either intensify or mitigate interference. Similarly, contrasts between **Pidgin-speaking and non-Pidgin-speaking communities** may provide clearer evidence of how exposure and language-use contexts influence students' English proficiency levels.

In a broader sense, the evolving landscape of **multilingual education and language planning** in Nigeria holds significant implications for both research and educational policy. As the nation continues to embrace its linguistic diversity, scholars should investigate how inclusive language policies can foster a **balanced coexistence** between indigenous languages, Pidgin English, and Standard English without undermining academic excellence. Future research should also focus on **developing bilingual and multilingual instructional models** that utilise the communicative strengths of Pidgin English while preserving the structural integrity of Standard English instruction.

Ultimately, such empirical endeavours will contribute to **evidence-based strategies** for language educators, curriculum developers, and policymakers—promoting linguistic competence, cultural inclusivity, and effective communication within Nigeria's multilingual educational framework.

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Advanced Digital Classroom and Students' Academic Achievement: A Comparative Evaluation of Select Tertiary Institutions in Nigeria

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Abstract

The integration of digital technologies in education is transforming teaching and learning globally, yet many Nigerian tertiary institutions remain constrained by limited infrastructure and inconsistent policy support. This study examined the influence of advanced digital classrooms on students' academic achievement across six tertiary institutions representing varying levels of digital readiness. Anchored on the Constructivist Learning theory, the study employed a descriptive survey design involving 450 respondents—300 students and 150 lecturers—selected through stratified random sampling. Data were collected using a validated questionnaire ($\alpha = 0.881$) and analysed with descriptive statistics and Chi-square (χ^2) tests at 0.05 significance level. Findings revealed that digital classroom facilities were moderately available, with federal institutions better equipped than state-owned ones. Students exposed to advanced digital classrooms showed higher engagement and academic achievement, confirming the theoretical assumption that interactive learning enhances knowledge construction. The study recommends increased ICT funding, continuous digital pedagogy training for lecturers, integration of digital learning policies, and establishment of institutional support units to sustain digital teaching practices. By providing empirical evidence on the academic value of digital classrooms, the study contributes to improving educational policy, promoting equity, and advancing the quality of tertiary education in Nigeria.

Keywords: advanced digital classroom, academic achievement, digital learning, tertiary institutions, Nigeria, constructivist theory.

Introduction

Education in the twenty-first century continues to evolve rapidly due to technological advancements, and traditional methods of instruction are increasingly insufficient to meet the demands of global competitiveness and innovation. In Nigeria, the conventional "chalk and talk" model of teaching remains dominant across most tertiary institutions. However, this model has proved ineffective in engaging today's digital-native students who are more accustomed to interactive, multimedia-based learning environments. Consequently, there is a pressing need for a transition from traditional classrooms to advanced digital classrooms that can foster academic achievement and equip learners with the competencies required in a technology-driven economy.

An advanced digital classroom extends beyond a physical room equipped with computers or internet connectivity. It represents an integrated learning ecosystem where technology, pedagogy, and content interact to provide a dynamic, learner-centred educational experience. Key components of such classrooms include interactive whiteboards, video-conferencing tools, real-time assessment platforms, virtual and augmented reality learning modules, and robust Learning Management Systems (LMS) such as Moodle, Canvas, and Google Classroom.

Despite the global shift towards digitalised education, Nigeria continues to lag behind in adopting and implementing advanced learning technologies. According to Adeoye, Adanikin, and Adanikin (2021), only a fraction of Nigerian tertiary institutions possesses the infrastructural and human capacity necessary to sustain digital learning environments. The COVID-19 pandemic further exposed these systemic weaknesses, as many institutions were unable to transition effectively to online learning (Abubakar, 2020).

Research evidence shows that digital learning tools enhance student engagement, critical thinking, collaboration, and academic performance (OECD, 2023). The United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2023) emphasises that educational systems must leverage Information and Communication Technologies (ICT) to prepare students for participation in the global knowledge economy. Yet, most Nigerian tertiary institutions still depend heavily on face-to-face instruction with limited technological support.

The persistent Infrastructure deficits and restricted access to digital resources have continued to hinder educational quality and innovation. As the digital revolution transforms global education systems, Nigeria must adapt by modernising its teaching and learning environments. Advanced digital classrooms — equipped with smart boards, reliable broadband, LMS platforms, and virtual simulation tools

— offer innovative opportunities to strengthen learning outcomes and promote academic excellence.

This study therefore examines the state of digital readiness among selected tertiary institutions in Nigeria, investigates the impact of advanced digital classrooms on students' academic achievement, and proposes strategies for sustainable integration. The study provides evidence geared towards the formulation of workable educational policy, institutional development, and enhanced learning outcomes in the Nigerian tertiary education system.

Purpose of the Study

The main purpose of this study is to examine the necessity of developing advanced digital classrooms as a strategy to enhance students' academic achievement and promote educational excellence in Nigerian tertiary institutions.

Specifically, the study seeks to:

- i. Examine the current state of classroom infrastructure and the level of digital technology utilisation in Nigerian tertiary institutions.
- ii. Determine the extent to which advanced digital classroom facilities influence students' academic achievement.
- iii. Propose feasible strategies for effective implementation of advanced digital classrooms in Nigerian tertiary institutions.

Research Questions

In line with the stated objectives, the following research questions were raised to guide the study:

- i. What is the current state of classroom infrastructure and digital technology available in Nigerian tertiary institutions?
- ii. To what extent do advanced digital classroom facilities influence students' academic achievement?
- iii. What strategies can be adopted to ensure the effective implementation of advanced digital classrooms in Nigerian tertiary institutions?

Research Hypotheses

Based on the purpose and research questions, the following null and alternative hypotheses were formulated for testing:

H₀: There is no significant difference in academic achievement between students who learn in advanced digital classrooms and those who learn in traditional classrooms in selected Nigerian tertiary institutions.

H₁: There is a significant difference in academic achievement between students who learn in advanced digital classrooms and those who learn in traditional classrooms in selected Nigerian tertiary institutions.

Literature Review

Conceptual Review

An advanced digital classroom refers to an interactive learning environment that integrates modern information and communication technologies (ICTs) to enhance teaching and learning outcomes. It involves the use of digital tools such as computers, interactive whiteboards, smart projectors, simulation software, internet-based learning platforms, and Learning Management Systems (LMS) including Moodle, Google Classroom, and Canvas (OECD, 2023). These tools facilitate collaboration, communication, creativity, and assessment in ways that traditional classrooms cannot.

In contrast, a traditional classroom relies primarily on teacher-centred instruction - characterised by one-way communication, physical presence, chalkboards, and printed materials (Abubakar, 2020). The shift from traditional to digital classrooms represents a move from passive learning to active, learner-centred engagement, where technology serves as both a medium and a facilitator of knowledge construction (Jonassen, 1999).

Academic achievement in this context denotes the measurable outcomes of learning processes, often represented through students' grades, examination results, performance assessments, and cognitive development. It reflects not only content mastery but also the application of skills, creativity, and problem-solving abilities (Aina, 2022).

Digital learning environments support these outcomes by offering flexibility, instant feedback, adaptive learning paths, and access to diverse knowledge sources (UNESCO, 2023). Thus, the concept of an advanced digital classroom encompasses not only the physical technological infrastructure but also pedagogical innovation, digital literacy, and institutional readiness.

Digital Transformation and Pedagogical Innovation in Tertiary Institutions

The integration of technology into tertiary education has transformed how knowledge is created and disseminated. Studies across Africa indicate that digital classrooms enhance student motivation, engagement, and retention (Adeoye, Adanikin & Adanikin, 2021). In countries such as South Africa and Kenya, digital

tools have been successfully incorporated into blended learning models to bridge access gaps (Ngugi, 2020).

In Nigeria, however, adoption remains uneven. Federal institutions tend to have better digital infrastructure and internet connectivity than state-owned polytechnics and colleges of education (Obidiegwu, 2022). Challenges include inconsistent electricity supply, inadequate broadband access, insufficient ICT-trained staff, and the absence of institutional policy frameworks (Yusuf & Onasanya, 2021).

Nonetheless, there are emerging models of success. For instance, the University of Ilorin, Federal Polytechnic, Ede, and the National Open University of Nigeria (NOUN) have implemented robust e-learning systems that demonstrate the potential of technology-enhanced education. These institutions show that where digital classrooms are properly implemented, students perform better academically and exhibit stronger digital competencies (Adebayo, 2022).

Digital Inequality and Barriers to Implementation

Despite these gains, the digital divide persists across Nigeria's tertiary education landscape. Many state-owned institutions lack reliable internet services and ICT infrastructure, which constrains the adoption of advanced digital classrooms (Okon, 2023). Lecturers often rely on outdated instructional methods due to limited training or resistance to pedagogical change (Ogunleye & Adeniran, 2021).

Socio-economic barriers further exacerbate these challenges. Students from low-income backgrounds often lack personal digital devices or consistent access to data services, limiting their participation in technology-based learning. Institutional funding constraints, coupled with bureaucratic procurement processes, impede the maintenance and upgrading of ICT facilities.

These challenges collectively contribute to poor implementation of digital education policies and undermine efforts to integrate ICT into classroom instruction.

Empirical Insights and Emerging Gaps

Empirical research supports the assertion that digital learning environments improve students' academic performance and learning efficiency (OECD, 2023; UNESCO, 2023). Studies by Adeoye et al. (2021) and Abubakar (2020) revealed that the introduction of digital tools during the COVID-19 pandemic led to improved engagement and continuity of learning among Nigerian students, despite infrastructural limitations.

However, existing literature also highlights several research gaps:

- Most studies have concentrated on universities, leaving polytechnics and colleges of education under-researched.
- Limited comparative studies exist that examine the relationship between digital classroom access and academic achievement across federal and state tertiary institutions.
- Few empirical analyses have been conducted in the South-South geopolitical zone, where variations in digital readiness and institutional support are pronounced.

This study seeks to bridge these gaps by conducting a comparative evaluation of advanced digital classroom use and academic achievement among students in selected tertiary institutions across different ownership types and regions.

Theoretical Framework

This study is grounded in the Constructivist Learning theory (Piaget, 1972; Vygotsky, 1978). The theory posits that learning occurs through active engagement, collaboration, and the internalisation of knowledge rather than passive reception.

According to Piaget, learners build understanding through interaction with their environment and assimilation of new experiences into existing knowledge structures. Vygotsky expands this with his concept of the Zone of Proximal Development (ZPD), which emphasises the importance of social interaction and guided support (scaffolding) in enabling learners to reach higher cognitive levels.

The advanced digital classroom exemplifies these principles: interactive whiteboards, discussion forums, and collaborative digital tools create environments that support discovery learning and peer collaboration. Teachers become facilitators of learning, and students take responsibility for constructing meaning through exploration and feedback.

By situating this research within the constructivist paradigm, the study assumes that students exposed to advanced digital classrooms achieve better academic outcomes than those in traditional learning environments. This theoretical perspective therefore provides the interpretive lens for analysing the study's findings.

Materials and Methods

Research Design

The study adopted a descriptive survey design, which is suitable for obtaining factual information, opinions, and perceptions from a representative sample of respondents. This design was appropriate because it enabled the researcher to examine existing conditions of classroom infrastructure and digital readiness, and

to determine their influence on students' academic achievement in tertiary institutions.

Population of the study

The population comprised all lecturers and students in selected tertiary institutions in Nigeria. These institutions were chosen to represent variations in digital classroom adoption, ownership type, and regional distribution.

A total of six tertiary institutions were purposively selected across different geopolitical and administrative categories:

Table 1
Institutions by ownership

Institution	Ownership	Location (State/Region)	Level of Digital Classroom Adoption	Justification
Kenule Beeson		Rivers		Limited digital
Saro-Wiwa Polytechnic, Bori	State	(South-South)	Low	infrastructure; reliance on traditional instruction
Captain Elechi Amadi Polytechnic, Port Harcourt	State	Rivers (South-South)	Low-moderate	Urban institution with partial digital facilities
Federal Polytechnic of Oil and Gas, Bonny	Federal	Rivers (South-South)	Moderate	Recent federal investment; developing digital capacity
Federal Polytechnic, Ugep	Federal	Cross River (South-South)	Moderate	New federal institution; expanding digital resources
Federal Polytechnic, Ede	Federal	Osun (South-West)	Fair-strong	Well-established ICT infrastructure and e-learning platforms
Federal Polytechnic, Mubi	Federal	Adamawa (North-East)	Fair-strong	Advanced ICT labs and e-learning adoption through TEFFund projects.

These institutions were selected to ensure representative variation across ownership structures (federal/state), geographic zones (South-South, South-West, and North-East), and levels of digital classroom implementation.

Sample Size Determination

The sample size was determined using Cochran's (1977) formula for large populations:

$$n_0 = \frac{z^2 p(1-p)}{e^2}$$

Where:

$z = 1.96$ (for 95% confidence level)

$p = 0.5$ (maximum variability)

$e = 0.05$ (desired precision)

Substituting these values:

$$n_0 = \frac{(1.96)^2(0.5)(0.5)}{(0.05)^2} = 384.16$$

To account for design effect and possible non-response (estimated at 10%), the sample was adjusted to: $384.16 \times 1.1 = 422.6 \cong 450$

Thus, 450 respondents were targeted for the study, comprising 300 students and 150 lecturers drawn proportionally from six institutions.

Sampling Procedure

A stratified random sampling technique was adopted to ensure balanced representation of both ownership and respondent categories.

The first stratum was based on institutional ownership (federal or state), and the second on respondent group (lecturers and students). Within each stratum, respondents were randomly selected using departmental lists.

Table 2

Categories of sampled population

Category	Federal institutions (3)	State institutions (2)	Total
Lecturers	90	60	150
Students	210	90	300
Total	300	150	450

This approach ensured that each group had a fair chance of selection while

maintaining representativeness across institutional types.

Instrumentation

Data were collected using a structured questionnaire titled Advanced Digital Classroom and Academic Achievement Questionnaire (ADCNAQ), developed by the researcher.

The Instrument comprised three sections:

- i. Section A: Demographic information (institution, role, gender, years of experience/study level).
- ii. Section B: Availability and utilisation of digital classroom facilities.
- iii. Section C: Students' academic performance and perceived learning outcomes.

Items in Sections B and C were structured on a 5-point Likert scale, ranging from Strongly Disagree (1) to Strongly Agree (5).

Validity and Reliability of the Instrument

The questionnaire was subjected to content and face validation by three experts in Educational Measurement and Evaluation, and Educational Technology from tertiary institutions in Nigeria. Their feedback informed revisions to item clarity and relevance.

The reliability of the instrument was established through a pilot study involving 30 respondents from non-sampled institutions. Using the Cronbach's Alpha technique, a coefficient of $\alpha = 0.881$ was obtained, indicating high internal consistency and reliability.

Method of Data Collection

The researcher personally administered the instrument with the assistance of trained research assistants. Both physical distribution and electronic forms (Google Forms) were utilised to reach participants efficiently. Data collection was carried out over four weeks, with a retrieval rate of approximately 95%, yielding 428 valid responses for analysis.

Method of Data Analysis

Data were analysed using the Statistical Package for the Social Sciences (SPSS) Version 25. Descriptive statistics (frequency counts, percentages, means, and standard deviations) were used to summarise respondents' demographic characteristics and perceptions.

To test the study's hypothesis, the Chi-square (χ^2) test of independence was employed at the 0.05 level of significance to determine whether a significant

difference existed in academic achievement between students in advanced digital and traditional classrooms.

The decision rule was as follows:

- If the calculated χ^2 value > critical χ^2 value ($df = 2, \alpha = 0.05$), reject H_0
- Otherwise, fail to reject H_0 .

Ethical Considerations

Ethical approval was obtained from the relevant institutional review boards of the participating institutions. Respondents were informed of the study's purpose, assured of confidentiality, and given the right to withdraw at any time without penalty. Informed consent was obtained prior to participation.

Results and Discussion

Research Question 1:

What is the current state of classroom infrastructure and digital technology available in Nigeria tertiary institutions?

Table 3
Availability of advanced digital classroom facilities (N = 428)

Facilities	Always Available (%)	Occasionally Available (%)	Rarely Available (%)	Not Available (%)	Mean	Decision
Interactive smartboards	25.6	31.2	28.0	15.2	2.67	Moderately available
Learning Management Systems (LMS)	35.8	29.1	23.4	11.7	2.90	Moderately available
Reliable Internet Access	20.5	26.3	33.8	19.4	2.49	Low availability
Digital Projectors	46.7	30.6	15.2	7.5	3.16	Fairly available
Computer laboratories	52.3	26.4	14.1	7.2	3.24	Fairly available
Virtual learning platforms (Zoom, Google Meet)	39.6	28.9	20.4	11.1	2.97	Moderately available

Grand Mean = 2.90 – Interpretation: Advanced digital classroom facilities are moderately across the selected institutions.

Discussion

The findings indicate that while most institutions possess some level of digital infrastructure, the facilities are not uniformly available or effectively utilised.

Federal polytechnics, particularly those in the South-West and North-East, showed higher level of readiness compared to their state counterparts. This supports the reports of Adeoye, Adanikin, and Adanikin (2021) and Obidiegwu (2022), which

identified funding and policy gaps as major constraints to ICT implementation in Nigerian tertiary institutions.

Research Question 2:

To what extent do advanced digital classroom facilities influence students' academic achievement?

Table 4

Perceived Influence of advanced digital classrooms on students' academic achievements

ITEMS	SA (%)	A (%)	U (%)	D (%)	SD (%)	MEAN	DECISION
Digital classrooms make learning more engaging	44.6	40.2	8.1	4.7	2.3	4.21	High influence
Access to online resources improves understanding	42	43.2	7.8	4.1	2.9	4.17	High influence
Digital feedback enhances performance	40.7	45.3	7.5	4.2	2.3	4.18	High influence
Digital learning increases motivation to study	38.9	40.6	9.4	6.8	4.3	4.02	High influence
Overall use of digital classroom improves academic results	41.8	39.1	9.6	5.9	3.6	4.1	High influence

Grand Mean = 4.14 → Interpretation: Students and lecturers perceive advanced digital classrooms as highly influential on academic achievement.

Discussion

The results affirm that the introduction of digital tools in teaching enhances learning motivation, engagement, and achievement. This aligns with UNESCO (2023) and OECD (2023) findings that technology-mediated environments foster collaboration and deeper learning. The results also validate the Constructivist Learning Theory, which emphasises active participation and knowledge construction through interactive and social processes (Vygotsky, 1978).

Test of Hypothesis

H₀: There is no significant difference in academic achievement between students in advanced digital classrooms and those in traditional classrooms.

H₁: There is a significant difference in academic achievement between students in advanced digital classrooms and those in traditional classrooms.

Table 5
Chi-Square test of difference in academic achievement

Variable	N	χ^2 Calculated	χ^2 Critical	Df	p-value	Decision
Academic Achievement (Digital vs Traditional)	428	12.57	5.99	2	0.002	Reject H ₀

Interpretation

Since the calculated χ^2 value (12.57) is greater than the critical value (5.99) at 0.05 significance, the null hypothesis is rejected. This indicates a significant difference in academic achievement between students taught in advanced digital classrooms and those in traditional classrooms.

Discussion

The finding implies that the adoption of advanced digital classrooms contributes positively to students' academic outcomes. Students exposed to digital learning tools demonstrate better comprehension, higher participation, and improved grades. These outcomes echo the observations of Adebayo (2022) and Jonassen (1999), who found that interactive digital environments enhance cognitive processing and student engagement.

Research Question 3:

What strategies can be adopted to ensure effective implementation of advanced digital classrooms in Nigerian tertiary institutions?

Table 6
Strategies for effective implementation

Suggested Strategy	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	Decision
Increase institutional ICT funding and maintenance.	53.8	32.4	8.3	3.1	2.4	4.32	Strongly agreed
Continuous ICT training for lecturers and staff.	47.1	38.9	7.6	4	2.4	4.25	Strongly agreed
Integrate e-learning policies into curriculum design.	45.9	39.3	8.7	3.9	2.2	4.22	Strongly agreed
Establish dedicated digital support centres.	43.6	42.1	7.4	4.2	2.7	4.2	Strongly agreed
Improve internet connectivity and infrastructure.	51.8	36.2	6.4	3.1	2.5	4.31	Strongly agreed

Grand Mean = 4.26 → Interpretation: Respondents strongly support increased funding, training, and infrastructural improvements.

Discussion:

Respondents emphasised the need for sustainable investment in ICT infrastructure and personnel training. The results are consistent with Yusuf & Onasanya (2021) and Okon (2023), who identified staff development and institutional support as critical success factors for technology integration in higher education.

Summary of Findings

- Advanced digital classrooms are moderately available in Nigerian tertiary institutions, with federal polytechnics showing greater adoption than state institutions.
- There is a significant positive relationship between the use of digital classrooms and students' academic achievement.
- Implementation success depends on adequate funding, staff training, and policy integration.

These findings align with the Constructivist Learning theory, reaffirming that learning is enhanced through interactive, technology-supported engagement.

Conclusion

This study examined the influence of advanced digital classrooms on students' academic achievement across six tertiary institutions in Nigeria. Findings revealed that

while digital infrastructure is moderately available, its utilisation and

integration into teaching and learning processes vary significantly across institutions. Federal polytechnics demonstrated higher levels of adoption and readiness compared to state-owned institutions, primarily due to better funding and access to TetFund-supported projects.

The results of the chi-square analysis indicated a significant difference in academic achievement between students exposed to advanced digital classrooms and those in traditional classrooms. Students who engaged in technology-mediated learning reported higher levels of motivation, comprehension, and overall academic performance.

These findings validate the Constructivist Learning theory, confirming that active, technology-supported learning environments enhance knowledge construction and learner engagement. Consequently, the development of digital classrooms should be prioritised as a key strategy for improving educational quality and equity in Nigeria's tertiary education system.

Recommendations

Based on the findings, the following recommendations are proposed:

- **Targeted ICT funding and infrastructure development:** The study found that advanced digital classroom facilities were only moderately available across the six institutions, with state-owned polytechnics lagging behind. To address this, government and funding bodies such as TetFund should prioritise equitable ICT investment across regions. Allocations should focus on broadband connectivity, smart boards, functional computer laboratories, and solar-powered learning facilities to ensure sustainable digital access.
- **Capacity building and digital pedagogy training:** Findings revealed that lecturers' limited digital competence constrained the effective utilisation of existing facilities. Continuous professional development programmes should therefore, be institutionalised to strengthen lecturers' skills in the use of Learning Management Systems (LMS), virtual teaching tools, and blended learning strategies. Such initiatives will enhance student engagement and overall academic achievement.
- **Policy integration and institutional frameworks:** The study showed that inconsistent policy direction hinders sustained digital adoption. The Federal Ministry of Education should develop a comprehensive National Digital Learning Integration Policy mandating the inclusion of digital pedagogy in tertiary curricula. Institutions should complement this with internal ICT

policies covering usage standards, equipment maintenance, and digital evaluation systems.

- **Establishment of digital support and maintenance units:** Respondents identified irregular maintenance as a key barrier to consistent use of digital tools. Each institution should therefore, establish a digital support centre staffed with trained ICT personnel responsible for system maintenance, technical support, and software updates. This will ensure continuous functionality and reduce downtime in teaching and learning.
- **Improved internet connectivity and power supply:** Findings indicated that poor internet access and erratic electricity supply disrupt teaching activities. Collaborations with telecommunication providers and renewable energy firms should be pursued to deliver reliable connectivity and sustainable power solutions, particularly in rural and semi-urban institutions.
- **Monitoring, evaluation, and accountability mechanisms:** The study established that there are no systematic frameworks for assessing digital classroom performance. Institutional quality assurance units should introduce periodic monitoring and evaluation of digital learning outcomes. Data obtained should guide policy decisions, budget priorities, and staff performance reviews to promote transparency and continuous improvement.

Limitations and Future Research

This study was limited to six tertiary institutions, which may not fully represent Nigeria's diverse higher education system. In addition, reliance on self-reported data may have introduced subjective bias. Nevertheless, the study offers credible evidence of the link between digital classrooms and academic achievement. Future research should include a larger sample and adopt mixed or longitudinal approaches to explore how digital learning environments influence teaching practices and student performance over time.

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PDE Modelling of Population Dynamics using Physics Informed Neural Networks (PINNs)

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Abstract

In recent years, Artificial Intelligence (AI) has transformed scientific inquiry and technological innovation significantly in almost all facets of life. This paper presents a study of Physics-Informed Neural Networks (PINNs) solution techniques applied to Partial Differential Equation (PDE) models in population dynamics. Specifically, the paper focuses on modelling disease spread using an advection-diffusion-reaction partial differential equations (PDEs), with the solution sought through Physics-Informed Neural Networks (PINNs) technique. The community is being modelled as a bounded spatial domain where the disease density evolves over time and space. By embedding the underlying physical and biological laws into the network architecture, PINNs offer a robust and accurate framework to simulate infectious disease dynamics. Furthermore, numerical simulations, were implemented using the MATLAB ODE45 scheme, which provided insights into the interplay between disease progression, recovery, birth and death rate as parameter of interest in the transmission dynamics.

Keywords: PDE modelling, population dynamics, physics informed neural network, machine learning, biological laws, disease spread.

Introduction

Population dynamics refer to study of the variation in the size and density of population over time and space reflecting the net effect in differences among individuals in their physiological and behavioural interactions with the environment. It represents the changes in the number a species in a single location. Population models have been germane and the time dependent interactions between modelling species have been of great interest to ecologists over the years.

Beginning from the well-known Lokta-Volterra predator prey equations derived in the 1920s, mathematical modellers have utilised these equations to describe even much more complex systems in more biological setting such as competition, symbiosis, disease model (SIR -Susceptible Infected-Recovered typed model) powered mostly by ordinary differential equations and a host of others. However, as noted by Christou, (2022) this set of ordinary differential equations fails to capture the spatial effect and thus, the inclusion of diffusion terms and spatial dependence in the work by Conway and Smoller (2007), birthed the use of PDE partial differential equations (PDEs) in modelling dynamics.

Partial differential equations (PDEs) are pivotal to the modelling of natural phenomena and find applications in almost every field of science and engineering driving the means to tackling vast and ever-expanding array of real-world problems—from the simple heat equation to more complex systems describing financial markets, weather forecasting, or population dynamics. In the context of disease spread, PDEs serve as a powerful technique to capture the dynamics of infectious agents over space and time. The desire to understand the solutions to these equations has over the years pre-occupied mathematicians, scientist as these solutions offer both insights into the underlying phenomena and valuable predictive capabilities.

Traditional numerical techniques for approximating PDEs, such as finite difference and finite element methods, have been thoroughly developed and refined over the years. These methods typically involve discretising the spatial domain using a mesh, which transforms the PDE into a system of ordinary differential equations (ODEs) that can be time-stepped to approximate the original problem. Though highly robust and reliable, these grid-based methods require copiously fine discretisations to enhance accuracy. For stability considerations, finer spatial discretisations requires smaller time steps, resulting in more computationally expensive schemes.

Neural network describes a mathematical convenient and simplified version of neurons in a brain encapsulating elements called 'perceptrons'. Neural network is made up of a large network of these perceptrons just as the brain is a big network of neurons.

In recent years, advances in Artificial Intelligence (AI) have opened new vistas for solving PDEs. Solving partial differential equations (PDEs) governing physical phenomena using machine learning (ML) has emerged as a new field of scientific machine learning leveraging the universal approximation theorem and high expressivity of neural networks. Physics-Informed Neural Networks (PINNs) represent a groundbreaking technique that roots the physical laws—expressed as PDEs—directly into the neural network's training process. Rather than relying wholly on discretisation, PINNs enforce the consistency with observed data and the underlying PDE constraints simultaneously by incorporating both into a composite loss function. For modelling disease spread, this methodology is particularly attractive, since it enables the integration of sparse or noisy observational data with the rigorous mathematical structure provided by an advection-diffusion-reaction PDE.

The recent forays of scientists and modellers into physics informed neural network (PINN) otherwise known as theory trained neural network (TTNN) to provide solutions to PDE systems is well documented. For example, Raissi et al., (2019) introduced a novel framework that leverages machine learning (ML) integrated with physics-based constraints both to solve and understand partial differential equations (PDEs) from data. Their approach comprises two complementary strategies: a continuous time model that embeds PDE residuals into the loss function to create data-efficient spatio-temporal approximators, and a discrete time model that employs implicit Runge–Kutta schemes for highly accurate temporal integration. This dual technique has been effectively utilised across diverse spectrums—including fluid dynamics, quantum mechanics, reaction–diffusion systems, and nonlinear shallow-water wave propagation—demonstrating its capacity to not only simulate complex systems with limited data but also uncover underlying physical laws (Wu et al., 2024).

For Rodrigues, (2024), the main idea behind PINNs is to train neural networks to learn not only from observed data but also adhere to the underlying physics that govern the system. This is achieved by incorporating differential equations or other relevant physical constraints as additional terms in the loss function during training. This unique combination allows PINNs to generalise well beyond the available data and offers a data-driven framework for solving complex physical problems.

Lin and Chen (2023) proposed a twin novel physics-informed neural network (PINN) schemes that integrate Miura transformation constraints into the learning process to solve nonlinear partial differential equations (PDEs) using an unsupervised approach. Their method leverages the Miura transformation as a critical bridge, allowing initial-boundary data from one nonlinear equation to drive the data-driven solution of another. Through extensive computational experiments

on the KdV and mKdV equations, the authors not only reproduced the dynamic behaviour of the solutions but also discovered a new localised wave—namely, a kink-bell type solution for the defocusing mKdV equation. Their comparative analysis of the two schemes underscores that each has its own merits, suggesting that the choice of method should be tailored to the specific problem at hand. The utilisation of PINNs by several authors Rodrigues ((2024); Lin and Chen (2024); Wu et al. (2024) to study different phenomena directed by PDE systems underscore the growing influence of Artificial Intelligence (AI) enabled solutions in everyday life.

In this study, a novel PDE modelling technique of population dynamics specifically disease transmission dynamics using the Physics informed neural networks (PINNs) solution techniques is formulated and analysed qualitatively and quantitatively. The study is further structured for ease of presentation as follows: Section one deals with the introduction while section two entertains the mathematical formulations and assumptions. Section three is engulfed in the analysis involving both qualitative and quantitative approach. Section four is concerned with the simulations and discussions of the results. The paper concludes in section five with further research direction.

Mathematical Formulations and Assumptions

Disease spread in a typical population amongst species is characterised by a complex interaction such as spatial movement representing the advection terms, random movement (diffusion) and local interactions (reactions) such that the governing equation is directed by a PDE. In this study, an advection-reaction diffusion model describes the spread of a disease in a local population and is presented thus:

$$\frac{\partial u}{\partial t} + \nabla \cdot (v u) = D \nabla^2 u + R(u, x, t) \quad (2.1),$$

Where $u(x, t)$ is the disease density at location x and time t .

v is the advection velocity field representing the human movement

D is the diffusion coefficient and $R(u, x, t)$ is the reaction terms modelling the local infection dynamics such as infectivity, recovery and death with $R(u, x, t) = \beta u(1 - u) - u\gamma$ and follows a logistic format, β being the infection transmission rate and γ is the infection recovery rate. A feed forward neural network was designed to approximate the solution of system (2.1). The network architecture included an input layer, multiple hidden layers, and an output layer corresponding to the predicted population size. The loss function is modelled below:

$$\mathcal{L}(\varphi) = \mathcal{L}_{data} + \lambda \mathcal{L}_{PDE} \quad (2.2)$$

Where $\mathcal{L}_{data} = \frac{1}{N_d} \sum_{i=1}^{N_d} |U(x_i; t_i; \theta) - u_i|^2$ is the measure of error with respect to the

observed disease data and λ is the regularisation parameter.
 $\mathcal{L}_{PDE} = \sum_{r=1}^{N_r} \left| \frac{\partial u}{\partial t} + \nabla \cdot (vU(x_j; t_j; \theta)) - D\nabla^2 U(x_j; t_j; \theta) - R(U(x_j; t_j; \theta), x_j, t_j) \right|^2$ is the

measure of the PDE solutions ensuring that the governing equation is enforced in this instance by penalising any violation of the underlying physical laws at the point of selection in the domain of consideration.

PINN Architecture

The algorithm for the implementation of PINN is outlined in these sections. This is achieved as follows:

1. Define the PDE parameters by setting values for Advection, diffusion coefficient, infection transmission rate and recovery rate respectively v, D, β and γ .
2. Define the normalised domain as $\Omega := x \in [0, 1]$ and $t \in [0, 1]$ for the spatial location and time.
3. The N_{data} point along the spatial domain at $t = 0$ is generated using the Gaussian profile centred at $x = 0.5$ to simulate the initial outbreak: $u(x, 0) = \exp(-100(x - 0.5)^2)$
4. The N_{colloc} random points $x(x, t)$ is generated such that the enforced neural network output satisfies the governing PDE throughout the domain.
5. The neural network setup is implemented manually using the feed-forward neural network with two input layers corresponding the x and t and two hidden layers with 20 neurons using the hyperbolic tangent (tanh) activation function and a single neuron output that predicted the disease density $u(x, t)$.
- 6) All network parameters (weights and biases) are initialised using small random values and stored in a single vector θ .
- 7) The loss function is defined by computing the mean square error (MSE) between the predicted neural network and the initial observed data (observed error) such that:

$$\text{Loss} = \frac{1}{N_{data}} \sum_{i=1}^{N_{data}} u_{NN}(x_i; \theta) - u_{data}(x_i))^2$$

8) Define the PDE loss (residual error) by approximating the derivatives of $u(\vec{r}, t)$ using central finite differences such that

the time derivative $u_t = \frac{u(x, t+\epsilon) - u(x, t-\epsilon)}{2\epsilon}$ and the spatial derivative

$u_x = \frac{u(x+\epsilon,t) - u(x-\epsilon,t)}{2\epsilon}$ and the second spatial derivative $u_{xx} =$

$\frac{u(x+\epsilon,t) - 2u(x,t) + u(x-\epsilon,t)}{\epsilon^2}$. Forming the PDE residual function $f = u_t + vu_x -$

$Du_{xx} - \beta u(1 - u) - \gamma u$ and computing the PDE loss as the MSE of this residual such that

$$\text{Loss} = \frac{1}{N_{colloc}} \sum_{i=1}^{N_{colloc}} f(x_i, t_i)^2$$

9) The combined data and PDE loss function is calculated:

$$\text{Loss}_{total} = \text{Loss}_{PDE} + \text{Loss}_{data}$$

10) Define the objective function that returned the total loss function given by the parameter θ and thereafter utilised the trained network to predict $u(x, t)$ over the grid covering the entire domain $u(x, \mathbb{R})$.

Based on the above algorithm generated using MATLAB is as shown in the table below:

Table 1

Algorithm generated using MATLAB

Iteration	Func-count	f(x)	Step-size	optimality
0	502	0.186273		0.781
1	1506	0.13376	0.321166	0.307
2	2008	0.109949	1	0.123
3	2510	0.104914	1	0.0568
4	3012	0.103023	1	0.0249
5	3514	0.096667	1	0.0776

6 4016 0.094622 1 0.0426

7 4518 0.0939039 1 0.00619

8	5020	0.093862	1	0.00111
9	5522	0.0938617	1	0.00131
10	6024	0.0938607	1	0.00153
11	7028	0.0938599	0.377604	0.00179
12	8032	0.0938595	0.282073	0.00144
13	13554	0.0938591	0.346832	0.00154
14	14056	0.0938567	1	0.00131
15	14558	0.0938553	1	0.00125
16	15060	0.0938551	1	0.00139
17	15562	0.0938519	1	0.00132
18	16064	0.0938492	1	0.00214
19	16566	0.0938439	1	0.00385
20	17068	0.0938292	1	0.00405

Numerical Simulations

As noted by Chin & Mckay, (2019) model verification and validation can provide evidence that a given model is accurate and hence, simulation of the model system (2.1) was carried out with the data to represent and understand the research problem. Since it is based on dearth of mathematical modelling on the subject, all values are assumed for simulation purposes.

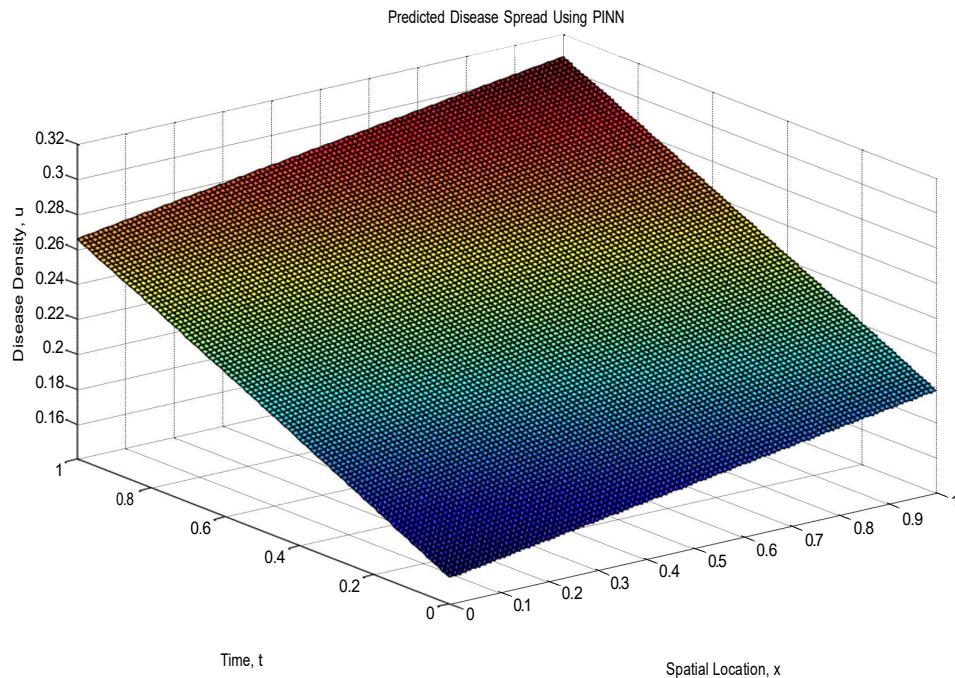


Figure 1: A 3D plot in a normalised spatial domain $\Omega: x \in [0, 1]$ of disease spread in a typical community where the simulations begin at $t = 0$ and $t = 1$ capturing how the disease propagates over time. u represent the prevalence of the disease at each spatial location x and time t .

The figure depicts a gradual increase in the density of the disease from blue (low points) to red (high points) as the time progresses. As could be seen from the figure, there are no sharp peaks or localised hotspot evidently suggesting a uniform propagation over time and space rather than a sudden outbreak. The sloped surface shows a steady increase in disease density across space and time in the domain of interest suggesting that the governing equations enforce a smooth continual spread in the local community. The absence of sharp variations along the x – axis is indicative of a diffusion dominated spread leading to a uniform distribution across the local community of interest. The implication of the gradual spread of the disease is suggestive that diffusion is the primary driver rather than advection. This might be akin to a scenario where the recovery or removal terms are not enforced mirroring the early stages of an epidemic where infections dominate over recovery.

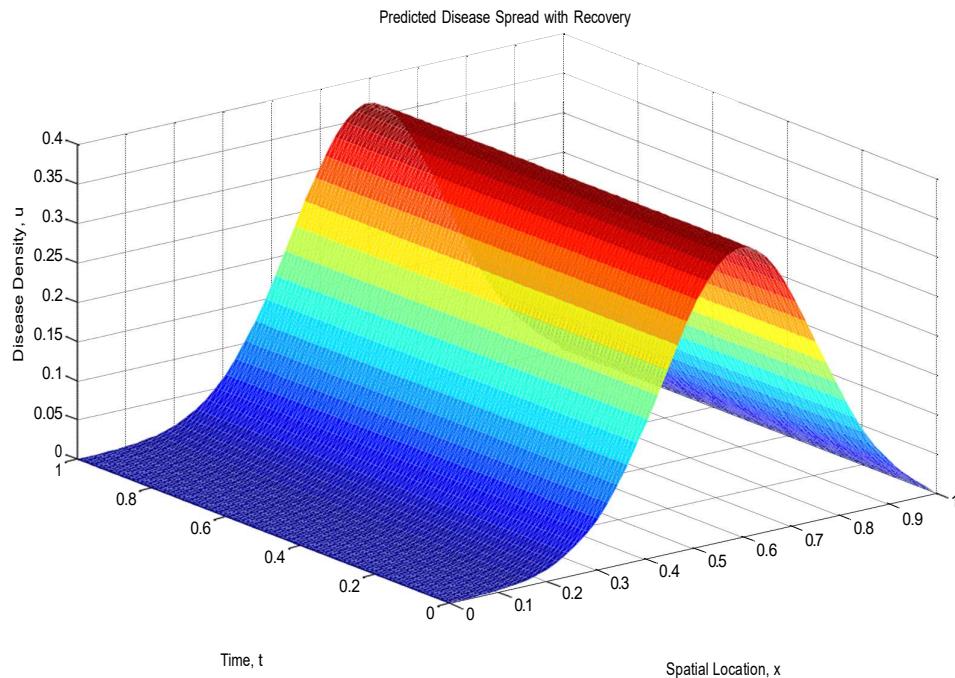


Figure 2: A 3D plot of disease spread $u(x, t)$ over time t and location x in a typical community over a spatiotemporal domain incorporating diffusion, advection and recovery. The plot showcases the fact that at time $t = 0$ the infection begins as a localised peak in the middle of the region of the local community with the initial peak representing high infection concentration at the specific spatial location. Over time, the disease spread outward, modelling the random movement (diffusion) of infected individual while the rightward shift shows disease spread in a preferred direction (advection). The infectivity peaked at the red (high point) and as individual recovery ensued leading to reduction in the infective density and as this happens over time then fewer individuals remain infected. Thus, as $t \mapsto 1$ the infective individual reduces significantly showing the triple effects of diffusion, advection and recovery. Though the infection is not completely eliminated but it is diminished significantly. This is an indicative tendency towards disease control that could be achieved in this instance. The result underpins that disease diffusion, transport and recovery interact dynamically.

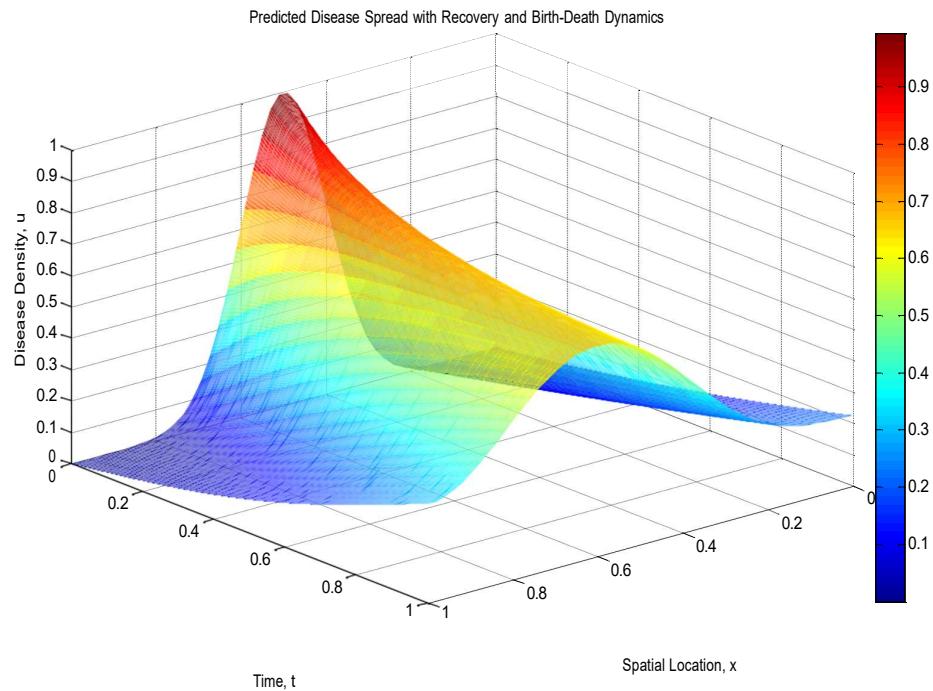


Figure 3: The plot illustrates the propagation of disease in a typical community where birth and death are taken into account.

Discussion of Results

The simulations above as depicted in the visualisation seen in figures (1-3) showcase a simple disease propagation under several modelling scenarios ranging from basic disease transmission, recovery mechanism and birth-death dynamics proving key insights that could be utilised for quick decision-making process in a public health setting.

The initial plot mirrors a monotonically increasing surface indicating that disease density increases over time and spatial location. The absence of the recovery mechanism implies that once an infective individual remains infected in a population leading to a gradual accumulation of the disease in the typical human society could lead to the prevalence of the disease in such a situation. Expectedly, in a purely diffusion-based model, where infections propagate freely without any recovery; the disease continues to spread unabated until it saturates the entire population - a reflection of unchecked epidemic.

On the other hand, the second plot (figure 2) reflect a non-monotonic trend where

initially the disease increases, peaked and finally decline over time, analogous to the fact that the infected individual recover over time, resulting the decline in disease

prevalence over the spatial domain. The inclusion of the recovery mechanism significantly changes disease progression. The maximum burden of the disease is represented at the peak and thereafter recovered individual lowered the disease density, akin to a typical real-world epidemic scenario where disease outbreaks have peaked phase followed by declining phase possibly due to immunity or interventions.

Finally, the third plot represents a complex scenario owing to the introduction of birth-death into the dynamics. In this instance new susceptible individual are introduced by birth whereas infected individual could die reducing disease density. Thus, the disease does not necessarily vanish out of the population but reaches steady states depending on the birth, infection, recovery and death rate. The implication of this situation is that if the birth rate exceeds the death rate, then the new susceptible will enter the population enabling the disease to persist indefinitely in the population. In the same vein, if the recovery and death interplay is high enough, then the possibility of the disease to die out in the population is guaranteed. The model underscores a real-world infectious disease system where the population is dynamic, rather than being static.

Conclusion

This study has demonstrated the successful application of Physics-Informed Neural Networks (PINNs) to model disease spread through an advection-diffusion-reaction PDE. The approach effectively integrates sparse observational data with the underlying physical laws governing disease dynamics, overcoming several limitations of traditional numerical methods. By embedding the PDE constraints directly into the training process, PINNs provide a robust and computationally efficient means of forecasting epidemic evolution.

To illustrate the potential of this methodology, it was vital to simulate several scenarios of disease spread in a typical local community. Numerical simulations were implemented using the MATLAB ODE45 scheme, which provided insights into the relationship disease propagation, recovery, birth and death rate as parameter of interest in the transmission dynamics. The community is modelled as a bounded spatial domain where the disease density evolves. An outbreak is assumed to start from a localised region, figures (4.1-4.3) representing an initial cluster of infection within the community. The velocity field is configured to reflect common commuting patterns and daily movements, which are significant in shaping the directional spread of the disease.

Diffusion models the random movement of individuals across the community, accounting for local interactions that are not captured by directed movement. The reaction term modelled to follow a logistic growth framework captures the intrinsic

biological dynamics of disease transmission. The application of the PINNs underpins the utility of the method in solving PDE systems.

Recommendations

Based on the results of the study, the following recommendations are made:

- The model should be applied to real-world epidemiological data to demonstrate the practical relevance of PINNs instead of the current simulations which uses hypothetical community parameters.
- Integrating PINN with real-time data stream and online learning could enable dynamic predictions of outbreaks. This would provide timely insight for public health officials, thereby, improving response efficiency during emerging epidemic situations.
- Combining the PINNs with traditional finite element or difference numerical scheme to explore their synergy could be utilised for enhanced numerical accuracy and stability. This approach can leverage the interpretability of the classical method while exploiting the flexibilities and learning capacities of neural networks.

Suggestion for further Research

Further research avenues could explore the application of artificial intelligence for policy analysis and forecasting. This could involve utilising AI techniques to model and predict the impact of various policy interventions, including strategies to mitigate disease outbreaks.

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Credentials Stacking and Employability of Library Professionals in the University of Uyo

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Abstract

The emerging unpleasant trends have instigated most library and information professionals to seek multiple qualifications to enhance employability. Credentials stacking and employability of library professionals in the University of Uyo, describes the challenges embedded in the pursuit of additional training including Massive Open Online Courses, professional certifications and bachelor's degree. Three objectives were formulated to guide this study. The population comprised 36 librarians and para-professionals. Structured questionnaire designed was face-validated by experts and used for data collection. Descriptive statistical technique was employed for analysis. Findings of the study indicated that Massive Open Online Courses is a potent platform to publicise job vacancies, and that professional certification, along with a bachelor's degree, enhances the credibility of librarians, opening up good job opportunities and attainment of desired career path and advancement. It is concluded that Massive Open Online Courses influence employability of library professionals in the University of Uyo. Indeed, credentials stacking portrays variety of good opportunities for professional in field to be employed at completion of course of study. Therefore, motivation, setting of minimum standard, partnership and funding are recommended.

Keywords: credentials, stacking, employability, library professional

Introduction

Credentials stacking are series of document collected and build up to project an individual toward career placement and keep track to get to the highest career in life (Bailey & Belfield, 2017, p. 8). A credentials stacking is the act of putting things in a well-arranged order to provide easy access which guards against space, maintain professionalism and promote ease of retrieval. Stacking credentials allows the employer to access those copies of documents received or retrieved for easy access. This may come as a short-form courses or certificate that can further lead to enrolment in a long-term or higher educational programmes, such as degree awarding programmes, Masters or even up to PhD level.

Etim, Akwaowo and Inyang (2025) define stacking of credentials as a model or sequence that provide more opportunities to library professional to acquire more credentials to stack them for job placement or professorial position that suit their academic qualification. Additionally, stacking is often done to save space, increase efficiency and facilitate storage for convenient access to information whenever opportunity strives. The application of this technology has reduced the work load of officials in offices by reducing papers movement and printing of documents. Jalilvand, (2023) opined that stackable credentials are succession of post-secondary credentials, which increases professional aid and builds on the existing knowledge and skills for career development. Furthermore, credential stacking and employability are practices of amassing multiple certificates, such as degrees, certificates, or diploma in order to enhance one's chance of being employed.

Employability refers to an individual's ability to obtain and maintain meaningful employment that aligns with skills, qualifications, and career aspiration (Williams et al., 2016). Additionally, employability is that state of being qualified for a particular job; for instance, most organisations or institutions of higher learning employ members of staff based on predetermined factors including psychological attributes. Also, professionals who are employed still enrol into other programmes in order to build their experience and learning of new things; for instance, participate in conference, workshops, internship programmes and online learning.

Statement of the Problem

In recent years, there has been a growing trend among professionals in various fields including library and information science (LIS) to pursue multiple academic and professional qualifications as a strategy to remain competitive in the evolving labour market. Credentials stacking are processes of accumulating additional degrees, certification, diplomas as well as short term training course to one's initial qualification.

The underlying assumption is that each additional credential enhances an individual's employability. Therefore, the capacity to retain and progress in employment within academic environment depends largely on credentials.

Despite the increasing investments in credentials stacking among library professionals, it has shown no clear empirical evidence that such practices could translate into employability outcomes in university libraries in Nigeria. Edet, (2023) highlighted the importance of continuous learning and skills acquisition for libraries but considered factors like job acquisition, promotion, professional recognition and career satisfaction amongst community libraries in Nigeria. University of Uyo libraries have increased participation of staff through workshops, and seminars, yet the extent to which credentials contribute to tangible employability outcome, remains unclear. Lack of empirical assessment of this perception has created uncertainty around the value of credentials stacking.

This and many other challenges spur the researchers to seek to address uncertainty that influences credentials stacking and employability of library professionals in University of Uyo.

Purpose of the Study

The general purpose of this study is to examine credentials stacking and employability of library professional in the University of Uyo. The study specifically aims to:

- i. Assess the influence of Massive Open Online Courses (Moocs) on employability of library professional in the University of Uyo;
- ii. examine the extent of professional certification on employability of library professional in the University of Uyo; and
- iii. ascertain the effect of bachelor's degree on employability of library professional in the University of Uyo.

Research Questions

- i. What is the influence of Massive Open Online Courses (Moocs) on employability of library professionals in the University of Uyo?
- ii. To what extent has the use of professional certification influence the employability of library professionals in the University of Uyo?
- iii. What is the effect of bachelor's degree on employability of library professionals in the University of Uyo?

Research Hypotheses

- i There is no significant influence of Massive Open Online Courses (Moocs) on employability of library professional in the University of Uyo
- ii There is no significant relationship between professional certification and employability of library professional in the University of Uyo
- iii Acquisition of a bachelor's degree does not affect employability of library professionals in the University of Uyo.

Review of Related Literature

Otitoju and Nwagwu (2023) conducted a study on the Use of Massive Open Online Course for digital skills development by undergraduates in selected universities in Ibadan, Nigeria. The study adopted four objectives and research questions and a descriptive survey design. The targeted population of 378 of the 21764 undergraduate students in private and public universities in Ibadan Metropolis, Oyo State was selected.

The findings of study indicated that a substantial portion of respondents (77.8%) utilised MOOC, with 72% enrolling and 60.8% completing their enrolled courses.

Additionally, most of the respondents agreed that MOOC surpasses traditional classrooms with the mean (3.24) and standard deviation of (0.728) in clarity, while other students reported receiving adequate support during challenges. Except for Learning Analytics IA/A, all the Unified Theory of Acceptance and Use of Technology (UTAUT) variables significantly predicted undergraduate use of MOOC in the universities. The findings of this study also suggested that MOOC is growing in acceptance and utilisation among students, thereby portraying integration of digital learning methods in education. Further exploration into factors that influence MOOC adoption, motivation was profound in enhancing course completion rates, just as lack of it could act as a barrier. It was recommended that MOOC should be adopted and utilised by among students, because it offers a holistic view of their experiences and perception on training.

Bakare's (2021) study on evaluation of students' internship experience in the Lifelong & Continuing Education Department of the University of Lagos sought answers to five research questions raised. The population consisted of 125 students. The study involved 300-Level students in the Department of Lifelong and Continuing Education of the University of Lagos, who registered for the course, Automated Distance Education (ADE 325) on Internship (for two consecutive sessions). The study embraced questionnaire and focus group discussion for data collection. Purposively sampling technique was adopted to select 123 students for

the two Sessions, while questionnaire was the tool for data collection. The instrument of data collection was administered and data collected immediately. The process yielded expected success with a retrieval rate of 100%. Data gathered were analysed through simple percentages and mean scores.

The study suggested that Internship were urgently reviewed in the department and explored as possibility of giving the students stipend to facilitate their experience. The study concluded that students who have experiences in the practical aspect of the profession are more confident, and contribute meaningfully to national development. It was recommended that the internship programmes should be extended to a minimum duration of 3 months within each academic year.

To Zhebago, et al, (2020), it was important to know the effect of certificate in knowledge and skills acquisition in Nigeria with a focus on selected tertiary institutions in Nasarawa State. The study adopted Human Capital Theory as its theoretical framework. Data were collected from both primary and secondary sources. The analysis was done with simple percentage. The entire population comprised (3030) staff of Nasarawa State. The population was broken down as follows: Nasarawa State Polytechnic, Lafia was (545), College of Agriculture, Science and Technology Lafia stood at (498), Nasarawa State University, Keffi has population (1015) and Federal Polytechnic, Nasarawa State population was (972).

The criterion means was adopted in answering the research questions, using the five-point Likert's scale format. The study concluded that certificate without corresponding knowledge is responsible for the collapse in the educational and societal value system in Nigeria. In view of this, it was recommended that there should be coordinated actions against promotion of mediocrity, low productivity or research, falling academic standard and value systems, self-deceit and incompetence in career development.

Methodology

This study employed descriptive survey research design. Population of the study comprised 36 staff members, consisting of 24 academic and 12 heads of resource centres of libraries in the University of Uyo. The study adopted census sampling method. Self-developed questionnaire was used to collect data from respondents. Copies of the instrument were administered on participants selected. Data collected were analysed through descriptive statistics where mean and standard deviation provided bases to answer research questions, and a dependent t-test was used to test the stated hypotheses at the 0.05 level of significance.

Results and Analysis

Table 1

Mean and standard deviation of massive open online courses on employability of library professional in the University of Uyo

S/N	ITEMS	SA	A	D	SD	X	ST.D	Remarks
1	I will employ someone with MOOCs experience	20 (55.3%)	10 (27.8%)	4 (11.1%)	2 (5.5%)	3.3	2.04	Agreed
2	I know MOOCs enable students to get more certificates.	18 (50%)	8 (22.2%)	7 (19.4%)	3 (8.3%)	2.5	2.18	Agreed
3	MOOC is a good way to get more training and professional knowledge	21 (58.3%)	10 (27.8%)	3 (8.3%)	2 (5.5%)	3.4	2.02	Agreed
4	The MOOC training programs are up-to-date with the latest trends and technologies for organisations.	17 (47.2%)	9 (25%)	6 (16.7%)	4 (11.1%)	3.0	2.09	Agreed
5	I know MOOC enable students to enrol in free online courses	19 (52.8%)	8 (22.2%)	7 (11.9%)	2 (5.5%)	3.2	2.06	Agreed
Grand Mean						3.1=15.4	2.08	

Table 1 indicates the summary of the items analysis influence of Massive Open Online Courses on employability of library professional in the University library. The results indicate that all the items have a positive mean response, which shows that respondents strongly agreed to five items. The (average weight of Mean is 3.20, standard deviation is 2.08), altogether items measured under Massive Open Online Courses on employability of library professional in the University library had mean scores that are above 2.5 but lower than 3.1, which implies that the scaled items appear within the range of high influence.

Table 2

Mean and standard deviation of professional certification and employability of Library professional in the University of Uyo

S/N	ITEMS	SA	A	D	SD	X	ST.D	Remarks
1	I will employ students with an extra professional certificate	12 (33.3%)	20 (55.6%)	2 (5.6%)	2 (5.6%)	3.2	2.05	Agree
2	Professional certificate gives students an	9 (25%)	19 (52.8%)	7 (19.4%)	8 (8.3 %)	3.1	2.06	Agree

3	opportunity to be gainfully employed Professional certificate was awarded to students at the end of National Library Association (NLA) training.	10 (2.8%)	21 (58.3%)	4 (11.1%)	1 (2.8%)	3.1	2.06	Agree
4	Professional training programs in library schools adequately prepare students for the demands of the modern library workplace.	12 (33.3%)	16 (44.4%)	4 (11.1%)	4 (11.1%)	3.0	2.08	Agree
5	Professional certificate makes students qualified for the employment	11 (30.6%)	19 (52.8%)	3 (8.3%)	3 (8.3%)	3.1	2.08	Agree
Grand Mean								3.1=15.5 2.06

Table 2 indicates the summary of the items analysis influence of professional certification and employability of library professional in the University of Uyo. The results indicate that all the items had a positive mean response, which shows that respondents strongly agree to four items and one agree on the item. The (average weight of Mean is 3.10, Standard Deviation is 2.06), altogether, items measured under professional certification on employability of library professional in the University of Uyo have mean scores that are above 3.1, but lower than 2.01, which implies that the scaled items appear within the range of low influence.

Table 3

Mean and standard deviation on bachelor's degree and employability of library professional in the University of Uyo

S/N	ITEMS	SA	A	D	SD	X	St.D	Remarks
1	Bachelor's degree holders are employed to work in the library	23 (63.9%)	6 (16.7%)	8 (8.3 %)	4 (11.1%)	3.3	2.19	Strongly Agree
2	I will gainfully employ with Bachelor's degree in library science	20 (55.6%)	5 (13.9%)	6 (16.7%)	5 (13.9%)	3.1	2.20	Strongly Agree
3	Having a degree in library science has given an opportunity to have a good work	21 (58.3%)	7 (19.4%)	6 (16.7%)	2 (5.6%)	3.2	2.21	Strongly Agree
4	Having a Bachelor's degree gives me confidence of being employed.	22 (61.1%)	7 (19.4%)	4 (11.1%)	8 (8.3 %)	3.3	2.19	Strongly Agree
5	Bachelor's degree in library science has	22 (61.1%)	10 (25%)	8 (8.3 %)	8 (8.3 %)	3.4	2.18	Strongly Agree

increased employment opportunity.	
Grand Mean	3.3=16.3

Table 3 indicates the summary of the items analysis influence of bachelor's degree and employability of library professional in the University of Uyo. The results indicate that all the items had a positive mean response, which shows that respondents strongly agree to four items and one agree on the item. Altogether, items measured under bachelor's degree on employability of library professional in the University of Uyo have mean scores that are above 2.5, but lower than 3.2. This implies that the scaled items appear within the range of high influence.

Test of Hypotheses

Hypothesis 1

There is no significant influence of Massive Open Online Courses on employability of library professionals in the University of Uyo

Table 4

Influence of Massive Open Online Courses on employability of library professionals in the University of Uyo

Variables	N	Mean (z)	St.D	d.f	P-value	t-cal	t-crit	Decision
Employability	36	16.4	3.10	1	.05	1.74	2.38	Ho accepted
Massive Open Online Courses		10.4	2.08	35				

Table 4 reveals that Massive Open Online Courses do have significant influence on employability of library professional in the University of Uyo. Since t-cal of 1.74 is less than t-crit of 2.38, while corresponding calculated level of significance is .05 alpha. With the result, the null hypothesis was accepted. This implies that there is significant influence of Massive Open Online Courses on employability of library professional in the University of Uyo.

Hypothesis 2: There is no significant relationship between professional certification and employability of library professionals in the University of Uyo

Table 5

Relationship between professional certification and employability of library professionals in the University of Uyo

Variables	N	Mean (z)	St.D	Df	P-value	t-cal	t-crit	Decision
Employability	36	15.5	3.10	1	.05	2.53	1.68	Ho Rejected
Professionals Certification		10.4	2.06	35				

The result in Table 5 indicates that professional certification does not significantly influence employability of library professional in the University of Uyo. Since t-cal 8.40 is greater than the t-crit 1.68, while corresponding calculated level of significance is .05 alpha. With the result, the null hypothesis was rejected. This implies that there is no significant relationship between professional certification and employability of library professional in the University of Uyo

Hypothesis 3: The acquisition of a bachelor's degree does not affect employability of library professionals in the University of Uyo

Table 6

The acquisition of a bachelor's degree and employability of library professionals in the University of Uyo

Variables	N	Mean (z)	St.D	d.f	P-value	t-cal	t-crit	Decision
Employability	36	16.3	3.30	70	.05	3.41	2.66	Sig.
Bachelor's degree		10.9	2.18					

The result in Table 6 shows that bachelor's degree does not have a significant effect on employability of library professional in University of Uyo. Since the t-cal 3.41 is higher than t-crit 2.66, while corresponding calculated level of significance is .05 alpha. With the result, the null hypothesis was accepted. This implies that there is significant effect of bachelor's degree on the employability of library professional in University of Uyo.

Discussion of Findings

Research Questions 1: What is the influence of Massive Open Online Courses (Moocs) on employability of library professional in the University of Uyo?

The results of the analysis in Table 1 indicates that massive open online courses have an influence on employability of library professional in the University of Uyo due to the fact that strongly agreed percentage is greater than agree, disagree and strongly disagree percentage of respondents. The result implies that Massive Open Online Courses facilitate and give library profession an opportunity to encourage in different courses that can end them employment.

The findings are in support of Kaushik's (2016) assertion that MOOCs has become a hot topic and spread over all subject domains. The researcher expresses that MOOCs explore the basic ideas features for online learning and endeavours to solve all the

educational related problems. MOOCs helps learners in various ways. It is like a discovery, which actually creates interests for specialising in their area of activity such as Massive Open Online Courses (MOOCs). Coursera, edX (Extended Data), Udacity, SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds) and NPTEL (National Programme on Technology Enhanced Learning) are such major initiatives that provide different self-paced and self-regulated online courses.

Research Questions 2: What is the influence of professional certification on employability of library professional in the University of Uyo?

The results of the analysis in Table 2 indicates that professional certification have an influence on employability of library professional in the University of Uyo due to the fact that agreed percentage is greater than strongly agree, disagree and strongly disagree percentage of respondents. Professional certifications facilitate and give library profession an opportunity to acquire more professional certification that would end them employment. The findings are in line with Albert, (2017) who averred that certification represents competency-based skills and a capability to perform a specific Job. Cisco-certified network associate and National Institute for Automotive Service Excellence (ASE), Certified Automotive Technicians (CAT) are examples of certifications. Furthermore, unlike a license, certification does not convey a legal authority to work in an occupation, but nonetheless, might be a requirement to work in an occupation, for example, automotive technician certification.

Research Questions 3: What is the influence of bachelor's degree on employability of library professional in the University of Uyo?

The results of the analysis in Table 3 indicates that bachelor's degree have an influence on employability of library professional in the University of Uyo due to the fact that the agreed percentage is greater than strongly agree, disagree and strongly disagree percentage of respondents. The result implies those bachelor's degree holders are qualified to be given an employment. The findings are in line with Bird, Chu and Oguz, (2015) through experiential learning, internships usher future LIS professionals into the field and allow them to engage with their future colleagues in the real world of professional work. Udochukwu, (2019) maintained that the role of earning a bachelor's degree may help one to pursue more opportunities in the career progression, even as bachelor's degree has become the minimum educational requirement listed by most hiring organisations in recent times.

Conclusion

Based on the findings, it is concluded that credentials stacking including Massive Open Online Courses, professional certification and bachelor's degree do influence employability of library professionals in the University of Uyo. Therefore, credentials stacking and employability of library professionals portrays a good variety of opportunities for those in the profession to be employed at completion of course of study.

Recommendations

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

- Since MOOCs gives library professionals added qualifications, along with requisite experience, which are capable of enhancing availability for employment. Therefore, they must be motivated to pursue these lofty programmes.
- Professional certifications create marketable opportunities for library professionals over non-professionals. Consequently, there is an urgent demand for partnership with professional organisations, funding of library activities and sponsorship of library professionals to pursue higher qualifications for personal and organisational development.
- Bench mark such as a Bachelor's degree must be set as a minimum academic standard so as to protect the profession, professionals and professional prestige and employability.

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Code-Switching and Code-Mixing in Multilingual Classrooms: Challenges and Opportunities

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Abstract

This study explores the dynamics of code-switching and code-mixing in multilingual classrooms, focusing on their pedagogical implications, challenges, and opportunities. In many linguistically diverse learning environments, teachers and learners frequently alternate between languages to enhance comprehension, facilitate participation, and create inclusive spaces. While such practices can bridge linguistic gaps, they may also raise concerns about language standardisation, curriculum alignment, and assessment practices. Drawing on perspectives of Matrix Language frame, Communicative competence and the Markedness Model, the article examines how strategic language alternation can support cognitive development and scaffold learning, particularly for students from minority language backgrounds. The findings suggest that informed, purposeful language use can transform multilingual classrooms into spaces of linguistic empowerment, rather than barriers to proficiency. It further highlights how code-switching and code-mixing can foster cultural identity and strengthen classroom interaction, while acknowledging potential issues such as reduced target language exposure and inconsistent language policies. Encouraging reflective practice, incorporating multilingual teaching materials, enhancing students' language competence, strategic integration in teaching, among others are offered as panaceas for educators and policymakers to harness effectively within formal education settings.

Keywords: code-switching, code-mixing, multilingual education, language policy, classroom interaction

Introduction

In the contemporary interconnected world, multilingualism has emerged as a defining characteristic of educational contexts, particularly within societies where several languages coexist and interact daily. Multilingual classrooms embody microcosms of cultural and linguistic diversity, as learners arrive with varied linguistic repertoires shaped by social, ethnic, and cultural influences. Within such spaces, language use functions beyond communication—it assumes pedagogical and social significance. Educators and learners often alternate between languages to support comprehension, convey meaning, and foster interpersonal connection. Although sometimes criticised as informal or lacking structure, this linguistic adaptability is instrumental in negotiating meaning and constructing knowledge in classroom settings.

Multilingual education denotes the coexistence and utilisation of more than one language for teaching, learning, and communication within educational environments. In many postcolonial nations such as Nigeria, Kenya, and India, this approach represents both an inevitable and strategic response to linguistic diversity. English frequently serves as the language of instruction, while indigenous languages sustain their cultural and communal significance. The interaction between these languages generates varied linguistic practices, notably code-switching and code-mixing. These phenomena naturally occur among bilingual and multilingual speakers and reflect not only linguistic competence but also social identity and communicative purpose.

Code-switching involves alternating between two or more languages or language varieties within a conversation, sentence, or discourse. It serves several functions in instructional communication, such as clarification, emphasis, translation, and rapport-building between teachers and learners. Conversely, code-mixing refers to the incorporation of lexical or grammatical elements from one language into another within a single utterance. Although the boundary between these two concepts can be fluid, code-switching typically functions at the sentence or discourse level, whereas code-mixing operates at the lexical or morphological level. Both illustrate the dynamic nature of multilingual communication and demonstrate speakers' proficiency in navigating complex linguistic systems.

Historically and sociolinguistically, the use of multiple languages in education stems from colonial and postcolonial language policies. During colonial administrations, European languages such as English, French, and Portuguese were institutionalised as official and instructional media, marginalising indigenous languages. This historical legacy continues to shape linguistic practices in many African and Asian societies. Consequently, educators and learners in multilingual contexts often employ code-switching and code-mixing as pragmatic tools to bridge linguistic gaps caused by restrictive monolingual language policies. From a sociolinguistic viewpoint, these practices embody identity negotiation, resistance, and adaptation within educational discourse while revealing the intersections between linguistic power, social class, and access to education.

The pedagogical relevance of code-switching and code-mixing in multilingual classrooms is profound. Beyond facilitating communication, code-switching and code-mixing can also be examined through the lens of **instructional scaffolding**, a concept originating from Vygotsky's (1978) sociocultural theory and his notion of the *Zone of Proximal Development* (ZPD). Scaffolding refers to the temporary, adaptive assistance a lecturer provides to help learners perform tasks that would be too challenging to complete independently. Within language learning, this support might include modelling vocabulary, paraphrasing complex ideas, prompting learners to articulate understanding, or strategically alternating between languages to clarify meaning. As learners' competence increases, such assistance is gradually withdrawn, enabling them to operate autonomously in the target language.

In multilingual classrooms, lecturers frequently employ students' first languages as pedagogical tools to bridge conceptual and linguistic gaps. In this context, code-switching functions not merely as a conversational habit, but as a **deliberate instructional aid** that facilitates comprehension, sustains participation, and nurtures confidence. Research indicates that when implemented thoughtfully, scaffolding through language alternation promotes metalinguistic awareness and supports incremental mastery of academic English (Gibbons, 2002; Hammond, 2001; Walqui, 2006). Consequently, understanding scaffolding as an integral component of multilingual pedagogy highlights the functional, rather than deficient, value of learners' full linguistic repertoires in achieving communicative and cognitive growth.

Despite their instructional merits, code-switching and code-mixing also present challenges. These include inconsistency in language application, possible learner confusion, and the potential reduction in proficiency in the target language, typically English. Teachers may encounter tensions between policy prescriptions and practical realities, particularly where monolingual instruction is mandated. Furthermore, the lack of adequate preparation in bilingual teaching strategies leaves many educators uncertain about how and when to implement language alternation effectively. These difficulties highlight the necessity for evidence-based guidelines and professional development to support effective classroom practice and policy implementation.

Nonetheless, the opportunities presented by code-switching and code-mixing remain substantial. When employed strategically, they promote inclusivity, enrich classroom discourse, and cultivate learners' metalinguistic awareness. They also enable culturally responsive pedagogy and encourage students to utilise their full linguistic repertoires in the learning process. In multilingual contexts such as Nigeria, where linguistic diversity functions both as a resource and a challenge, the purposeful application of these practices can contribute to equitable and effective education. Understanding the complexities of code-switching and code-mixing is therefore essential for developing pedagogical frameworks that reflect the realities of linguistically diverse classrooms.

Research Objectives

The study is designed to explore dynamics of code-switching and code-mixing in multilingual contexts with focus on implications, challenges and emerging opportunities. Specifically, it is geared to:

- i. Describe the patterns and functions of code-switching and code-mixing in multilingual interactions in Akwa Ibom State Polytechnic, Ikot Osurua; and
- ii. examine the challenges and opportunities associated with code-switching and code- mixing as facilitators or inhibitors of effective communication and cultural expression in multilingual contexts.

Research questions

In the course of this study, it was germane to develop and sought for answers to the following questions:

- i. What are the patterns and functions of code-switching and code-mixing in multilingual interactions in Akwa Ibom State Polytechnic, Ikot Osurua?
- ii. What challenges and opportunities do code-switching and code-mixing present as facilitators or inhibitors of effective communication and cultural expression in multilingual contexts?

Literature Review

Scholarly engagement with code-switching and code-mixing in multilingual environments has developed significantly over time. Early linguistic theories often interpreted these practices as indicators of language interference or incomplete bilingualism (Weinreich, 1953). However, contemporary scholars now acknowledge them as sophisticated communicative mechanisms that multilingual speakers employ for both social and pedagogical purposes. Within educational settings, research has shown that these language alternation practices improve understanding, close linguistic gaps, and promote learner participation (Arthur & Martin, 2006). Rather than viewing them as symptoms of linguistic deficiency, current perspectives regard code-switching and code-mixing as creative and adaptive strategies that facilitate the negotiation of meaning in linguistically complex classrooms.

Conceptually, both code-switching and code-mixing are examined through their structural and functional characteristics. Code-switching refers to alternating between languages at the discourse, sentence, or conversational level, whereas code-mixing involves embedding lexical or grammatical elements from one language into another (Muysken, 2000). These linguistic behaviours are inherently natural in multilingual interaction and are influenced by the sociocultural contexts in which communication occurs. In classroom discourse, such practices represent deliberate or subconscious efforts to make instruction comprehensible to learners with differing levels of proficiency. They also exemplify how multilingual individuals mobilise their entire linguistic repertoires to enhance effective communication within culturally diverse educational spaces.

Theoretical Perspectives

Several theoretical models have contributed to a deeper understanding of code-switching and code-mixing. The **Matrix Language Frame theory** (Myers-Scotton, 1993) posits that one language typically provides the grammatical structure while

another supply embedded lexical items. The **Markedness Model** suggests that speakers alternate between languages strategically to express identity, negotiate relationships, or conform to social expectations. Likewise, Hymes' (1972) **Communicative Competence theory** underscores the pragmatic and contextual considerations influencing speakers' language choices in interaction. Collectively, these frameworks affirm that code-switching and code-mixing are systematic, context-dependent, and purposeful communicative acts rather than random language alternations.

Empirical investigations have consistently underscored the pedagogical importance of code-switching and code-mixing within multilingual learning environments. In many African and Asian contexts, where English functions as the primary instructional language, teachers frequently alternate between English and local languages to aid comprehension and sustain learner engagement (Ferguson, 2003; Sert, 2005). Such practices are particularly effective in second-language classrooms, where learners rely on familiar linguistic forms to understand abstract academic concepts. Nonetheless, certain scholars caution that excessive dependence on these strategies might limit learners' immersion in the target language and subsequently affect linguistic competence and academic achievement (Lin, 2013). This perspective highlights the need for balance in employing language alternation within instruction.

The literature also identifies that while code-switching and code-mixing pose several challenges, they simultaneously offer opportunities for inclusive, culturally grounded pedagogy. The challenges encompass inconsistent language use, potential learner confusion, and perceptions of unprofessionalism associated with informal linguistic alternation (Arthur, 2001). Conversely, the advantages include enhanced learner participation, validation of students' linguistic and cultural identities, and the promotion of active, student-centred learning. Within multilingual classrooms, these strategies empower learners to utilise their full linguistic repertoires to achieve academic success. Overall, existing studies demonstrate that the thoughtful and intentional integration of code-switching and code-mixing can transform linguistically diverse classrooms into inclusive spaces that encourage pedagogical innovation, equity, and cultural affirmation.

Methodology

Research Design

This study adopted a descriptive research design to provide a detailed account of the subject of inquiry without manipulating variables or imposing experimental conditions. The design was considered appropriate because it allows the researcher to observe, document, and interpret naturally occurring behaviours, experiences, and perspectives within their real-life setting (Creswell & Creswell, 2018). The design enabled the researcher to obtain data on how code-switching and code-mixing occur in classroom interactions, patterns of individual navigation and the making of sense of language use in multilingual settings, as well as the perceived challenges and opportunities associated with these practices.

Research Setting

The study was conducted at the Akwa Ibom State Polytechnic, Ikot Osurua, Ikot Ekpene, **Akwa Ibom State**, where English is used for instructional purposes. This setting enabled the researcher to explore authentic classroom interactions and lecturer-student communication as they naturally unfolded. The choice of the location also provided access to participants who regularly engage with linguistic and pedagogical practices relevant to the study.

Population, Sample and Sampling Technique

The population of the study consisted of all National Diploma and Higher National Diploma students in the School of Communication Arts, Akwa Ibom State Polytechnic, Ikot Osurua. School of Communication Arts has various departments including General Studies (GNS), Library and Information Science (LIS), Mass Communication (MAC), Journalism and Media Studies (JMS), and Strategic Communication and Media Studies (SCM). Lecturers who teach language-related courses were also included. This population was selected because members of this group frequently engage in both formal and informal communication where code-switching and code-mixing occur.

A sample size of **120 respondents** was drawn from the target population using a simple random sampling technique. This sample size was adequate for generating meaningful data. Out of the 120 respondents, 100 were students and 20 were lecturers. The use of simple random sampling ensured that every member of the population had an equal chance of being selected, thereby reducing sampling bias.

Table 1*Frequency distribution of respondents by departmental affiliation*

S/N	Department	F(students)	F(Lecturers)
1.	General Studies (GNS),	4	
2.	Library and Information Science (LIS),	25	4
3.	Mass Communication (MAC)	25	4
4.	Journalism and Media Studies (JMS)	25	4
5.	Strategic Communication and Media Studies (SCM).	25	4
N (Frequency)		100	20

Instrument of Data Collection

The primary instrument for data collection was a structured questionnaire developed by the researcher. The questionnaire consisted of two sections. Section A captured demographic information such as age, gender, department, and level of study. Section B contained items designed to measure respondents' experiences, frequency, and perceptions of code-switching and code-mixing. The items were arranged on a four-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree".

Validation and Reliability of the Instrument

To ensure validity, the questionnaire was reviewed by two experts in language studies and one expert in educational measurement and evaluation. Their feedback helped to refine the items for clarity and relevance. A pilot study was conducted with 15 respondents from a nearby institution. Data from the pilot test were analysed using the Cronbach alpha method, which produced a reliability coefficient of **0.81**, indicating that the instrument was internally consistent and reliable for data collection.

Method of Data Collection

The researcher personally administered the questionnaires to the selected respondents. This method increased the return rate and provided an opportunity to give clarifications where necessary. Respondents were assured of confidentiality and informed that their participation was voluntary. A total of 120 copies of questionnaire were distributed, and 113 were returned correctly completed. This represented a response rate of **94.2%**.

Method of Data Analysis

Data obtained from the questionnaire were analysed using simple percentage and frequency count. This method was appropriate for presenting patterns of responses in clear numerical form. Frequency distribution tables were used to display demographic characteristics and response trends. Percentages were applied to interpret levels of agreement or disagreement with each questionnaire item. The results were later presented in tables and explained in narrative form to support clarity.

Data Presentation, Analysis, and Interpretation

Demographic Characteristics of Respondents

The demographic characteristics of respondents were analysed to understand the composition of participants in terms of age, gender, and role (students or lecturers). Table 2 presents the distribution of respondents by category.

Table 2

Demographic characteristics of respondents (N = 113)

Demographic Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	65	57.5
	Female	48	42.5
Age (years)	18-22	60	53.1
	23-27	40	35.4

Demographic Variable	Category	Frequency (f)	Percentage (%)
	28 and above	13	11.5
Respondent Type	Students	93	82.3
	Lecturers	20	17.7

From Table 2, it is evident that the majority of respondents were male (57.5%) and students (82.3%), with most aged between 18 and 22 years (53.1%). This distribution reflects a typical tertiary institution environment where younger students form the bulk of the population.

Frequency Distribution of Responses

Respondents were asked to indicate how frequently they engage in or observe code-switching and code-mixing during classroom interactions. Table 3 shows the frequency distribution of responses.

Table 3

Frequency of code-switching and code-mixing (N = 113)

Frequency Level	Students (f)	Lecturers (f)	Total (f)	Percentage (%)
Always	38	8	46	40.7
Often	30	7	37	32.7
Sometimes	20	3	23	20.4
Rarely	5	2	7	6.2

Analysis of Table 3 shows that most respondents (73.4%) indicated that code-switching and code-mixing occur either “always” or “often,” suggesting that these practices are common in classroom interactions.

Patterns of Responses from Respondents

Table 4 highlights respondents' perceptions of challenges and opportunities associated with code-switching and code-mixing.

Table 4*Respondents' perceptions of challenges and opportunities (N = 113)*

Statement	SA	A	D	SD	Total (f)	% A
Code-switching affects mastery of Standard English	25	40	30	18	113	58.4
Code-mixing enhances comprehension in class	45	35	20	13	113	70.8
Excessive code-switching reduces academic performance	20	38	35	20	113	51.3
Strategic code-switching improves classroom participation	50	35	15	13	113	75.2

SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree

From Table 4, it is observed that respondents acknowledge both challenges and opportunities of code-switching and code-mixing. Most respondents (75.2%) agreed that strategic use improves participation, while 58.4% believed that indiscriminate switching could hinder Standard English mastery.

Findings of the Study

From the data presented above, the following key findings emerged:

- Code-switching and code-mixing are **frequently used** by both students and lecturers, with 73.4% indicating "always" or "often."
- **Strategic use** of code-switching enhances classroom participation and comprehension (75.2% and 70.8% agreement).
- **Excessive switching** may negatively affect mastery of Standard English (58.4% agreement).
- Students and lecturers recognise that these practices serve both **pedagogical and social functions**, bridging linguistic gaps and fostering engagement.
- There is a **balance between challenges and opportunities**, highlighting the need for moderation and guidance in classroom language use.

Discussion of Findings

Findings of the study suggest that code-switching and code-mixing are integral components of classroom interaction in multilingual contexts. The high frequency of these practices aligns with previous studies indicating that learners often rely on familiar languages to clarify and reinforce meaning (Adegbija, 2004; Bamgbose, 1998).

Strategically used, code-switching serves as a scaffolding tool, improving comprehension and participation. This supports the notion that allowing some flexibility in language use can enhance learning outcomes, particularly for students with limited English proficiency.

However, the data also reveal the challenges associated with indiscriminate language alternation. A significant proportion of respondents reported that frequent switching could compromise Standard English mastery, supporting earlier claims that over-reliance on code-switching may interfere with formal language development (Weinreich, 1953).

Overall, the study demonstrates that while code-switching and code-mixing present potential obstacles to language mastery, their judicious use offers notable opportunities for learning. Lecturers and students alike benefit from recognising when and how to alternate languages, balancing comprehension with formal language proficiency.

Conclusion

The study has examined the patterns, challenges, and opportunities associated with code-switching and code-mixing in a multilingual educational context. Empirical findings indicate that both students and lecturers frequently engage in these linguistic practices as a means of facilitating comprehension, participation, and communication within the classroom. The study reveals that code-switching and code-mixing serve essential pedagogical and social functions, allowing learners to bridge gaps between their home languages and Standard English, and providing lecturers with strategies to enhance instructional clarity.

At the same time, the study confirms that indiscriminate or excessive use of code-switching and code-mixing can present challenges. Such practices may interfere with the acquisition and mastery of Standard English, creating inconsistencies in language use and potentially affecting academic performance. These findings

underscore the dual nature of these practices as both beneficial and potentially problematic, depending on how they are employed in the learning environment.

In conclusion, the study highlights the importance of **balanced language use** in multilingual classrooms. Strategic and purposeful application of code-switching and code-mixing can enhance comprehension and participation, while moderation is necessary to maintain the integrity of Standard English. Overall, the study emphasises that recognising both the opportunities and challenges of these linguistic practices is essential for improving teaching, learning, and communication in tertiary educational settings.

Recommendations

Based on the findings of this study, several recommendations are proposed to enhance the effective use of code-switching and code-mixing in multilingual classroom environments:

- **Strategic integration in teaching:** Lecturers should deliberately integrate code-switching and code-mixing as pedagogical tools. By using these practices purposefully, they can clarify complex concepts, facilitate comprehension, and ensure that all learners, regardless of language proficiency, actively participate in classroom discussions.
- **Professional development for lecturers:** Tertiary institutions should organise training programmes for lecturers to develop skills in managing code-switching and code-mixing. These programmes can provide guidance on when and how to switch languages appropriately, balancing comprehension support with the maintenance of Standard English.
- **Policy guidelines for language use:** Institutions should develop clear language policies that encourage flexible but structured use of code-switching and code-mixing. Such policies would help lecturers and students understand the acceptable contexts for alternating languages, preventing excessive reliance on non-standard codes.
- **Enhancing students' language competence:** Students should be encouraged to improve their proficiency in Standard English through additional practice, reading, and language workshops. Strengthening formal language skills will allow learners to engage more confidently in academic discourse while still benefiting from occasional code-switching for clarification.

- **Encouraging reflective practice:** Both lecturers and students should be encouraged to reflect on their language use. By being conscious of when and why they engage in code-switching or code-mixing, participants can optimise these practices to enhance learning outcomes without compromising linguistic accuracy.
- **Incorporating multilingual teaching materials:** Teaching materials that acknowledge the multilingual reality of the classroom can support comprehension and engagement. For example, bilingual glossaries, translated examples, and dual-language resources can reduce over-reliance on spontaneous code-switching.
- **Monitoring and evaluation:** Institutions should periodically monitor language use in classrooms to ensure that code-switching and code-mixing are employed effectively. Feedback from both lecturers and students can inform adjustments to teaching strategies and institutional language policies.

Suggestions for Further Research

While this study has provided insights into the challenges and opportunities associated with code-switching and code-mixing in a multilingual educational setting, several areas remain for further investigation. The following suggestions are proposed:

- **Expansion to other educational levels:** Future research could explore code-switching and code-mixing practices at different levels of education, such as secondary schools or postgraduate institutions. Comparing these levels may reveal variations in frequency, patterns, and impact on language proficiency across age groups and academic stages.
- **Cross-disciplinary studies:** Researchers could examine these linguistic practices across different academic disciplines to identify subject-specific challenges and opportunities. For instance, courses in science, technology, or humanities may have distinct language demands that influence the use of code-switching and code-mixing.
- **Longitudinal studies:** Conducting longitudinal studies would provide insights into how code-switching and code-mixing behaviours evolve over time. Such studies could assess the long-term effects of these practices on learners' mastery of Standard English and overall academic performance.
- **Qualitative investigations:** While this study employed quantitative methods, future research could incorporate qualitative approaches, such as

classroom observations, interviews, and focus groups. This would offer a deeper understanding of the motivations behind language alternation and the social and cultural contexts that shape it.

- **Intervention-based research:** Researchers could design intervention studies to assess the effectiveness of structured strategies for managing code-switching and code-mixing. For example, testing the impact of guided language policies or bilingual teaching resources on comprehension and academic outcomes could provide practical recommendations for educators.
- **Comparative studies across regions:** Further studies could compare code-switching and code-mixing practices across different states or countries with multilingual populations. Such research would highlight contextual differences and provide a broader perspective on how cultural and linguistic diversity influences classroom communication.
- **Technology-mediated learning contexts:** As digital and online learning platforms become more prevalent, future research could explore how code-switching and code-mixing manifest in virtual classrooms. This would help understand the role of technology in shaping multilingual communication and learning experiences.

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**New Media, Civic Participation, and the Enforcement of Child Rights Policies:
A Survey of Civil Society Organisations in Uyo, Akwa Ibom State**

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Abstract

Persistent child labour, trafficking, and inadequate access to justice have continued to decimate the future of children in developing nations including Nigeria. The list of forced underage marriages, sex labour, teenage pregnancies and underage maternal mortality swells unabated. The helpless Children bear the pangs with ignorance consequent upon ineffective implementation of Child's rights policies. This study examined the role of new media and civil society organisations (CSOs) in civic participation and the enforcement of child rights policies in Uyo. The study was anchored on Public Sphere theory. Using a descriptive survey design, data were collected through questionnaire and interviews from 50 respondents across five purposively selected CSOs. Findings indicate that Facebook and WhatsApp are the most commonly used platforms for advocacy; with civic participation reported as moderate and inconsistent. Major challenges include limited funding, weak government support, and low public awareness. The study concludes that new media is effective to some extent in promoting awareness, but less impactful in driving enforcement outcomes. Therefore, the study suggests strengthened public engagement, stronger institutional collaboration, improved funding, and digital literacy as necessities to translate online participation into concrete enforcement of child rights policies.

Keywords: new media, civic participation, enforcement, Child rights, civil society organisation

Introduction

The protection and enforcement of child rights remain a significant challenge across Nigeria, where progressive legal frameworks such as the Child Rights Act of 2003 have not always translated into consistent practice at the state and local levels. Reports continue to document persistent child labour, child trafficking, and inadequate access to justice for children, reflecting the gap between policy provisions and their enforcement (U.S. Department of State, 2023; U.S. Department of Labor, 2022). These lapses highlight the importance of social institutions and civic actors in ensuring that children's rights are not only recognised in law but also protected in daily reality.

Civil society organisations (CSOs) have emerged as key actors in bridging these gaps by offering legal aid, public education, advocacy, and monitoring of child rights violations. They often serve as intermediaries between communities and the state, providing services, raising awareness, and demanding accountability from authorities (UNICEF, 2022). However, the effectiveness of CSOs is sometimes constrained by limited resources, weak institutional frameworks, and insufficient collaboration with government agencies, which hinder their capacity to promote child rights enforcement consistently (UNICEF, 2025).

The rapid expansion of new media technologies in Nigeria has opened new avenues for civic engagement and advocacy. Social and digital media platforms such as Facebook, WhatsApp, and Twitter have increasingly become important tools for mobilising public opinion, disseminating information, and creating pressure for policy enforcement (Bello, 2023). These platforms have reshaped patterns of civic participation by enabling grassroots actors to bypass traditional gatekeepers and engage directly with the public on issues affecting children and other vulnerable groups (Umoh, 2025).

In the specific context of child rights, new media provides unique opportunities for immediacy, low-cost mobilisation, and interactive communication. Advocacy campaigns, online reporting mechanisms, and digital storytelling have been deployed to highlight cases of abuse, pressurise authorities to act, and connect victims with support services (UNICEF, 2025). Despite these potentials, there remains uncertainty over the extent to which digital advocacy translates into tangible enforcement outcomes such as increased prosecutions, improved social services, or enhanced institutional responsiveness (U.S. Department of State, 2023).

Within Akwa Ibom State, and particularly in Uyo, the role of civil society organisations in utilising new media for child rights advocacy has received limited scholarly attention. Assessments suggest that issues relating to child rights often receive sporadic coverage

in mainstream media, and the capacity of CSOs to leverage digital platforms for advocacy and enforcement remains under-documented (Inibehe, 2025). This suggests an urgent need to empirically investigate how CSOs in Uyo are integrating new media into their broader strategies for child rights enforcement.

The study therefore, provides insight into the extent of their engagement with new media, the challenges they face, and the outcomes they achieve. Such an investigation determines whether new media use has strengthened civic participation in child rights advocacy or whether its effects remain largely limited to awareness creation without significant enforcement results.

Objectives of the Study

The study is designed specifically to:

- i. Examine how civil society organisations in Uyo use new media to promote child rights policies;
- ii. assess the extent of civic participation in child rights advocacy through new media platforms;
- iii. identify the challenges faced by civil society organisations in enforcing child rights policies; and
- iv. evaluate the effectiveness of new media in influencing the enforcement of child rights policies in Uyo.

Conceptual Review

New Media

New media refers to digital communication technologies that enable interactive, networked, and user-generated content dissemination. Unlike traditional mass media, which primarily operate on a one-way flow of information, new media platforms are characterised by interactivity, immediacy, and participatory culture (McQuail, 2020). Social networking sites, blogs, online news portals, and instant messaging applications represent the key forms of new media, and their growth has reshaped communication landscapes across the globe. These platforms not only facilitate information exchange but also enable the construction of virtual communities that can mobilise around social, political, and developmental issues (Bello, 2023).

The emergence of new media has been particularly transformative in Africa, where mobile technologies have expanded rapidly, creating new opportunities for civic participation and advocacy. In Nigeria, platforms such as Facebook, WhatsApp, and

Twitter are now integral to public discourse and political mobilisation, allowing individuals and organisations to bypass traditional gatekeepers of communication (Umoh, 2025). Studies suggest that these platforms have given voice to marginalised groups, amplifying civic demands and enabling collective action on issues ranging from governance to human rights (Adeyanju & Haruna, 2021). This shift demonstrates how new media has become central to contemporary democratic engagement and social development.

The Interactive nature of new media also creates new possibilities for advocacy and accountability. Scholars note that the ability of digital platforms to archive, circulate, and reframe information has made them critical tools for raising awareness of social issues (Livingstone, 2019). For instance, child rights advocacy organisations increasingly rely on new media to disseminate campaigns, publicise violations, and pressurise authorities into action. However, research reveals that while online visibility is often achieved, the translation of digital activism into tangible policy enforcement remains inconsistent (UNICEF, 2025). This observation highlights both the potential and the limitations of new media as a tool for civic engagement.

Despite its promise, the adoption of new media in advocacy also presents challenges. Issues such as digital divides, misinformation, lack of regulatory frameworks, and unequal access to technology limit the effectiveness of online engagement (Ndukwe, 2020). In contexts such as Nigeria, disparities in internet connectivity and literacy create uneven participation, raising concerns about exclusion of vulnerable populations. Moreover, the transient nature of online campaigns often leads to what scholars describe as "slacktivism," where individuals participate symbolically without contributing to lasting social change (Gladwell, 2019). These concerns necessitate closer empirical examination of how new media is applied in specific advocacy contexts, such as child rights protection.

Civic Participation

Civic participation refers to the active engagement of citizens in political, social, and developmental processes that influence their communities. Traditionally, such participation has taken the form of voting, public demonstrations, community meetings, and involvement in civil society organisations. However, with the growth of new media, the scope of civic participation has broadened to include online engagement, digital advocacy, and networked mobilisation (McQuail, 2020). Scholars emphasise that civic participation strengthens democracy by holding leaders accountable, ensuring inclusion of marginalised voices, and promoting collective problem-solving (Adeyanju & Haruna, 2021).

In the Nigerian context, civic participation has evolved significantly with the diffusion of digital technologies. Platforms such as Facebook, WhatsApp, and Twitter have become arenas where citizens discuss governance issues, mobilise for protests, and demand accountability from leaders (Bello, 2023). This transformation has shifted political discourse beyond traditional spaces, enabling individuals and groups to influence decision-making processes at local and national levels. Evidence suggests that social media-driven civic participation has been particularly influential among young people, who increasingly use digital platforms to advocate for rights, highlight injustices, and campaign for social change (Umoh, 2025).

Nevertheless, the expansion of civic participation through new media is not without challenges. While digital platforms allow for greater inclusivity, issues such as unequal access to technology, misinformation, and superficial forms of engagement undermine their effectiveness (Ndukwu, 2020). Scholars warn of the tendency toward "slacktivism," where online support does not translate into sustained action or institutional change (Gladwell, 2019). These limitations raise critical questions about the depth and sustainability of civic participation in digitally mediated contexts, particularly in areas where institutional frameworks for policy enforcement remain weak.

In relation to child rights, civic participation is vital because it provides a platform for collective advocacy and oversight of enforcement mechanisms. Through both offline and online channels, citizens and CSOs can mobilise against child abuse, monitor government compliance with child rights policies, and push for stronger institutional responses (UNICEF, 2025). However, it remains unclear how effectively civic participation, especially in its digital forms, contributes to tangible improvements in child rights enforcement within specific contexts such as Uyo, Akwa Ibom State. This uncertainty underscores the need for empirical research into the link between civic engagement, new media, and child rights protection.

Child Rights Policies

The protection of children's rights in Nigeria is primarily guided by the Child Rights Act (CRA) of 2003, which domesticated the United Nations Convention on the Rights of the Child and the African Charter on the Rights and Welfare of the Child. The Act provides a legal framework for safeguarding children from abuse, exploitation, neglect, and discrimination, while also promoting access to education, healthcare, and social services (UNICEF, 2022). Despite this progressive legal framework, child rights violations remain widespread, with persistent reports of child labour, early marriage, child trafficking, and inadequate access to justice (U.S. Department of Labor, 2022; U.S. Department of State, 2023).

The gap between policy provisions and enforcement has raised concerns about institutional weaknesses and the need for stronger monitoring and accountability systems.

Implementation of child rights policies in Nigeria is complicated by federalism, since the CRA requires individual state assemblies to domesticate its provisions. While several states have passed versions of the Act, disparities exist in enforcement, with many states lagging in resource allocation and institutional support (UNICEF, 2025). Research shows that this uneven application has left children in some regions particularly vulnerable, underscoring the importance of both government action and the contributions of civil society organisations in strengthening enforcement mechanisms (Adeyanju & Haruna, 2021).

In Akwa Ibom State, the domestication of the Child Rights Act was an important step towards protecting children, especially in light of historical reports of child stigmatisation and abuse linked to cultural practices. Civil society organisations and international agencies have worked alongside the state government to promote awareness and implementation of the law (UNICEF, 2025). However, challenges remain in translating policy into effective practice. Reports indicate that despite legal protections, cases of child neglect, abuse, and exploitation continue to surface, raising questions about institutional capacity, community engagement, and the role of civic actors in bridging the enforcement gap (Inibehe, 2025).

The situation in Akwa Ibom illustrates the broader Nigerian challenge of ensuring that legal frameworks for child protection move beyond symbolic commitments to real, enforceable mechanisms. While laws exist on paper, enforcement is often undermined by limited resources, inadequate training of enforcement officers, and weak collaboration between government and non-state actors (UNICEF, 2022; UNICEF, 2025).

Child Rights Policies and Enforcement

Nigeria's Child Rights Act of 2003 remains the most comprehensive legal framework for protecting children, aligning with both the United Nations Convention on the Rights of the Child and the African Charter on the Rights and Welfare of the Child. The Act guarantees children protection against abuse, exploitation, and neglect while promoting access to education, healthcare, and justice (UNICEF, 2022). However, the translation of these policy provisions into practice has been inconsistent. National reports show continuing cases of child labour, early marriage, and trafficking, indicating that enforcement mechanisms remain weak (U.S. Department of Labor, 2022; U.S.

Department of State, 2023). This gap reflects systemic challenges within Nigeria's governance structures, particularly at state and local levels.

The federal nature of Nigeria's political system requires that the Child Rights Act be domesticated by individual state legislatures before it can be fully enforceable. Although many states, including Akwa Ibom (CRA 2008) have domesticated the Act, but enforcement remains problematic due to inadequate institutional frameworks, poor funding, and limited coordination across agencies (UNICEF, 2025). Scholars have observed that while the legal framework is robust, actual implementation is undermined by a lack of monitoring, insufficient capacity of child protection institutions, and socio-cultural practices that perpetuate abuse (Adeyanju & Haruna, 2021).

In Akwa Ibom State, the domestication of the Child Rights Law was a response to specific challenges, including widespread reports of child stigmatisation and abuse. Despite this legislative progress, enforcement gaps remain evident, as cases of neglect and exploitation persist in many communities (Inibehe, 2025). Civil society organisations, in partnership with government and international bodies, have attempted to bridge these gaps through advocacy, awareness campaigns, and service delivery. Yet, the effectiveness of such interventions is limited by structural weaknesses and low levels of community engagement (UNICEF, 2025).

While child rights policies in Nigeria represent a strong legal commitment to child protection, their enforcement continues to face significant barriers. Institutional fragility, uneven state-level implementation, and resource constraints prevent the full realisation of these rights (UNICEF, 2022; U.S. Department of State, 2023).

Civil Society Organisations in Uyo

Civil society organisations (CSOs) occupy a vital space in promoting social development, accountability, and human rights in Akwa Ibom State. In Uyo, these organisations often act as intermediaries between citizens and the government, providing platforms for advocacy, service delivery, and policy monitoring. Their involvement in child rights issues has been especially important, given the persistence of challenges such as child labour, neglect, and abuse despite the existence of formal legal frameworks (UNICEF, 2025). By mobilising communities, educating the public, and engaging with policymakers, CSOs help to bridge the enforcement gaps that government institutions alone have not been able to address.

For the purpose of this study, five civil society organisations in Uyo have been selected based on their active engagement in child rights advocacy and protection. These are

Child Rights and Rehabilitation Network (CRARN), Save the Child Initiative (SCI), Family Empowerment and Youth Re-Orientation Path Initiative (FEYReP), Street Priests Incorporated, and the Initiative for Youth Development and Child Rights Advocacy (IYDAR). Each of these organisations has made visible contributions in addressing issues affecting children, ranging from direct intervention and rehabilitation to advocacy and awareness campaigns.

CRARN is particularly recognised for its work in rescuing and rehabilitating stigmatised children in Akwa Ibom communities, while Save the Child Initiative has focused on education and health programmes for vulnerable children. FEYReP, founded with the support of office of the First Lady of the State, has carried out large-scale sensitisation campaigns against child stigmatisation and abuse. Street Priests Incorporated is notable for its outreach and rehabilitation programmes targeting street children, while IYDAR has been involved in grassroots advocacy and capacity-building programmes designed to promote children's rights and youth empowerment. Together, these organisations provide a rich context for examining how CSOs employ new media for civic participation and enforcement of child rights policies.

Empirical Review

Okafor and Ekanem (2020) examined how new media platforms influence youth civic participation in governance within South-South Nigeria. Using a survey of 300 respondents across three states, the authors found that social media platforms such as Facebook and Twitter significantly enhanced awareness and mobilisation around governance issues. However, the study noted that while awareness was high, actual participation in governance processes remained limited, as online engagement often failed to translate into offline political action. The authors concluded that new media had strong potential for democratic participation but cautioned that structural and institutional barriers limited its overall impact. This work is relevant to the present study as it highlights both the strengths and weaknesses of digital engagement in advocacy and governance.

Udo and Effiong (2021) in their investigation, examined the role of civil society organisations (CSOs) in advocating for and protecting child rights in Nigeria. Drawing on interviews with leaders of ten CSOs across different states, the study revealed that CSOs have been instrumental in raising awareness of child abuse, influencing policy debates, and providing direct support to vulnerable children. Nonetheless, the research identified persistent challenges such as weak government collaboration, poor funding, and cultural resistance to some child rights provisions. The study concluded that while CSOs have made significant contributions to child rights advocacy, their **efforts were**

undermined by limited enforcement mechanisms. The relevance of this study to the present research lies in its emphasis on the enforcement gap in child rights advocacy and the role of CSOs in bridging that gap.

Essien and Johnson (2022), explored how digital activism contributes to human rights enforcement in Akwa Ibom State, with a particular focus on social movements and online advocacy groups. The study employed a mixed-methods approach, combining surveys of 200 respondents with case studies of three prominent advocacy campaigns. Findings indicated that digital activism significantly increased public awareness and exerted pressure on government institutions to act on reported cases of rights violations. However, the study noted that enforcement was inconsistent, as online campaigns sometimes lost momentum without sustained offline engagement. The authors recommended stronger partnerships between CSOs, government, and online activists to improve policy enforcement. This study is directly relevant as it situates new media within Akwa Ibom's human rights landscape, offering insights into the effectiveness and challenges of digital advocacy.

Theoretical Framework

Methodology

This study adopted a descriptive survey research design, which is suitable for exploring how civil society organisations (CSOs) in Uyo, Akwa Ibom State, utilise new media to enhance civic participation and the enforcement of child rights policies. The design enabled the researcher to obtain first-hand information from respondents on their experiences and perceptions.

The population of the study consisted of staff and volunteers of five purposively selected CSOs actively engaged in child rights advocacy within Uyo. These organisations include the Child Rights and Rehabilitation Network (CRARN), Save the Child Initiative (SCI), Family Empowerment and Youth Re-Orientation Path Initiative (FEYReP), Street Priests Incorporated, and the Initiative for Youth Development and Child Rights Advocacy (IYDAR). Together, they formed a relevant population because of their established track record in child rights protection and policy engagement.

From this population, a sample size of 50 respondents was determined, with 10 drawn from each organisation. The purposive sampling technique was employed because it ensures that only participants directly involved in child rights advocacy and familiar with the use of new media are included in the study. This choice of sample size and technique is justified as it allows for manageable data collection while still providing diverse perspectives from multiple organisations.

Data was collected using a structured questionnaire, complemented by semi-structured interviews with key informants from the selected CSOs. The questionnaire provided quantitative data on the extent of new media usage and civic participation, while the interviews offered deeper qualitative insights into the challenges and successes of enforcement efforts. This combination strengthened the validity of the findings and ensured that both numerical and narrative evidence informed the analysis.

Data Presentation and Analysis

Table 1

The most commonly used new media platform by CSOs for child rights advocacy

Variable	Number of Responses	Percentage (%)
Facebook	18	36
WhatsApp	12	24
Twitter (X)	10	20
Instagram	7	14
Others	3	6
Total	50	100

The result shows that Facebook (36%) is the most widely used platform for child rights advocacy among CSOs in Uyo, followed by WhatsApp (24%). Twitter and Instagram have moderate use, while other platforms are minimally used. This indicates a preference for platforms with wider reach and accessibility.

Table 2

The frequency of engagement of members of the public with child rights advocacy posts online

Variable	Number of Responses	Percentage (%)
Very often	9	18
Often	15	30
Sometimes	16	32

Rarely	7	14
Never	3	6
Total	50	100

Engagement levels vary, with most respondents indicating participation occurs “sometimes” (32%) or “often” (30%). Only 18% reported very frequent engagement, suggesting that while new media facilitates participation, public involvement is moderate and inconsistent.

Table 3
Major challenge organisation faces in enforcing child rights policies

Variable	Number of Responses	Percentage (%)
Limited funding	20	40
Weak government support	12	24
Low public awareness	10	20
Poor digital infrastructure	5	10
Other challenges	3	6
Total	50	100

Limited funding (40%) emerged as the biggest challenge facing CSOs in Uyo, followed by weak government support (24%). This highlights that financial constraints and insufficient institutional collaboration significantly hinder child rights enforcement efforts.

Table 4
Effectiveness of new media in influencing child rights policy enforcement

Variable	Number of Responses	Percentage (%)
Very effective	8	16
Effective	17	34
Moderately effective	15	30
Less effective	7	14
Not effective	3	6
Total	50	100

Findings indicate that 34% of respondents consider new media effective, while 30% rate it as moderately effective. However, only 16% perceive it as very effective, suggesting that while new media contributes positively, its influence on actual enforcement is limited and still evolving.

Discussion

To examine how civil society organisations in Uyo use new media to promote child rights policies. Findings showed that Facebook (36%) and WhatsApp (24%) are the dominant platforms used by CSOs for child rights advocacy in Uyo, while Twitter, Instagram, and other platforms are used less frequently. This pattern suggests that CSOs prefer platforms with wider accessibility and community reach. This finding is consistent with Okafor and Ekanem (2020), who found that Facebook and Twitter were instrumental in mobilising youth participation in governance, although participation often stopped at online awareness creation.

By applying Habermas's (1962/1989) Public Sphere theory, these findings demonstrate that new media platforms serve as digital public spheres where advocacy discourse occurs. However, as in the reviewed study, the potential of these platforms has not fully translated into structural change or strong enforcement of child rights.

To assess the extent of civic participation in child rights advocacy through new media platforms

Data revealed that most respondents reported moderate levels of engagement, with 32% indicating public participation occurs "sometimes" and 30% saying it happens "often." Only 18% reported "very often." This suggests that civic participation is present but inconsistent. This aligns with Okafor and Ekanem's (2020) conclusion that while awareness through social media is high, active participation often falls short. Within the framework of the Public Sphere theory, the finding reinforces the idea that while digital spaces have opened opportunities for dialogue, barriers still exist that prevent consistent and deeper forms of participation. This underlines the gap between digital interaction and practical policy enforcement.

To identify the challenges faced by civil society organisations in enforcing child rights policies

The major challenge identified was limited funding (40%), followed by weak government support (24%) and low public awareness (20%). These findings corroborate Udo and Effiong (2021), who reported that CSOs in Nigeria struggle with poor funding, limited institutional collaboration, and socio-cultural resistance to some child rights provisions.

From a Public Sphere Theory perspective, these challenges reveal that while digital platforms can create spaces for advocacy, effective participation requires resources and structural support. Without these, the deliberations in the public sphere cannot translate into concrete enforcement of policies, reflecting a limitation in the digital advocacy process.

To evaluate the effectiveness of new media in influencing the enforcement of child rights policies in Uyo

The findings showed that 34% of respondents considered new media effective and 30% rated it moderately effective, but only 16% considered it very effective. This indicates that new media contributes positively but is yet to become a strong driver of enforcement. Essien and Johnson (2022) made similar observations in Akwa Ibom, finding that digital activism raised awareness but did not consistently sustain momentum to influence enforcement. Through the lens of Public Sphere Theory, this finding reflects the limitation of the digital public sphere, where discourse may generate visibility but lacks the structural mechanisms to ensure enforcement. This underscores the need for synergy between online advocacy, offline action, and institutional support.

Summary of Findings

- i. Civil society organisations (CSOs) in Uyo predominantly use Facebook (36%) and WhatsApp (24%) as their main new media platforms for child rights advocacy, while platforms like Twitter and Instagram are less utilised.
- ii. Civic participation in child rights advocacy through new media is moderate and inconsistent, with most respondents indicating engagement occurs only “sometimes” (32%) or “often” (30%).
- iii. The biggest challenges to the enforcement of child rights policies include limited funding (40%), weak government support (24%), and low public awareness (20%).
- iv. New media was found to be moderately effective in influencing the enforcement of child rights policies, with 34% rating it effective and 30% moderately effective, though only 16% considered it very effective.

Conclusion

The study concludes that while new media platforms have become vital tools for CSOs in Uyo to promote child rights advocacy, their potential is not fully realised in terms of concrete enforcement outcomes. Civic participation, though present, remains inconsistent and largely confined to awareness creation rather than tangible policy action. The major barriers of inadequate funding, weak institutional collaboration, and insufficient public awareness undermine the effectiveness of CSO advocacy. It is obvious

that the new media contributes to visibility and dialogue within the public sphere, but its role in actual policy enforcement is limited without strong offline mechanisms and supportive structures.

Recommendations

- **Diversify Platform Use:** CSOs should expand beyond Facebook and WhatsApp to maximise the advocacy potential of platforms like Twitter, Instagram, and YouTube, which offer broader visibility and diverse engagement opportunities.
- **Strengthen Public Engagement:** CSOs should adopt interactive campaigns, online petitions, and virtual forums to convert online awareness into active civic participation and offline policy action.
- **Improve Funding Mechanisms:** Sustainable funding partnerships with international donors, private organisations, and government agencies should be developed to reduce financial constraints on child rights advocacy.
- **Enhance Institutional Collaboration:** CSOs should build stronger alliances with government bodies, law enforcement, and community leaders to ensure that online campaigns translate into enforcement of child rights policies.
- **Promote Digital Literacy and Awareness:** Training programmes should be initiated to improve community members' ability to engage effectively with new media platforms for advocacy and rights protection.

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Challenges in Accessing Finance by Small and Medium Construction Enterprises in Akwa Ibom State, Nigeria: Perspectives of Banks and other Financial Institutions

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Abstract

Small and medium-sized construction companies play a pivotal role in both the national economy and the construction industry. However, accessibility, cumbersome procedures and sometimes, denial to credit facilities from banks and other financial enterprises have been a major setback in many developing nations, including Nigeria. The study investigates factors influencing small and medium-sized construction contractors' access to financing from the viewpoint of banks and other financial institutions in Akwa Ibom State. Data were collected from commercial and microfinance banks, mortgage institutions, and cooperative societies. Descriptive statistics were deployed to analyse responses from twenty-five (25) completed copies of the questionnaire. The results of the study revealed that the key problems impacting funding of Small and Medium Construction Enterprises' (SMCE) are lack of collateral, absence of legally recorded and audited financial history, and an insufficient regulatory environment. It is recommended that Small and Medium Construction Enterprises should design and maintain accurate and up-to-date records of financial transactions. Government should institute policies that strengthen legal and regulatory frameworks for ease of obtaining bank loans. Also, institutionalising kYC (know your customer), financial management mentorship and orientation by financial institutions would boost trust in financial transactions including lending and borrowing.

Keywords: bank and financial institutions, construction, contractors, finance

Introduction

According to Adeagbo (2019), the construction industry is significant from a socioeconomic standpoint. It has the capacity to create jobs, and its operations have a multiplicative effect on other economic sectors. According to Dada, Akpadiahia and Ologunagba (2018), Nigeria's construction industry is a major economic sector with enormous growth potential, contributing over 69% of the country's fixed capital formation. According to data from the National Bureau of Statistics (NBS) (2018), the building and construction industry contributed 2.19% of the country's GDP in 2016. Aganga (2017) found that the activities of micro, small, and medium-sized construction businesses were responsible for 10.76% of the construction industry's overall GDP contribution.

Small and medium-sized businesses continue to be the most dynamic force and agent of economic growth and development of the country (Kehinde, 2017; Osotemehin Jegede, Akinlabi, & Olajide, 2018); they dominate the economy (Oni & Daniya, 2018); and they are crucial in emerging economies (Ketley, 2018). The majority of nations depend on small and medium-sized businesses' dynamism, ingenuity, and enterprise to start and maintain economic growth processes; their significance is demonstrated by their increased use of domestic raw materials, creation of jobs, and cultivation of entrepreneurial skills (Muritala, Awolaja, & Bako, 2017).

According to Mohan and Miller, (2011) Small and Medium Construction Enterprises (SMCE) are essential. They handle the majority of the real work in the construction sector in many nations and supply the resources needed. Therefore, most well-known businesses rely on them. They can carry out minor projects in various, isolated regions that may be too expensive or unappealing to large corporations (Thwala & Mvubu, 2018).

The Nigerian government has supported several programmes aimed at boosting small and medium-sized businesses. The Local Content Bill for construction services, which was passed into law in April 2019, has given indigenous contractors the chance to prosper in the Nigerian construction industry, although many foreign contractors still control a large portion of the market, according to research by NBS (2020). Accordingly, the local content policy makes it possible for small and medium-sized local contractors to compete on an equal basis with their international counterparts. As a result, more local construction companies are established, which will lead to the creation of more jobs and an increase in the sector's share of the national GDP.

Nevertheless, despite their important contribution to the economy and the rules that allow them to prosper, small and medium-sized construction companies face numerous

obstacles. Insufficient funding is a significant challenge faced by small and medium-sized construction companies in developing nations. Studies have revealed that most businesses are unable to finance projects on their own and infrequently obtain loans or credits from banks and other financial organisations (Odediran, Adeyinka, Opatunji, & Morakinyo, 2018). In recent years, this issue has drawn some attention, leading to the implementation of several alternatives and intervention measures (Oyefuga, Siyanbola, Afolabi, Dada, & Egbetokun, 2019). However, since the issue of obtaining loans and credits continues to exist, it seems that these interventions and actions have not been successful.

Unfortunately, they are frequently unable to meet guarantee and performance bond requirements due to shortage of funding during pre-construction and construction, which results in cash flow issues, unfinished work, and even liquidation (Eyiah, 2011; Thwala & Mvubu, 2018). Furthermore, financial difficulties prevent small and medium-sized contractors from obtaining more attractive and profitable projects (Eyiah, 2011). It also impacts their capacity to obtain the necessary equipment and attract professionals and trained personnel.

Small businesses and banks have acknowledged the value of strengthening their working relationship in order to address any issues that may arise with financing their operations. There are not much data on the phenomenon in developing nations in general, and the construction sector in particular, despite the fact that several studies have been done on funding small and medium-sized businesses. The perception of the money lenders has received little attention in other existing studies, which have primarily looked at the viewpoints of contractors. Therefore, to unravel the banks' and financial institutions' perspectives on the challenges small and medium-sized construction companies in Akwa Ibom State encounter while trying to obtain credit facilities is the focus of this study, with a view to shedding light on best approaches to take in order to address the issue of smaller contractors' limited access to financing.

Objectives of the Study

The objectives of the study include to:

- i. Determine the prevailing conditions and requirements for issuing loans to smaller construction firms; and
- ii. evaluate factors affecting access to finance by small and medium-sized construction contractors.

Literature Review

Small and Medium Construction Enterprises

There is no agreed-upon definition of small and medium-sized construction companies because they are classified based on a range of factors, such as annual turnover, asset value, sales value, capital size, and personnel count (Eyiah, 2011; Bondinuba, 2012). As a result, determining the firm's capital structure, labour structure, and turnover are among the primary concerns in defining a small business. Furthermore, the definition of an SME is relatively flexible in relation to the stage of economic growth and development of a country (Kehinde, 2017). Given the challenge of reaching a widely recognised definition, the National Policy on Micro, Small, and Medium Enterprises (MSME) offered a helpful framework for classifying businesses, which Ketley (2018) captures in Table 2.1. In order to provide an authoritative definition, it incorporates characteristics like the number of employees, yearly turnover, and asset worth. However, Aganga (2017) proposed that the employment criterion will take precedence in cases where the asset base and employment are inconsistent.

Table 1
Categorisation of micro, small, and medium enterprises

S/N	Category of Enterprise	Number of Employees	Annual turnover (₦)	Asset value (excluding land and building) ₦
1	Micro	0-10	0 - 10 million	0 - 5 million
2	Small	10-49	10 - 100 million	5 - 50 million
3	Medium	50-199	100 - 500 million	50 - 500 million

Source: Ketley, (2018)

Small and medium-sized construction businesses create jobs and make up a sizable portion of the construction economy in developing nations. According to recent data, there were 17,284,671 Micro, Small, and Medium-Sized Enterprises (MSMEs) in Nigeria, with a total employment of 32,414,884. In 2016, MSMEs were estimated to have contributed 46% of Nigeria's GDP. Furthermore, 10.76% of the building and construction sector's GDP contribution in 2016 came from MSMEs (Aganga, 2017).

Sources of Finance for Small and Medium Construction Enterprises

Typically, construction projects are capital-intensive, requiring large upfront costs and funding. Many businesses, especially small and medium-sized construction companies, lack the necessary capital. Although financing is necessary to purchase assets and pay for building projects before client payments are received (Hore, Kehoe, McMullan, & Penton, 2007). Therefore, it is believed that finance plays a crucial role in the growth of small and medium-sized businesses (Cook, 2010). Small businesses may be able to obtain funding from a number of sources. This is because each source of funding has its own advantages and disadvantages. It is also critical for building contractors to select the best one for their various demands (Bondinuba, 2012).

Ekpenyong & Nyong (2020) state that there are three main ways for SMEs in Nigeria to obtain funding: personal savings, informal financial institutions, and official financial institutions. Additionally, Cook (2010) notes that small businesses in developing nations depend on both the formal and informal sectors for short-term funding. Furthermore, Kehinde (2017) pointed out that there are a variety of financing strategies and methods available for small and medium-sized businesses, ranging from corporate and near-corporate finance categories to private and personal financial sources.

Commercial banks, savings banks, development banks, and other financial institutions are among the formal sources of funding that SMEs can access (Ekpenyong & Nyong, 2002). Organisations that receive money from people, other organisations, or government agencies and invest or lend it to borrowers are known as financial institutions. Examples of these include banks, building societies, and finance houses. Despite their willingness to lend money, they will only do so if they think there is a good chance the loan will be paid back (Hore et al. 2007). According to a study by Terungwa (2022), the majority of funding for SMEs in Nigeria comes from unofficial sources, while the proportion of loans to SMEs from formal sources decreased steadily between 2013 and 2018. Figure 2.1 displays the trend of loans to SMEs in Nigeria from 2002 to 2018.

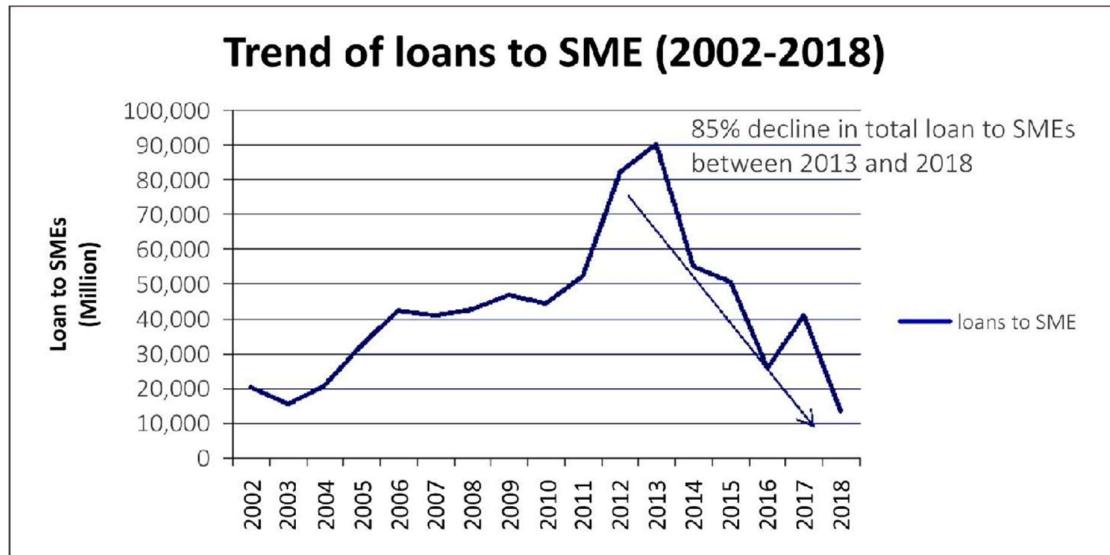


Figure 1: Trend of bank loans to small and medium-sized enterprises

Source: Terungwa (2022)

According to Ekpenyong and Nyong (2002), the informal financial institutions include Osusu (rotational contributions), friends, and family, as well as money lenders, trade creditors, and savings groups (also known as cooperative societies). According to Harris and McCaffer (2011), small businesses that are just starting typically have to obtain the initial funding from private sources since they do not legally qualify for banks and informal financial institutions as these institutions likely offer banking services and money-lending activities to established firms. Cook (2010) also, noted that a large percentage of small businesses' assets are financed by friends and family. However, when the business grows, it might reinvest its retained earnings. This is when lenders and financial institutions might be thinking about offering loans and stock investments to small and medium enterprise.

To support and grow SMEs, governments in developing nations have implemented a wide range of policies and programmes, some of which have been successful. Institutional assistance, training in pertinent skills, tax breaks, technology acquisition, and loosened finance availability are some of these measures (Hore et al., 2007; Xueyong, 2019; Oni & Daniya, 2018; Osotemehin et al., 2018; Ketley, 2018). Some strategies to improve the financial standing of small- to medium-sized construction companies include direct payment to material suppliers, mobilisation loans payable in instalments with no interest, advanced payment, and a decrease in retention rates (Adolwa, 2022). The competitiveness of small-to medium-sized construction companies is thought to be

influenced by these legislative frameworks as well as, a variety of financial support services (Bondinuba, 2012).

SMEs in Nigeria have reportedly had poor access to financing, despite government best efforts. Low access to financing is the second most significant barrier facing Nigerian SMEs, after lack of energy, according to the World Bank Investment Climate Assessment Study report, which was emphasized by the Central Bank of Nigeria (CBN) in 2019. According to the survey, Nigeria has the lowest average loan duration when compared to certain emerging nations, and just around 5% of SMEs obtain loans from financial institutions, even though 80% of them apply for financing. Due to the extremely low level of bank lending, it was determined that the majority of SMEs in Nigeria primarily rely on retained earnings and their own money for financing. Furthermore, Ketley (2018) found that the average MSME loan maturity time was 12 months, and the average interest rate levied on loans was 20%.

Factors affecting Access to Finance by Small-Medium Construction Firms

According to Eyiah (2011), the main obstacles influencing small construction contractors' ability to obtain financing include transaction risk, informational gaps, enforcement challenges, and transaction costs. Banks are hesitant to work with this group of borrowers due to the risks that small businesses encounter, high mortality rate, the vulnerability to market and economic swings, and the negative perception of the construction sector (Eyiah 2011). SMEs in the construction industry have a weak financial foundation, and it is believed that significant clients' non-payments or even late payments will certainly lead to a small business's demise. Even worse, the construction sector is seeing a decline in profitability margins and an increase in risks, in part because of competition (Xueyong, 2019). Additionally, small and medium-sized contractors in developing nations lack the technical, management, and skilled abilities needed to address these issues. Project success is negatively impacted by these risk variables, which also reduce profit margin and impact loan repayment capacity (Eyiah, 2011; UNEP FI, 2018).

Banks are unable to properly assess loan offers because they struggle to gather sufficient information about small business owner-managers and their enterprises (Eyiah, 2011; Chilipunde, 2020). According to 2018 UNEP FI research, the majority of bank and financial institution investment officers lack industry knowledge and are thus unable to provide these SMEs with proper support. The National Credit Regulator (NCR) (2019) states that banks in developing nations expect small contractors to be able to make a strong case for finance, as well as to demonstrate their business background, financial status, and project cash flow estimates. According to Lam and Shin (2019), small firms

are noted to have no standardised reporting structure and fail to promptly share information about their company to aid in the evaluation of their loan request.

Registration status is another aspect that influences an SME's capacity to obtain financing. Formal business registration legally isolates the company from its owner or owners. It is simpler to discern between the small business owner's personal and company finances when they are registered (NCR, 2019). Additionally, banks need small contractors to furnish sufficient collateral to be used as compensation in the event of default in order to safeguard their interests. The necessary collateral, which frequently takes the form of fixed assets, is regrettably unavailable from small contractors in underdeveloped nations (Eyiah, 2011; Ketley, 2018). Due to compliance issues and inadequate legal and regulatory frameworks, banks frequently hesitate to rely on collateral, even when it is available (Eyiah 2011). According to Bondinuba (2012), financial providers cannot get their money back in default situations where there is a significant degree of informality in the economy and a poor legal framework.

Since small business loans are typically short-term and small in size, lending to small enterprises has substantial transaction expenses. Since lending to SMEs is typically more expensive on a unit cost basis than lending to larger firms, Oteh (2017) argued that the high administrative and transaction costs of lending do not make SME financing a profitable enterprise. As a result of this, banks believe that working with smaller businesses would be inefficient and expensive.

Research Methods

The cross-sectional survey research approach was chosen for this study. Banks and other financial organisations were consulted regarding the difficulties and obstacles small and medium-sized construction companies face when trying to get bank credits and financial facilities. The study was carried out in Akwa Ibom State's three main towns of Uyo, Ikot-Ekpene, and Eket. Both governmental and private sector clients are engaged in a significant amount of construction activity in these towns, including building and civil engineering projects. These cities are also home to a sizable number of small and medium-sized construction companies.

The financial institutions, which include cooperatives, commercial banks, microfinance banks, and primary mortgage institutions (PMIs), were given thirty (30) copies of the questionnaire in total. For this study, a structured questionnaire was employed as the data gathering tool. On a 5-point Likert scale, respondents were asked to rate factors influencing access to financing in addition to answering preliminary questions about the financial institutions' characteristics (1 being not significant, 2 being less significant, 3

being moderately significant, 4 being highly significant, and 5 being very highly significant).

The researchers delivered the questionnaires to the respondents by hand and collected them in the same way. The analysis techniques that were employed were descriptive statistics including frequency, percentage, and mean score. The mean score was calculated by adding up all of the responses, multiplying that total by the Likert scale's weighting, and then dividing that total by the Likert scale's weighting or numerical score.

Data Presentation and Analysis

Out of the 30 copies of the questionnaire distributed, 26 well-completed copies were retrieved, representing a response rate of 90%. These numbers were used for analysis, and the results are presented here. Table 1 shows the different types of banks and financial institutions included in the survey, and it indicates that the majority (68%) of the respondents are commercial banks, 20% are microfinance banks, 8% are mortgage banks, and 4% are co-operative societies.

Table 2
Type of bank or financial institution

Type	Frequency	Percentage (%)
Commercial bank	17	68
Mortgage bank	2	8
Microfinance bank	5	20
Co-operative society	1	4

Table 2 shows the total amount of loans issued by the responding banks and financial institutions in the year 2016. The results indicate that 40% of responding financial institutions gave out loans worth ₦ 101–₦150 million in the year 2016, 32% gave out loans or facilities worth ₦51–₦ 100 million, 16% gave loans worth more than ₦500 million, and 12% gave loans worth ₦11–₦50 million. Interestingly, none of them gave out loans of less than ₦10 million.

Table 3*Total amount of loans issued by branch to SMCE in 2022*

Amount	Frequency	Percentage (%)
Less than ₦10 million	-	-
₦ 11 - ₦ 50 million	3	12
₦ 51 - ₦ 100 million	8	32
₦ 101 - ₦ 150 million	10	40
Above ₦ 500 million	4	16

Table 3 presents the results of the conditions and requirements for accessing loans from banks and financial institutions. As shown in table, the requirements mostly asked for is collateral security (100% of 25 respondent), followed by business plan and contract award letter (80%), then audited financial report (72%), cash flow statement (68%), purchase order (60%), total company asset/ equipment (44%), total company asset/ equipment (40%), forecast of anticipated profit on contract (32%), report on company personnel and management (20%).

Table 4*Conditions and requirements for issuing loans*

Requirements	Frequency (of 25)	Percent (%)
Audited financial statement /account	18	72
Business plan	20	80
Forecast of anticipated profit on the contract	8	32
Collateral	25	100
Total company assets/ equipment	11	44
Cash flow statement	17	68
Report on company personnel and management	5	20
Contract award letter	20	80
Evidence of registration with CAC	10	40
Purchase order	15	60

Table 4 shows factors affecting access to bank finance by SMCEs. The most significant factor is the lack of collateral security, with a mean score of 4.24. Absence of formally recorded and audited financial history, weak regulatory framework, and insufficient legal system were also considered important, with means scores of 3.95, 3.72, and 3.48, respectively. The least significant factor is poor managerial and technical skills.

Table 5
Factors affecting access to finance

Factors affecting access to finance	Mean	Rank
Lack of collateral	4.24	1st
Absence of formally recorded and audited financial history	3.95	2nd
Weak regulatory framework	3.72	3rd
Insufficient legal system	3.48	4th
Banks' poor knowledge of the construction industry	3.44	5th
Lack of formal registration documents	3.36	6th
Non-payment/ delayed payment of the payment certificate by the client	3.32	7th
Lack of information on cash flow projection	3.28	8th
Inadequate property registration	3.24	9th
Vulnerability to market changes	3.16	10th
Difficulty in obtaining adequate information on SMCEs	3.12	11th
High mortality rate of construction SMCE	2.92	12th
Absence of evidence of corporate history and background	2.80	13th
Inability to make a convincing case for credit	2.68	14th
Poor performance by construction SMCEs	2.56	15th
Cost of loan documents/ approval procedure	2.52	16th
Relatively high cost of gathering information on SMCEs	2.50	17th
Low financial bases of small and medium construction enterprises	2.48	18th
Low profit margins in contracts awarded to construction SMCEs	2.44	19th
Poor image of the construction sector	2.36	20th
Poor track records with banks	2.28	21st
Cost of tracking construction SMCEs to collect loans	2.16	22nd
Poor managerial and technical skills	1.95	23rd

Discussion of Findings

The findings of the study revealed that before considering a request for loans, banks most often require construction contractors to present collateral security, a contract award letter, business plans, and an audited financial statement. This underscores the fact that banks need assurance that the money invested will not be lost. However, small and medium-sized firms lack financial management skills; they also lack a standardised system of reporting, in addition to lacking the ability to clearly articulate a business plan (Lam & Shin, 2019). This suggests that they will not be able to make a compelling case for funding. In these situations, banks are extremely concerned about whether the company

will fulfil its obligations under the contract after obtaining the loan, and their concerns are often well-founded when it comes to dealings with small contractors.

Also, from the results of the study, the significant factors affecting access to finance include lack of collateral, absence of formally recorded and audited financial history, and weak regulatory framework. Obamuyi (2019) opined that commercial banks' reluctance to lend to SMEs was due to several adverse factors associated with the enterprises, and it has been previously noted (Eyiah, 2011; UNEP FI, 2018; Bondinuba, 2012; Ketley, 2018) that risk of transaction, lack of information, enforcement difficulties and cost of transaction are the key factors which affect access to finance by small and medium sized enterprises.

Conclusion

This study was carried out to examine the factors constituting challenges and barriers in access to finance by construction SMEs, in view of their importance in the construction sector as well as in the national economy. The study revealed that financial institutions find it risky to give loans to Small and Medium Construction enterprises (SMCEs) because they lack collateral security and have poor financial records, and the regulatory framework for protecting lenders' money is weak.

Recommendations

In view of the findings and conclusion of the study, the following are recommended:

- Banks should equally explore other means of securing loans other than demanding collateral.
- Financial institutions should provide free financial management mentorship and orientation to boost trust in financial transactions between including lending and borrowing.
- SMCEs should endeavour to keep accurate and up-to-date records of financial transactions.
- Government should also strengthen the legal and regulatory framework to give banks and financial institutions added confidence to lend money to small construction contractors.
- Government, banks and other stakeholders should institutionalise kYC (know your customer), and other measures to boost confidence and sincerity to guarantee access to credit facilities.

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Stakeholder Consultation and Public Debate as Catalysts for Sustainable Community Development in Akwa Ibom State

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Abstract

This study was carried out with the broad objective of finding out the roles which stakeholder consultation and public debates can play as essential requirements in rural community development in Ibesikpo Asutan Local Government Area of Akwa Ibom State. The contemporary and observation methods were adopted as the research designs for the study. Findings of the study revealed that sometimes stakeholders in rural communities in the local government area are not consulted to find out their peculiar needs. More findings also indicated that public debate is a very important requirement in rural community development in Ibesikpo Asutan, and Akwa Ibom State in general. The researchers, therefore, concluded that stakeholder consultation and public debate are catalysts in sustainable community development in Akwa Ibom State. The researchers then recommended that it is pertinent for community developers to always consult, as well as engage stakeholders in public debates in order to feel their pulse. Such consultations and debates would make them own and sustain the developmental projects.

Keywords: stakeholder consultation, public debate, sustainable community development

Introduction

In contemporary society, development partners such as government (at all levels) and organisations can no longer choose if they want to engage with stakeholders or not. The only decision that they need to take is when, as well as how to engage with such stakeholders in a fruitful way. According to Jeffery (2019) stakeholder consultation, or engagement is premised on the notion that those groups who can affect, or are affected by the achievements of an organisation's purpose should be given the opportunity to contribute and make input into the planning and implementation of decisions that affect them. If stakeholders are not actively sought out and engaged, they may demand to be consulted sooner or later.

When organisations fail to actively engage with their stakeholders, they may be forced to do so if crisis breaks out as a result of such negligence. In such situations, organisations may be forced to resort to crisis-management techniques, by adopting defensive dialogue with the stakeholders, leading to a significant and long-lasting loss of reputation. Such emergency communication is often antagonistic, and lack trust (Jefferey, 2019).

Stakeholder consultation is a process through which subjects or topics of interest are discussed within or across constituency groups. It is a deliberation, discussion and dialogue and sometimes debate. Consultations are more formal and interactive than dialogue, and generally vary from consultations on global policies, such as social safeguards and adjustment lending, to local consultations on Bank-financed projects. The objective of a consultation is to seek information, advice and opinion. In any consultative process, the convener is not only gathering input, but sharing information as well. The organiser seeks to identify and clarify interests at stake, with the ultimate aim of developing a well-informed strategy or project that has a good chance of being supported (by the stakeholders) and therefore, being implemented. Providing and sharing information is seen as the foundation of an effective consultation process. But who is to be consulted? The answer to this rhetorical question leads this paper to the next major concept to be addressed – the stakeholder.

Statement of the Problem

Whenever development projects are to be sited in a rural community, the people for whom such projects are meant to benefit must be made to know how relevant such project is to them, and the need to protect such project. The relevance and usefulness of such project to the community dwellers should not pre-determined by those who think that is what the community needs. Any time beneficiaries of a developmental project are made to feel like strangers toward projects sited in their communities, there is the

likelihood that they would not really value such project like they would if the idea for the project emanated from them.

For instance, when former governor of Akwa Ibom State, Godswill Akpabio, decided to site the Disney-land prototype Ibom Tropicana project on the ancestral land of four communities of Itiam Etoi, Mbiabong Etoi in Uyo Local Government Area; and Afaha Ikot Obio Nkan, and Afaha Etok Ibesikpo in Ibesikpo Asutan Local Government Area, along the Udo-Udoma axis of Uyo, without having to consult the people to educate them on the benefits they would derive from the project, he ended-up wasting billions of the state's resources as the project was not protected by the host communities. This sentiment was expressed by Jefferey (2019) that:

Corporations that effectively serve the needs of all their key stakeholders will out-perform their peers. We are moving into a new economic era of accelerating stakeholder consciousness and connectivity, which makes it imperative for corporate leaders to master the art of organisational metamorphosis, of transforming their organisations from near-sighted, shareholder-centric systems, to organisations designed to serve all of their stakeholders all the time. Those organisations that learn to make that shift will survive and thrive. (p. 13).

Different sectors pose different types of risks and opportunities. Local contexts such as dimensions of social vulnerability and exclusion; conflict and fragility; governance aspects; land tenure systems; presence of indigenous groups; risks of natural disasters; and stakeholders' concerns about noise, pollution, or critical habitats may all be relevant.

Moreover, stakeholders are not homogeneous within one project setting. Different groups will have different concerns, and these concerns (and the stakeholders themselves) may change over time. Even when the authorities or agents that bring the developmental project consider themselves familiar with local the context and the likely project impacts, stakeholders in the rural communities are likely to know, and therefore, can raise issues that authorities, development agent may not have thought of.

This is what happens in some Akwa Ibom communities when projects are executed without due consultation with the rural dwellers who are supposed to be the 'beneficiaries' of the projects. It is very common in Akwa Ibom State for members of the rural communities where projects are sited to complain that they were not "carried along" in the planning and implementation of such projects. The question that therefore begs for answer is: Are stakeholders in rural communities in Akwa Ibom State consulted and carried along, before development projects are sited in their communities?

Objectives of the Study

The general objective of this study is to ascertain the extent that stakeholders in rural communities are consulted before a development project is sited in their communities. But the specific objectives of this study are to:

- i. Find out if stakeholders in Ibesikpo Asutan Local Government Area are usually consulted before developmental projects are sited in their rural communities;
- ii. determine the importance of public debate in rural community development in Ibesikpo Asutan Local Government Area in Akwa Ibom State.

Research Questions

- i. Are stakeholders in Ibesikpo Asutan Local Government Area are usually consulted before developmental projects are sited in their rural communities?
- ii. What is the importance of public debate in rural community development in Ibesikpo Asutan Local Government Area in Akwa Ibom State?

Methodology

This study was restricted in scope to Ibesikpo Asutan Local Government Area, in Akwa Ibom State. The research design adopted in carrying out the study was the survey method. The Focus Group Discussion (FGD) technique was adopted in gathering data for the study. According to the 2022 projection, Ibesikpo Asutan Local Government Area has a population of 175,000 people (www.citypopulation.development, 2024).

Review of Literature

What is a stakeholder?

According to Watson and Hill (2012) stakeholder is a term used in public relations practice to refer to those who have an interest or stake in, and thus are likely to be affected by, activities and plans of an organisation or individual client. Stakeholders may not always be aware of their potential involvement. Baines, Egan and Jefkins (2004) identify four categories of stakeholders, based on their relative levels of power and interest regarding a particular situation. They include:

- i. The key players who have considerable power to affect the activities of a company or industry sector;
- ii. There are stakeholders with low levels of power, but a high degree of interest in the situation, and who will look forward to being informed of activities in the communities;
- iii. There are those stakeholders with a high level of power, but a low degree of interest in activities, but who should still receive a satisfactory amount of information on the goings on in their communities; and

- iv. The last set comprises those stakeholders who have both low levels of power and interest; and relatively less effort may be expended to keep them informed.

In discussing the issue of public debate, it becomes pertinent to define who constitutes the public. Public refers to specific groups that are, or might become an intended audience for development communication activities. They include pressure groups, youth groups, community leaders, and opinion leaders. Baines, Egan and Jefkins (2004), note that the identification of the publics of a communication campaign is fundamental to the planning of such campaign; for until the publics are defined, it is difficult to select the media that will best convey the (development) messages to them.

Value of Stakeholder Consultation

Meaningful consultation with project stakeholders adds value to projects in different ways:

- i. It captures the views and perceptions of people who may be affected or have an interest in a development project, and provides a means to take their views into account as inputs to improve project design and implementation, thereby avoiding or reducing adverse impacts, and enhancing benefits;
- ii. It provides an important source of validation and verification of data obtained elsewhere, and improves the quality of environmental and social impact assessments;
- iii. It enables people to understand their rights and responsibilities in relation to a project; and
- iv. Greater transparency and involvement of stakeholders enhances trust, project acceptance, and local ownership, which are key to project sustainability and development outcomes;

There are several criteria that should be met for a stakeholder consultation process to be considered meaningful. Above all, it should not be thought of as one or more isolated events, organised in a pro forma manner to check a box or to meet a licensing requirement. It should be preceded by an analysis of the project, its context, potential impacts, and identification of the relevant stakeholders. It should be followed by genuine consideration of stakeholders' views and concerns in decisions related to project planning and implementation.

Elements of Successful Stakeholder Consultation

There are three essential elements to a successful stakeholder consultation. These include timeliness, clarity, and proportionality. The importance of stakeholder consultation is understood and accepted by most. However, sometimes, there are concerns that the consultation process may delay project planning and implementation, add to cost, brew tensions and conflicts, or raise unreasonable expectations. These are valid concerns, but avoiding transparent engagement with stakeholders does not eliminate such problems. On the contrary, it may exacerbate them, for example by fomenting rumours and suspicion. This would then lead to people in the local communities opposing a project.

It is therefore, pertinent to state here that a good stakeholder consultation is not only an essential requirement in the community development process, but it also adds real value to development projects. Such values become more apparent if transaction costs and delays are reduced to a minimal level. This can be achieved in three ways:

- i. **Timeliness:** The first essential thing to do is to ensure that preparing and undertaking the stakeholder consultation process start as early as possible in the project cycle. If the process starts too late, there may not be enough time to undertake the consultations in a meaningful manner, and lack of adequate consultation can turn into problems and local opposition, which may delay or put other aspects of project planning and implementation at risk.
- ii. **Clarity of purpose:** The second essential element to consider is clarity of purpose from the outset of a development project. Delays and costs can be reduced by being clear about requirements and good practice, and by ensuring that individuals and institutions responsible for consultation have the necessary skills and resources to manage the process.
- iii. **There is no “one size fits all” principle:** The third thing to note is that there is no “one size fits all” principle when it comes to stakeholder consultation. The principle of proportionality should guide the degree of effort. In projects with low or no risk, the consultation process can normally be limited to simple disclosure and information dissemination. Projects with moderate risk should have a two-way dialogue with affected stakeholders, while complex, large scale or higher risk projects require more systematic and thorough engagement with stakeholders throughout.

Good consultation and stakeholder engagement is an investment. It requires effort proportionate to project risk and complexity. While this may be seen as a cost or delaying factor, inadequate community engagement and stakeholder consultations can lead to far higher costs than those of the initial effort. Once trust has been broken, or there is a crisis

that needs to be dealt with, the cost in project delays or actions needed to retroactively address the problem can be very significant and involve adequate attention of management. It can damage an institution's reputation for a long time, and may lead to a loss of political support, reduced credit-worthiness, or other costs. In some cases, projects have had to be abandoned. It is, therefore, in everyone's interest to undertake systematic and meaningful consultations, and to demonstrate that stakeholder views are reflected in how projects are designed and implemented.

Theoretical Framework

This study is anchored on the Stakeholder Theory and Cyclical MELDS Model of Development Communication.

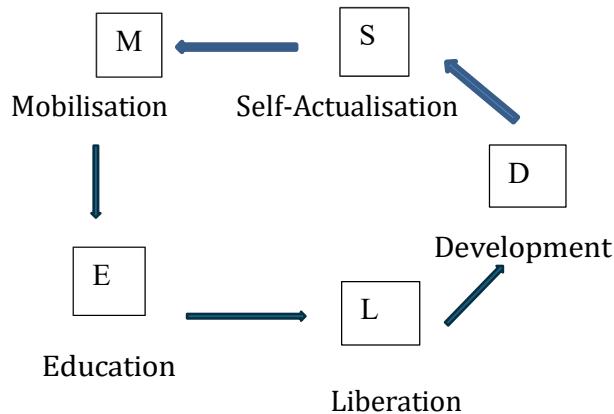
The Stakeholder Theory: The concept of Stakeholder was first used in 1963 in an internal memorandum at the Stanford Research Institute. According to its first usage, stakeholders are groups whose support an organisation needs so as to remain in existence. The concept was developed into a theory and championed by Edward Freeman in the 1980s (Freeman & Reed, 1983). Stakeholder theory states that a corporation has stakeholders who are generally the groups and individuals that benefit from, or are harmed by an organisation's actions. The rights of these parties can either be violated or respected by the organisation (Hartman, 2005).

Stakeholder theory identifies the groups and individuals relative to a corporation; and describes, as well as recommends methods by which the interests of each set of stakeholders can be catered for by the management of the corporation. The stakeholder theory is one of the classical theories in public relations. Philips (2004) observes that the question of who is and who is not a stakeholder has been discussed for years. Some of the questions that appear relevant to a proper conceptualisation of stakeholders are: Should stakeholder status be a reserved right for constituencies having close relationship with the organisation? Should the status be seen to apply broadly to all groups that can affect or be affected by the organisation? Should activists, competitors, natural environment or even the media be classified as stakeholders?

Meanwhile, Kvam (2017) states that meaningful stakeholder consultation is a two-way dialogue (debate) and engagement, rather than a one-way dissemination of information. It is a process rather than one or a few single events; and it involves people in affected communities and other relevant stakeholders.

Cyclical MELDS Model of Development Communication

The M in the model stands for Mobilisation; E = Education; L = Liberation; D = Development; and S = Self-Actualisation. The revised model is presented graphically thus:



**Figure 1: Cyclical MELDS Model of Development Communication by Sam (2023)
adapted from Wilson (2005)**

The MELDS Model of Development Communication as propounded by Wilson (2005) is linear in nature, and sees the mass media as the only agents that can mobilise members of the society for change. It does not make provision for an individual to act as an agent of change in the society. The Cyclical MELDS Model of Development Communication (Sam, 2023) states that apart from the mass media, it is possible for an individual, who perceives self as an opinion leader, mentor, or role model to be an agent of change. The redesigned Model also states that once a cycle of change occurs, it could be repeated. James and Sam (2023) state that:

A person whose attitude towards the change object has been positively influenced could himself become an agent of change, and the cycle continues. For instance, an individual who has been mobilised, and educated, and who is liberated to attain a certain level of development, and who has achieved self-actualisation, can set the whole process in motion all over again. This could be seen in a situation where someone who has been influenced by an opinion leader, grows to the point where he becomes an opinion leader in the future, where he mentors other people to become stakeholders in the community, and the cycle continues. (p. 287),

The postulations of the model are expatiated in the following segment of this study as follows:

- i. **Mobilisation:** This is the state of readiness which the individual or group is placed as a result of the message that has been available in the open society. This active state of psychological and social motivation is also a product of social rewards, which the participants receive from the mobilisers.

The postulation of the Cyclical MELDS Model of Development Communication is that the process of talking to someone, or being talked to about a development project in the society is mobilisation. Additionally, the real process of mobilisation may not have to be verbal, but learnt and adopted through observation, mentorship, and role modelling. In this context, a mentor can mobilise his mentee by showing him/her what to do.

- ii. **Education:** Communication can be used to provide education and enlightenment to members of a community. Education as a communication objective, once provided for, can ginger members of a community to higher levels of development, and through it, people acquire the knowledge for better ways of doing things.
- iii. **Liberation:** Education helps to bring about liberation in a community. Such liberation could bring about the betterment of individuals in the community, and the community as a whole. The liberation could attract higher financial freedom for community members; protection of development projects sited in the community; having more confidence in oneself; and greater commitment to one's community. These outcomes of education, in themselves, could liberate the people from financial stress, and low self-esteem.
- iv. **Development:** The position of the Cyclical MELDS Model of Development Communication is that the process of disseminating change-oriented information must be participatory in nature. This means that development agents such as the Akwa Ibom State Government should give a listening ear to the rural dwellers, and give them the opportunity to express themselves freely in the course of siting developmental projects, as much as possible.
- v. **Self-Actualisation:** According to psychology, self-actualisation is the highest level of human needs attainment. But the point of its attainment varies from one individual to another and from one rural community to another. It entails having a healthy confidence in one's own abilities; which include possession of independent, self-supporting, self-satisfying and self-propelling abilities. The position of the Cyclical MELDS Model is that as far as majority of Nigerians, and by extension Africans, are not individually self-actualised, the country and continent would still be seen as not having developed yet.

Levels of Stakeholder consultation and engagement

- i. **Information sharing** as primarily a one-way communication. This may be appropriate as the main form of engagement with the public in low-risk circumstances, where the project does not seek to actively engage communities or other stakeholders in a dialogue. The engagement consists largely of public information dissemination of project-related information in a transparent and accessible way, and provision of a way for members of the public to request additional information or to convey their concerns and recommendations.
- ii. **Consultation as a two-way dialogue:** In projects of moderate risk and complexity, and where there is potential for adverse impacts that would trigger safeguards policies, stakeholders are consulted through an active two-way process of engagement and dialogue. Information needs to be shared with relevant stakeholders, generally on a wholistic basis, in order to reflect local contexts. Also, stakeholder views should be captured, documented, and considered.
- iii. **Participation and empowerment:** Projects of substantial or high risk and complexity require a more meaningful and informed process of involvement with stakeholders. This builds on the dialogue principles above, but entails more active participation by stakeholders in defining and implementing relevant aspects of a project. In certain high-risk circumstances, policies and good practice require that stakeholders make contributions to project decision making, and that a degree of decision-making authority be transferred to local communities and stakeholder groups. An example of this is when a project requires formal agreement or consent from affected stakeholders.

Challenges of effective Public Debate and Stakeholder Consultation

The achievement of the specific goal of achieving better communication and participation faces a number of obstacles on a range of levels. At a macro level, those who decide which services should be provided are not the same people as those who actually provide the service. This is a tension inherent in any process of governance and it presents a challenge to those interested in enhancing community participation. Understanding this tension means locating efforts at achieving community consultation at the right juncture within processes of governance, so that the consultation is meaningful in the sense of having an impact on decision-making, and also effective in terms of having an impact on service delivery.

Other obstacles are inherent to the strategic planning process. These include the presence of conflicting values amongst participants, uncertainty about outcomes, the difficulty of defining responsibilities, and the controversial nature of sustainable land use

management. Combined with these inherent difficulties is dissatisfaction with conventional consultation methods such as public meetings, formal submissions and public hearings.

There is the issue of poorly attended meetings, a feeling among participants that they have not been heard, suspicions that valuable time and resources had been spent less effectively than they could have been, and a general sense of wondering if improvement was possible. This dissatisfaction emanates from many quarters.

Government authorities entrusted with making consultation happen may, in the past, have questioned its relevance and struggled with its implementation. Interest groups have felt frustrated by their perceived lack of impact. Experts have criticised the appropriateness of outcomes, and the broader public has felt disempowered. Some of the reasons people give for not consulting with stakeholders include: "We don't have enough time, it costs too much money and resources, people won't understand the complex issues involved, people won't agree, it might encourage dissatisfaction, and so on" (UK Cabinet Office, 2000, p. 44).

Irrespective of this, it should be understood that differences of opinion are inevitable, but surmountable. However, successful management of these issues is possible, by developing a strategic, integrated and involving approach to consultation and participation. Public involvement in strategic planning and visioning requires extended participation methods; the ability to become involved – and sustain an involvement over time.

Discussion of Findings

Research Question One: Are stakeholders in Ibesikpo Asutan Local Government Area usually consulted before developmental projects are sited in their rural communities?

During the second term of Obong Victor Attah as the Executive Governor of Akwa Ibom State, the State Government thought of giving a project to Afaha Ikot Obio Nkan community in Ibesikpo Asutan Local Government Area. But since the people who advised the then governor of the State felt they know what the people needed, they proposed to the governor that people in the community needed pipe-borne water, without duly consulting with the different stakeholders in the community to find out what their needs were.

The water project was sited near the village primary school, a location which is relatively far from where majority of the residents in the community live. And since the project was not what the people really needed, compared to the construction of roads that lead to the

popular Afaha Market, that project is now only a useless monument. The current state of that project convinced the researchers of this study that any project that is hurled at the people without due consultation may likely fail, or at the best, not fully benefit the people for whom such a project was meant.

Another finding of the study, which shows that most times community stakeholders are not consulted before a developmental project is sited in their community, is the case of the Worship Centre Project situated in Afaha Ikot Obio Nkan. When the immediate past Governor of the State, Mr. Udom Emmanuel, went to Afaha Ikot Obio Nkan and took over the farmland of the community to build the Worship Centre, the people of the community were not consulted. Stakeholders in the community assert that they were not consulted to discuss how the project will benefit them. To even make matters worse, stakeholders in the community state that they were not even compensated for their farmland, before it was taken over by the Akwa Ibom State Government.

These findings are supported by Hartman (2005) who states that a corporation has stakeholders who are generally the groups and individuals that benefit from, or are harmed by the organisation's actions. The rights of these parties can either be violated or respected by the organisation.

Research Question Two: What is the importance of public debate in rural community development in Akwa Ibom State.

A very good example which illustrates the importance of public debate in rural community development was what transpired at Ibom Hall during the twilight of former Governor Godswill Akpabio's tenure. As his tenure was rounding off, he organised Town Hall Meetings, where he met with the different stakeholders to feel their pulse and seek their input on government programmes and activities in order to impact their lives before he left the stage.

The Town Hall Meetings were held on Federal Constituency-bases. At the meetings, people were given opportunities to air their views on government projects and programmes. As a result of those meetings, some projects such as renovation of primary schools, construction (or at least grading) of rural roads were awarded to be constructed in some communities.

On one of those Town Hall Meetings, particularly, the one held at the Ibom Hall for Uyo Federal Constituency, one David Jackson from Ibesikpo Asutan Local Government Area was given the opportunity to speak. When he stood up, he thanked the governor for the opportunity given him. He directed his message to the governor, reminding him of the

promise he (the governor) made in 2005 when he consulted Akwa Ibom State Youth Caucus to enlist their support for his first term ambition.

Mr. David Jackson told the former governor that everyone in that youth caucus was empowered, except him. The former governor, in his characteristic manner, on hearing that immediately appointed Mr. David Jackson as a Special Assistant. He was given an official car and an office, and placed on a monthly salary of ₦300,000 till the end of that administration. This buttresses the importance of public debate in rural community development in Akwa Ibom State (*Vanguard Newspaper*, April 9, 2014).

This finding is supported by the redesigned MELDS Model of Development Communication (Sam, 2023). Mr. David Jackson was *mobilised* as a result of Town Hall Meeting, where he was *educated* through active participatory communication process. This education led to his *liberation* from financial stress, and this further led to his *development*, that resulted in *self-actualisation*, as a Personal Assistant to the Governor on Project Monitoring.

Conclusion

If done well, community stakeholder consultation can feel real, committed, integrated and influential. An overview of the ways in which the skills provided in this study can help development agents to overcome problems associated with achieving best practices in rural community consultation. It is, however, important to note here that stakeholder consultation in rural community cannot, in any way, replace the appropriate process of decision-making by elected, accountable, and public representatives. But, when it comes to siting development projects in rural communities, it is important to still practice the participatory and democratic communication process.

Central to any democratic system is the idea that the power to make decisions is linked to due process and is ultimately tested against public opinion in elections. Elected officials are, rightly, sensitive to the problem of making legitimate decisions through formal democratic procedures, such as town hall meetings and public debates. However, stakeholder consultation can help elected officials to understand, as well as incorporate public preferences and concerns into their decision-making processes.

Stakeholder consultation should not replace an elected official's right to make decisions on behalf of the constituents, but rather, it should be an integral part of it. Indeed, contemporary planning practice can be reconceptualised as a communicative, engaging and negotiated process, rather than largely a decision-making one. For such planning

practice to be successful, clear legislative backing is needed to uphold the legitimacy of community involvement and concerns.

Recommendations

The following recommendations are offered by the researchers of this study:

- To avoid wasting scarce resources on projects that would not be useful to rural dwellers at the end of the day, it is hereby advised that development agents such as the Akwa Ibom State Government should consult extensively with community stakeholders.
- For effective and efficient rural community and human development, it is advised that public debates be organised regularly, in order to appreciate the depth of issues affecting rural community dwellers so as to incorporate their needs into the developmental projects sited in such communities.
- Since it has been established in this study that effective stakeholder consultation can reduce the cost of rural community development projects, it is suggested that development agents such as the Akwa Ibom State Government should ensure that they engage rural community dwellers in consultations and public debates in order to reduce the cost of providing development projects in the rural communities.

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Exploring Communication Strategies in Human Resource Management: Implications on Employee Productivity in Organisations

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Abstract

In many organisations, the leaders' view of communication is almost limited to the design and structure of the organisation, not people. Consequently, dissatisfaction, mistrust, lack of motivation and collaboration become widespread. Since the Industrial Revolution, different communication approaches have been developed for human resource management to boost employee productivity and business success. Yet, many leaders still lack the essential communication skills and competences to influence their employees' positive work behaviours. Against this premise, the study examines the relationship between communication strategies in human resource management and employee productivity in organisations within the framework of McGregor's theory Y. Findings indicate that the creation of a climate of open communication is critical for the development of organisational citizenship behaviour. It is also found that positive behaviours have the propensity to drive employee productivity and organisational performance. Therefore, it is concluded in the study that effective communication strategies foster emotional involvement, commitment, a productive work environment devoid of negative work behaviours and high labour turnover. The study recommends that effective communication should be among the most significant aspects of human resource management to enhance employees' motivation for productive work.

Keywords: communication strategies, human resource management, employee productivity and organisation

Introduction

The ability to influence employees to behave in desired ways that an organisation can achieve its goals is dependent on competent management of personnel. This encompasses a wide range of issues including the ability to organise, coordinate and manage the organisation's employees to carry out an organisation's mission, vision and goals. Investing in communication competence, employees training and development, ensuring their safety and motivation are crucial to the development of trust, honesty, employees' emotional involvement in the organisation and high job performance.

Kreitner and Kinicki (2001, p. 478) posit that "Management is communication". Therefore, whether planning, organising, directing and controlling, managers find themselves communicating with and through others. On this premise, effective personnel management requires effective communication with employees. In today's highly sophisticated workforce, organisations must maintain adequate level of communication effectiveness. It is through adequate communication that employees obtain information, make sense of the situations they encounter and decide how to act. Straz (2015) asserts that effective communication between the managers and subordinates is critical otherwise complex problems like mistrust, hatred and ill-will arise which in turn can affect interpersonal relationship and limit cooperation.

In human resource management, communication is one of the most essential factors influencing employees' behaviour. Employees' perception about communication sources and relationships in the organisation determine their behaviour. The manager's positive communication behaviour enables employees to know what their organisation wants them to do, how to do it and how well they are doing. Soola and Ayoade (2000, p.13) are emphatic about the necessity of effective communication in personnel management, asserting that "Communication is the essence of executive function and personnel management. It is vital to all strata of human relationships and interactions. Without effective communication, there can be no effective cooperation and coordination of organisational activities".

It is not an overstatement to say that effective communication flow in the workplace is the means of facilitating employees' motivation. The organisational climate that permits the employees to communicate upward, encourages the employees' inputs in decisions that affect their career. This can motivate them to contribute their full range of talents to the accomplishment of organisational goals. Peterfreund (1980) cited in Udoфia (2008) notes that motivation of workers through extrinsic rewards alone is destined to fail unless communication is also improved. It is contended that having employees who feel that

they are well informed pays dividends in improved commitment to the organisation and more productive work.

Employees' success or failure in a job could be hinged on how well they communicate with peers. Human relations theorists believe that an important aspect of need satisfaction is communication among employees, so interaction that flows horizontally among employees is just as important as downward communication in the accomplishment of organisational goals (Miller 2009). This direction of communication flow according to Goldhaber (1993) cited in Udoфia (2008) is helpful in task coordination, problem solving, information sharing and conflict resolution. In this perspective, effective communication with peers can have a great impact on the organisation, individuals and productivity.

People are social creatures by nature, and so they are prone to be more anxious and stressed in an isolated environment. With the right kind of communicative relationships, employees can even end up being more productive than they would be if they worked alone because of the synergy that comes with teamwork. In support of this notion, Lamarco, (2019) states that when communication in the workplace is effective, it makes operations more effective and teamwork not only possible, but also, easier.

As fascinating as the values of communication may be, effective communication may not occur if employees lack the competence to communicate with others to foster quality relationships. It is imperative for human resource managers in collaboration with the general management to train the employees to acquire the basic communication skills as this is an essential requirement for effective communication which can contribute to higher productivity.

Theoretical Framework

This paper is anchored on the framework of McGregor's Theory Y (1960) cited in Miller (2009). McGregor's Theory Y is a variant of McGregor's Theory X. It represents a divergent organisational functioning. McGregor's theory Y is based on Maslow's higher levels of needs which provide incentives to employees for reaching or exceeding organisational goals. McGregor believes that there is more to job motivation than were reward of salary. Against the traditional structure of organisations characterised by centralised decision making, hierarchical structure and control of employee efficiency, McGregor views employees as possessing a high capacity for autonomy, responsibility and innovation. Optimistic about incorporating the individual's desires in organisational framework, McGregor believes that behaviours stemming from these managerial assumptions such as self-control, self-direction and participation in decisions that affect

workers, would lead to a more satisfied and more productive workforce. Thus, the essential task of managers is to create conditions such that members of the organisation can best achieve their own goals and those of the organisation.

As a motivational tool to get the best from the employees, the theory provides valuable insights into how managers should view and treat their employees. It also highlights the importance of understanding employee motivation and how management styles can impact employee productivity. These critical views on managing employees in ways that move an organisation forward, makes the theory highly significant to this study.

Concept of Human Resource Management

The emergence of today's human resource management could be traced back to 18th century. The British Industrial Revolution led to large factories and created a sharp increase in demand for workers (Hofstede, 2006). As many of the workers were eager to put in long hours, it became apparent that worker satisfaction and happiness had a positive correlation with productivity. In an effort to raise the net profit generated by employees, worker satisfaction programmes were introduced. Towards late 19th and early 20th century, attention was directed at factory conditions, safety concerns and workers' rights also began getting a serious focus.

Human resource management is workforce centred and a significant part of management concerned with employees at work and with relationship within the organisation. Barcenas, (2021, p. 431) defines it as "The strategic and coherent approach to the effective and efficient management of people in an organisation so that they help their business gain a competitive advantage." In any organisation, the improvement of the quality of employee performance, increased motivation and commitment to organisational objectives depends on the means by which they can be achieved. According to Flippo (2019), compensation, integration and maintenance of employees are some of the fundamental means an organisation can achieve the desirable outcomes.

Effective human resource management is the cornerstone of a successful general management of an organisation. This however, depends to a large extent, on the efficiency and effectiveness with which the management discharges its duties and functions. Although most organisations have a separate department whose main job is to coordinate all personnel activities, yet there is need for a close interaction between the personnel department which has the responsibility for the administration of personnel and line managers who have responsibility for optimising the use of their physical, financial and human resources.

The effectiveness of human resource management can be gauged by the degree to which issues concerning development and motivation are approached (Armstrong, 2009). Whether in profit or non-profit organisations, these issues constitute the primary task of human resource department to deal with in consultation with the general management of the organisation. As an extension of general management, the promotion and stimulation of competent workforce to make the fullest contribution to the organisation are crucial tasks of the human resource management. Personnel managers should understand the preferences of all the employees so that all the employees work according to their choices in order to promote job satisfaction and productivity.

For sound human resource management to thrive, Cross and Gabery (2016) have identified some essential skills that managers should possess. These include: Communication, employee relations and conflict management and resolutions.

- **Communication:** A high level of verbal and written capabilities is required in most human resource management jobs. Evidently, communication as a tool of human resource management is that interchange of fact, viewpoints and ideas which bring about unity of interest, clarity of purpose and integration of efforts in a group of individuals organised to achieve a specific mission. As an integral part of the motivating process, communication is essential in helping people work to satisfy the needs identified by Abraham Maslow. Therefore, satisfying these needs is fundamental to employees' high performance.
- **Employee relations:** The relationship between an employer and their employees is an integral part to the longevity of any successful organisation. According to Crail, (2024) employee relations concern the building of positive relationships and interactions among employers and employees, and at a broader level, helps foster a sense of community within an organisation. Mullins (2002) argues that positive experience in organisational environment could entail initiating transparent workplace communication or supporting the emotional, physical and psychological health of employees. Ultimately, the goal of employee relations is to create a positive relationship between employers and employees that leads to an increase in employee retention, happiness and productivity.
- **Conflict management and resolution:** In any conflict situation, mediation capabilities help human resource managers resolve conflicts and other difficult situations. Wilmot and Hocker, (2010) argue that conflict management is the use of processes, tools and skills to find creative and respectful ways to manage disagreements and disputes. It includes the ability to resolve conflict collaboratively through effective communication skills, such as active listening and assertive speaking. By meeting

these requirements and improving the opportunity for employees to share information, the parties in a conflict are more likely to develop fewer negative perceptions of each other. Gladwell (2005) posits that when the parties in a relationship openly trust and have confidence in one another's communicative behaviour, then destructive conflict is less likely to occur.

Employee Productivity

In organisations, particularly, the profit-making organisations, managers are required to boost productivity, quality and customer satisfaction while also reducing costs. These goals can only be met, however, through the cooperation and effort of all employees. By creating positive work environments where employees feel valued and appreciated, organisations are more likely to foster the employees' commitment and performance needed for organisational success.

Productivity in the workplace is an important aspect of every organisation and when top management understands this concept, success is just around the corner. Not only will employee productivity translate into good customer service, it will also lead to healthier work relationships and motivated employees. From the organisation's viewpoint, Eisenberg and Goodall Jr, (2001) assert that the most important indicator of cooperation is worker productivity. Campbell (2006, p. 426) defines productivity "As the relationship between the outputs generated by a system and the inputs required to create those outputs."

When productivity is considered from the perspective of the individual employee, it can be measured by the amount of time an employee takes to perform a task as well as, by the amount of effort required to make a product acceptable to customers. Gallo (2015) also states that employee productivity can be gauged by setting goals; pointing out that goal setting is particularly important as a mechanism for providing feedback. Indeed, by establishing and monitoring targets, managers can give the employees real-time input on their performance while motivating them to achieve more. In corroborating Gallo's argument, Core (2016) asserts that one key way to measure employee productivity is to set clear and specific goals and monitor employees' progress in order to know whether their effort is channelled toward behaviours that will improve work performance.

Increasing Employee Productivity

Employee training which is usually directed at upgrading and improving the employee's skills, can significantly increase employee skills and productivity. Although employee training programmes may disrupt the workplace and attract huge spending,

nevertheless, training has become increasingly important because of new information technologies and changes in the organisation's design.

Employee training can affect employees work behaviour in many positive ways. According to James and Udofia (2022), sustained employee training can improve the skills necessary for the employees to successfully complete their jobs. Therefore, an employee who receives training from time to time is in a better position to improve his works skills and increase productivity. Another gain is that every employee will be well versed with safety practices and paper procedures to follow when carrying out basic tasks.

On another level, employee training is seen to be a confidence booster. Training increases an employee's self-efficacy, thus contributing to an employee's expectation that he or she can successfully exhibit the behaviours required to produce an outcome. Employees with high self-efficacy is likely to have strong expectations about their ability to perform successfully in new situations. Training, then, is a means to help in building an employee's confidence since he or she would be given a better understanding of the organisation and responsibilities of his role. Moreover, training as a confidence booster will facilitate employee's willingness to undertake job tasks and exert a high level of effort. It is also equally important to note that employee training is not only good for the employees but also for the firm. Conducting frequent training and development programmes is one way of boosting the organisation's profile and reputation. A company that trains its employees will be more attractive to potential new employees, particularly those looking to advance their skills.

Placing emphasis on monetary compensation does not account for employee total motivation. But according to Mullins (2002), employee training is also a potential factor to their motivation. Peterfreund (1980) cited in Udofia (2008) contends that an employee who is thoroughly trained for the job will be more highly motivated than one who lacks basic training. Employee training produces dual benefits - a more competent performance of duties and an informed employee who recognises the employer's investment in the workers as evidence of their own worth. Many forward- looking organisations are striving for more innovative workforce. Therefore, when employees receive consistent training, it fosters their creativity and helps them to be more independent and creative when they encounter challenges in their work.

Effective Human Resource Management Communication and Employee Productivity
In any organisation, employees can perform better when the communication climate fosters a positive work environment. This perspective is controlled by or lies in the

strength of communication strategies that create a sense of belonging and value among employees, help build trust, engagement and collaboration within organisations. Good organisational leaders today, are communicatively adept. This is so because they recognise the value of effective communication as a means of promoting quality interactions, clarifying unclear objectives and ambiguous roles in the organisation.

Koontz, and Weihvich cited in Eisenberg and Goodall Jr. (2010) are of the opinion that for employees to perform enthusiastically and be committed to organisational goals, there must exist enduring communication strategies to elicit desirable outcomes. Aligning to this argument, Trethewey (2009) outlines some of the essential aspects of communication strategies for human resource management that must be incorporated in the organisational communication structure to help the employees unleash their potential and drive organisational success. These include:

- Clearly communicating expectations, goals, and fostering open communication channels and encouraging employees to share concerns and ideas.
- Providing regular and constructive feedback to help employees identify areas for improvement.
- Encouraging employee participation, facilitating teamwork, and overall engagement.
- Actively listening attentively to employees, addressing their concerns and suggestions.
- Promoting transparency, trust, and sharing company vision, mission, and progress with employees.
- Recognising and rewarding employees' contributions and achievements to be more productive.

Apparently, according to Tubbs and Hain (2010), organisations that prioritise these aspects of communication strategies are likely to reap benefits in terms of:

- Gaining a competitive advantage by adapting quickly to changes, staying ahead of competitors;
- Helping the organisation manage crises, minimising damage and maintaining stakeholder trust.
- Ensuring customers' consistent reception of accurate information, and boosting satisfaction.

- Encouraging idea-sharing, driving innovation and growth.

These benefits are consistent with the managerial assumption of McGregor's theory Y that management styles can impact both employee productivity and effective organisational functioning.

Communication is a keystone of organisational success. Conrad Poole (2005, p. 386) emphasises that "If the importance of communication is overlooked, then the managers are really overlooking communication's ability to promote desirable behaviours that can boost organisational success." Communication is essential to the employees since it can be used to satisfy their basic needs in the organisation. Therefore, inadequate and ineffective communication flow can be the major barriers to employees' job satisfaction.

In all aspects of organisational life, the roles that communication plays in effective functioning of an organisation are incontrovertible. Goldhaber (1993) cited in Udofoia (2018) states that as evidence of the importance of communication in organisations, it is described as the life blood of the organisation, the glue that binds the organisation and the oil that lubricates organisations' functions. Thus, in human resource management, the employees' positive perception of communication climate in the organisation will foster positive employees' behaviours and lead to overall employee's performance. The human resource manager has a duty to ensure that inadequate and ineffective communication flow are minimised as these could be major barriers to employees' attainment of individual goals.

No organisation can function maximally without effective communication. Several functions of communication within organisations correlate with employee productivity. Robbins (2003) argues that communication acts to control members' behaviours in several ways. The author explains that organisations have authority hierarchies and formal guidelines that employees are required to follow. When employees, for instance, are required to first communicate any job-related grievance to their immediate boss, to follow their job description or to comply with the company policies, communication is performing a control function which is vital for employee's efficient performance of their duties.

Motivation is a fundamental element in employee productivity. Sullivan cited (2001) in Eisenberg, et al. (2009) opines that communication can motivate employees to accomplish a specific activity or goal at a lower cost when managers provide information and feedback about employees' task, goals, performance and future directions.

Employee productivity cannot be isolated from the content of communication in the workplace. According to Farace, et al., (1977) cited in Miller (2009), maintenance related communication (communication on social topics that maintains human relations) is a factor in increased employ productivity. Thus, a climate of social interactions within an organisation can increase employees' efficiency and effectiveness. LaMarco (2019) asserts that work group is a primary source of social interactions for many employees. Apparently, communication that takes place within the group is a fundamental mechanism by which members show their frustrations and feelings of satisfaction.

Communication, therefore, provides a release for the emotional expression of feelings and for fulfilment of social needs. When social needs are met employee's productivity is likely to increase. Another important function that communication performs relates to its role in facilitating participation in decision making. It provides the information that individuals and organisations need to make decision by transmitting the data to identify and evaluate alternative choices. According to Kreitner and Kinicki (2001, p. 229), this role of communication fosters "Employee's higher commitment to organisational goal and facilitates higher productivity."

Conclusion

The study examines the linkages between communication strategies in human resource management in enhancing effective employee productivity. In exploring the impact of communication strategies in human resource management, the study notes that skilful management and effective motivation of employees are predicated on the assumption that a manager's acquisition of the most essential communication skills is necessary for creating a positive relationship among employees. This is the right approach to boost employee happiness and productivity.

The study further explores a theoretical framework of McGregor's Theory Y that conceptualises employees as individuals characterised by needs. McGregor shares an allegiance to the principles of human relations that highlight human needs and the satisfaction of those needs through effective management practices. It is argued that employees, whose needs are met, are likely to be more effective and productive.

Today's highly competitive business environment requires human resource managers to search for innovative ways to boost employee productivity and organisational success. It is obvious that the improvement of communication flow, the building of positive relationships and interactions among employees and the development of the skill to find creative and respectful ways to manage disagreements and disputes in the organisation are some of the keystones of a successful resource management.

The promotion and stimulation of competent workforce to make fullest contribution to the organisation are the crucial tasks of human resource managers. These imply the investment in employees' communication competence, training and development, ensuring their safety, and increased intrinsic and extrinsic motivation. These organisational factors among others, are the driving force to the development of employees' trust, honesty, and emotional involvement in the organisation. Ultimately, employees' positive perceptions of the quality of the internal environment of the organisation will encourage them to stay focused on their tasks and massively boost productivity.

Recommendations

In the light of the foregoing, the study recommends as follows:

- That communication as a potent instrument for employee productivity should be among the most important aspects of human resource management to enhance employees' motivation for high productive work behaviour.
- All skills necessary for human resource management should be employed in the management of employees for effective functioning and prosperity of the organisation.
- Managers should create positive work environments where employees feel valued and appreciated. Such feelings will promote job satisfaction, foster commitment, and boost productivity.

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**Expositions on the Semantic Potentials of some Nigerian English Expressions
used in Akwa Ibom State Polytechnic: Adapting to the Evolving
Landscape of Language**

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Abstract

This study expounds on the meaning potentials of some Nigerian English expressions used in Akwa Ibom State Polytechnic. It is observed that English language spoken in Nigeria is distinct from the British Standard English. The Language Variation Theory was adopted to guide the study. Descriptive design was used for analysis and data were collected from primary sources. A total of 130 Nigerian English expressions were collected from participants through observation while 30 expressions were selected for data presentation and analysis. The data for this study were collected from conversations between friends and colleagues. Also, Nigerian English has semantic and pragmatic values, but can only be appreciated by Nigerian speakers in terms of the vocabulary, phrases, and other larger expressions that are rich with idiomatic and proverbial colourations. The study recommends that English Teachers Association in Nigeria should use their platforms to promote research in Nigerian English. Efforts should be made to produce more comprehensive dictionary for Nigerian English.

Keywords: Nigerian English, semantic potentials, language variation, British Standard English

Introduction

English is a global language and has billions of speakers worldwide. Jowitt (2005) informed that second-language speakers of English are many and can be found almost everywhere in the world. The English language was transported to other parts of the world through British imperialism. The new speakers were influenced by their cultures (languages) leading to the emergence of varieties of English such as American English, Canadian English, Australian English, Indian English, South African English, and of course, Nigerian English (Ogunsiji, 2014).

Non-native speakers of English are the majority when compared to native speakers, however, the speakers do so as a second language, foreign language, international language speakers, and for specific professional purposes (McKay, 2002). Sociolinguistics has established the fact that language develops its varieties through regional contact it has with other languages. That is why culture and other environmental factors make up the variables for a sociolinguistics analysis. Ofule (2011) presents English language as evidence of this worldwide language contact phenomenon, leading to language variation and change. The author designates this phenomenon as 'World Englishes', 'Modern Englishes', and 'New Englishes'. No doubt, the variations are seen in different levels of the English language, that is, phonetics, phonology, syntax, semantics, and pragmatics.

At the semantic level, research is focused on meaning. In this process, linguists agree on the existence of complexity, especially when dealing with cultural elements. Language cannot be separated from culture, instead, language and culture complement each other. English language as used in Nigeria has accumulated certain features, which are cultural (environmental), motivating its designation as "Nigerian English" (Ogunsiji, 2014).

Statement of the Problem

English language that is spoken in Nigeria has evolved into a distinct variety shaped by the nation's socio-cultural environment and indigenous languages. However, many Nigerian English expressions used in Akwa Ibom State Polytechnic carry meanings that differ significantly from British Standard English. They often rely on cultural knowledge, idioms, and contextual interpretation. Without proper documentation and semantic analysis, these expressions remain misunderstood, misinterpreted, or labelled as errors, despite their communicative relevance within the Nigerian context. The lack of systematic exposition on the semantic and pragmatic potentials of these expressions creates a gap in understanding how meaning is constructed among Nigerian speakers. This study therefore addresses the problem of insufficient scholarly analysis of Nigerian

English expressions used within Akwa Ibom State Polytechnic, particularly how culture shapes their meanings and how they differ from standard British usage.

Aim and Objectives of the Study

The aim of this study is to make a semantic analysis of some Nigerian English expressions. Specifically, the study was designed to:

- i. Identify and categorise the major semantic shifts, loanwords, and neologisms present in the Nigerian English expressions commonly used in Akwa Ibom State Polytechnic; and
- ii. examine the extent to which these Nigerian English expressions enhance or hinder clarity and effectiveness of communication among students and staff in the institution.

Research Questions

- i. What types of semantic shifts, loanwords, and neologisms are most common in the Nigerian English expressions as used in Akwa Ibom State Polytechnic?
- ii. How do Nigerian English expressions affect clarity and effectiveness of communication among students and staff in Akwa Ibom State Polytechnic?

Review of Basic Concepts

Nigerian English

Jowitt (2005) declared that Nigerians have domesticated and acculturated a new type of English language known as "Nigerian English." This English dialect is distinguished by cultural components from Nigeria. Despite Nigeria's multiculturalism, all facets of the English language spoken there are greatly influenced by the local languages of Nigeria. Nigerian English is just one of the new English language variations that are emerging globally, according to Ajani (2007), the different ways of using the English language in the Nigerian speech community are necessary for the existence of a single superordinate variety of the language. Additionally, Ajani listed a few characteristics that set Nigerian English apart from other dialects spoken around the globe and divides these into spoken and written usages that are lexical, semantic, syntactic, and phonological.

Previously, Odumuh (1987) divided Nigerian English, often known as the "national language," into three varieties to reflect the impacts of the three main regional languages

of Nigeria. These English dialects are Hausa, Yoruba, and Igbo. Odumuh argues that these dialect varieties feed into and enhance the superior Nigerian English.

According to Bamgbose (1995), Nigerian English is at par with other officially recognised varieties of the language, since linguists worldwide have universally acknowledged it. The author distinguished among the techniques of innovation, deviation, and interference.

- i. The first method links the use of English in Nigeria to the influence of native Nigerian languages.
- ii. The second method labels any deviations from this model as aberrant by drawing a contrast with "native English."
- iii. The third method is the creative approach, which emphasises using the English language and regional languages to generate original terms and idioms. Bamgbose believes that this method has the added benefit of acknowledging Nigerian English's independent status.

Bamiro (2013) claims that the various historical, geographical, political, and socio-cultural elements that give rise to the new Englishes are primarily responsible for their unique traits, linguistic identities, and cultural identities. Nigerian English is therefore, not the same as Ghanaian or Indian English. Still, each variation has a number of subvarieties or dialects that are representative of its multilingual setting. The degree of English localisation will determine the extent of impact at different linguistic levels in each variety. In Nigeria, the English language has been spoken for almost three centuries.

There are numerous reasons for Nigeria's variation in English language usage. Many Nigerian academics have tried to categorise the English language as used by Nigerians due to its unique characteristics.

The following categories:

- a) "Perverse Nigerianism," contains borrowed terms, neologisms, category/semantic changes, and words that widen meaning. The loan terms, such as: "agbada," "garri," "akara," "amala," "tuwo," and "eba," are words that have been borrowed from a variety of Nigerian languages.
- b) Coinages/ neologisms. The examples of coinages and neologisms are "bride price," "head-tie," "flowing gown," "chewing stick," "go-slow," "chewing gum," and so on.
- c) Semantic shift refers to the gradual transition from one concept of meaning to another.

English Language in Nigerian Socio-Cultural Environment

Southern Nigeria is thought to have been the site of the initial interactions between Nigerians and British. As a result, a reduced form of English communication known as Broken arose between the English men and the Nigerians. Three main phases may be distinguished in the history of English adoption in Nigeria: the pre-missionary era, the missionary era, and the post-unification of the Southern and Northern Protectorates. It is crucial to note that these periods blend into one another, making it difficult to draw a precise border between them. Nigerians were increasingly exposed to the English language as a result of these activities (slave trade, missionary activity, colonisation, economic trade, and others). Nigeria took great pride in its more than three hundred languages and numerous linguistic variants, even before English arrived.

The fundamental components of the languages spoken in Nigeria are the entirety of Nigerian cultural patterns and behavioural patterns (Onuigbo & Eyisi, 2008). According to Kperogi (2015), culture is the intricate sum of human knowledge, morality, beliefs, arts, practices, and technological advancements that are passed down and shared from one generation to the next. Cultural practices are intricate lifestyles that are inherited by all members of a society across many generations. A people's beliefs, customs, language, art, technology, clothing styles, food preparation and preparation methods, political and economic structures, and rituals all constitute their culture. Like other cultures, Nigerian culture is made up of both material and non-material elements. The former is usually more explicit and includes things like technology, products of the local industry, and artifacts like knowledge, morals, language, attitudes, and values. The non-material elements frequently influence people's perception and create the circumstances around Nigerians. Since it differs greatly from those of English culture, it is mostly to blame for the variations found in several English lexical terms in Nigeria.

The English and local languages often represent what is possible in Nigerian culture. Culture is a pattern of behaviour, whereas language is a manifestation of human activity. Since language is ingrained in culture, it is clear that the two are intertwined. The Sapir- Whorf hypothesis of "Linguistic Relativity and Determinism," which holds that humans debate the world from the perspective of their language, supports this. British colonisation of Nigeria left elements of British culture in Nigerian culture, which has persisted since the country's socio-political and economic past. An educated Nigerian becomes bilingual or bicultural, speaking English first and subsequently their mother tongue.

In Nigeria's multilingual environment of education, communication, and administration, English now plays a significant role. Effective English language learning becomes essential in Nigeria. Nonetheless, a few aspects of the native Nigerian culture are not

shared by the English language. Thus, Nigerian conceptualisation systems differ from English conceptualisation systems. As a result, Nigeria has made great progress in creating unique cultural meaning systems, which are reflected in English, their second language. Words related to food, family, clothes, among others are examples of cultural terms that primarily cause this and semantic analysis of various expressions is required.

Theoretical Framework: Language Variation Theory -William Labov (1964)

Language Variation theory is also known as Language Variation and Change or Variational Sociolinguistics. This theory started in 1960s when William Labov got involved in the study on "sound change in Martha's Vineyard." The Variation theory became pronounced when Labov conducted PhD dissertation research in 1964 on the topic, "The Social Stratification of English in New York City." It is believed to have been ground-breaking research as it focused on the sociolinguistic patterns of African-American Vernacular English (AAVE) in the United States. This work became fundamental to the systematic study of language variation and change (Uzoigwe, 2010). Language Variation theory focuses on the systematic study of variation in language, particularly how language varies across different social and situational contexts. Language Variation theory recognises that language use is not uniform and that linguistic variation occurs due to social factors such as geography, ethnicity, social class, and specific communicative contexts.

Variations in language occur at different levels. There is phonetic variation, a kind that is seen in pronunciation (Hoffman & Walker, 2010). There are also morphological and syntactic variations, dealing with grammar. Semantic variation affects the meaning of words and longer expressions. Words assume different meanings based on dialects. Language change is compelled by both socio-linguistic factors and psycholinguistic factors. Socio-linguistic factors are those factors found outside a language system, while psycholinguistic factors are found within a system. To understand language variation, one needs to pay attention to both the language and the society in which the language is spoken (Ogunsiji, 2010).

Language use varies from one geographical location (ethnic group) to the other. This is clearly seen in Nigeria's use of the English language. The English language was introduced to Nigeria during British imperialism in the midst of more than 300 languages and language varieties. These second-language speakers of English have different cultures that are in sharp contrast to English. However, they have to learn the English language for wider communication. Therefore, native languages have a heavy influence on all aspects of the English language including pronunciation, word formation

processes, word order, and meaning. This theory supports the variation of English language in Nigeria, which led to the designation, "Nigerian English".

Methodology

Research Design

A descriptive design is adopted for the study. This design is most suitable for expositions on the meaning potentials of some Nigerian English expressions used in Akwa Ibom State Polytechnic. A total of 130 Nigerian English expressions were collected from participants through observation while 30 expressions were selected through random sampling method. Data for this study were collected from interviews of friends and colleagues. Other expressions that served as data were collected from social media chats (WhatsApp groups) and the rest were collected from interaction with students of Akwa Ibom State Polytechnic. Some speakers were interviewed to interpret the meaning of the expressions that are commonly used by people.

Data Presentation

S/N	Nigerian English Expressions	Semantic and Pragmatic Interpretation	British Standard version
1	The lady's fiancée has started doing something on her head.	This involves the process of offering a bride price to get married to a woman. In Nigerian culture, the process of marriage requires a man to pay a certain amount of money as prescribed by the woman's family along with other food items, drinks, and household items. A man begins to do something on a woman's head when he is introduced to the potential in-laws and offers drinks or other items.	To commence Marriage rite
2	The price of goods has gone up.	A hike in the price of goods is perceived as going up in Ibibio. The local language describes high cost of goods as going up.	The price of goods has skyrocketed.

3	Stop bringing my leg outside	The speakers therefore render it as going up based on the cultural view of pricing. Stop exposing (embarrassing) me. This meaning is more of pragmatic instead of semantic. The expression derives its meaning from the local language. It serves as an idiomatic expression, warning an erring person to save the face of the speaker.	Shield the embarrassment
4	The sun has gone down	The sunset is described in this way based on the traditional perception that the sun gradually sets by going down. While looking at the sun in the evening, the traditional society sees a sun that goes lower or down until it disappears.	It is sunset
5	Bend down and enjoy your madam	To 'bend down' is to be humble. When a person is advised to bend down, he is urged to be loyal and humble to his or her superior. This phrase is a direct transfer meaning from the local language.	Be humble to your boss.
6	His father is a big man	'Big man' refers to a wealthy man or rich man. In the local culture, wealthy people are described as 'big' because of their influence in society.	His father is wealthy and influential
7	The woman that has body	A chubby person is described as someone that has 'body'. In Ibibio language, it is perceived that a plus-sized person has a body while a slim person does not have a body.	A chubby lady...
8	That boy is eyeing me.	The boy watches me. It denotes looking at someone. However, when a woman insinuates that a man is eyeing her, it connotes a romantic signal from the man. Probably, the man looks with lust.	Eye contact expressing lust.
9	They are doing man-know-man	The act of favouritism is termed man-know-man in Nigerian parlance. This compound word is coined following the network of people, which necessitates favouritism.	Favouritism of a particular person
10	I am coming	In the local language of Ibibio, someone says, 'I am coming' to indicate that he will	I will be with you soon

		surely come back as soon as possible. The meaning of this expression is determined by context (the speaker and the hearer as well as the situation).
11	He is playing 419	He is fraudulent. The digit "419" is coined to mean fraud in Nigerian English. Scamming is literally considered to be a game in Nigeria's social environment
12	I like eating loi-loi in the afternoon	Loi-loi is a traditional solid food processed from cassava. Nigerians eat loi-loi with soup. Almost every Nigerian is familiar with loi-loi. This is one of the words borrowed from the local languages and used in English.
13	I need a chewing stick	The word 'chewing stick' is coined to name a stick which is traditionally used to cleanse the teeth. People use sticks that are considered to be medicinal and is able to serve the purpose of cleaning the teeth in the morning. Since this custom is only known to traditional Nigeria societies, it does not have an English name, hence the coinage.
14	How was your night?	This expression has a different usage and meaning in Nigerian context. Its original meaning in the Standard British English deals more on romantic relations between couples. In Nigeria English, it is used as a part of prolonged greeting, requesting the listener to say little about their night rest and well-being
15	I want to buy hot pure/bottle water	To the average buyers, the water in sachets and plastic bottles are either cold or hot. Cold pure/bottled water is frozen water while hot water is not frozen.
16	Me I don't have problem	Many speakers introduce the personal pronoun, which should originally occupy an object position in a sentence. It comes

		first at the beginning of a sentence for emphasis.	
17	The girl is doing eye service/notice-me	“Eye service” is a compound word coined in Nigeria to mean ‘pretentious service’. “Notice-me” is another compound word that has a similar meaning. They all refer to treacherous activity or service that some people render so as to achieve a selfish goal.	pretence
18	My head is paining me	Pain in the head might refers to head-ache and extreme stress. Speakers use this expression to indicate tiredness and their desire to have a rest.	I have a headache
19	Sir, I want to sign my course form	The meaning of this statement is only understood above the choice of words of the speaker. The student is actually requesting a lecturer or an administrative officer to append his or her signature on the document presented by the student. The use of this expression might have been motivated by politeness.	Could you sign my course forms please?
20	You are sick upstairs	When someone acts in a deviant manner, others can describe him as being “sick upstairs”. This means calling someone stupid or foolish. Being sick upstairs suggests unstable mentality.	Mentally ill
21	I don't like people that carry their shoulders up	This is an idiomatic expression describing pomposity and pride. To ‘carry shoulder up’ is to look down on others or display superiority	Pride
22	Our market will buy on Fridays	In Ibibio language or culture, markets can be described as buying on a particular day, which is the market day.	Specific market day
23	The food is sweet	In British Standard English, food is delicious. In Nigerian English, food is sweet as it tastes good.	The food is delicious
24	He is a village man	‘Village man’ is a compound name that is coined to describe an uncivilised person. It does not refer to a man from the village; it refers to someone whose social behaviour	Uncivilised person

		and mentality falls below expectation of others	
25	The hold-up is too much	'Hold-up' is a coinage describing traffic jam. Hold-up is also called 'go-slow' in Nigeria.	Traffic jam
26	His oga told me to wait	The word 'oga' is borrowed from the Yoruba language. It means master or a boss. It is generally used for any superior in the work place, business place and in the apprenticeship system in Nigeria.	Boss
27	Tell that Mama-put to give me something to eat	'Mama-put' is a compound word coined to name or describe the roadside food vendors. Along the streets in the cities and rural areas, women sell food. Mama-put refers to such women who sell food in the streets.	Food vendor
28	Thank God, iyawo is here	'Iyawo' is a Yoruba word for a married woman. Many Nigerian English speakers specifically call all married Yoruba women iyawo.	Wife, mother
29	Don't allow him to deceive you with his sweet mouth	'Sweet mouth' is a compound word for eloquence, well-articulated speech or convincing utterances. However, a person who has sweet mouth is considered to be deceptive.	Deceit
30	You want to run faster than your shadow	This is a proverbial statement condemning unnecessary attempts to outsmart others.	Tricky smartness

Discussion

Nigeria's socio-cultural environment and Nigerian English

The socio-cultural setting of every society is formed by the culture, language, customs, activities, and social events. The Nigerian society is rich with unique customs and practices as well as social activities. These features have great influence and have contributed to the meaning of English expressions as used by Nigerians. For example, most Nigerian customs on marriage perceive bride price as "paying for the head of a woman." With this conception, the use of English to describe this process is rendered as "paying for a woman's bride price" or "doing something on a woman's head."

The cultural practice has influenced this description because the speakers have transferred the native concept into the English language (Oyeleye, 2014). To the Nigerian speakers of English, this expression is acceptable. In the same vein, speakers can simply say "The food is sweet". In the Nigerian parlance, whatever tastes good is sweet including food. The speakers might not see any need to use another word for 'sweet'. Again, in describing the economic status of a person, Nigerian speakers use the word 'big'. In the cultural concept of wealth, people are considered to be "big" if they are rich. These expressions indicate that the social environment and the traditional perception of activities and events affect how English language is used.

Sociological ideologies affect or determine how people describe actions and events using their language. Where a second language (representing a different culture) does not share a particular social ideology, the usage of the second language by the new learners is bound to be influenced by the first language. These new speakers must continue to express their social ideas in the new language by manipulating the language. The ideas that are presented in the data above are expressed in English language, however, the ideas flow from the local Nigerian languages. In other words, the words that are selected and arranged to convey meaning in local languages are translated into English so as to represent the same meaning. Igboanusi, (2002) ascribed this deviation as semantic interference. Amachaghi (2021) also opined that although most Nigerian English expressions are characterised by errors they have semantic values.

Adegbite, (2003) stated that the English language in Nigeria is distinct because of historical, geographical, political, and socio-cultural factors. Political activities and other social events have contributed to the uniqueness of Nigerian English. Examples can be seen in the coinage of words like "Obidient" and "Atikulated" (words coined during 2019 and 2023 general elections in Nigeria).

In various social media platforms, new words are created and used by Nigerians. Interestingly, only Nigerians and those who follow developments in Nigeria can relate to the meaning of those expressions. Some words are products of hybridisation or loan words from any of the Nigerian local languages. Another example can be seen in the trend of migration by Nigerians seeking greener pastures abroad. This wave has gradually become a social ideology and to describe it, a Yoruba word, "Japa" (to escape) has been borrowed to represent this social ideology. Further, scamming in Nigeria is described as "419" in Nigerian English and sometimes, referred to as "wayo" (Yoruba word, meaning treachery). However, the mode of operation of the present scammers no longer fits the description of "419", therefore, a compound word, "Yahoo boys" has been

created to name the activity of most desperate men, who engage in internet or cyber fraud to dupe, defraud, scam, hack, or phish unsuspecting members of the public.

Language has the ability to generate new words according to the social activities and events in society. Nigerian English has continued to expand in vocabulary to account for developments in Nigeria's social cultural environment. Political events, social movements, the introduction of new ideas and innovations have resulted in neologisms, changes in the meaning of existing words and phrases, and so forth.

Semantic and Pragmatic Value of the Nigerian English expressions

The essence of language is to express meaning (Maduako, 2003). Where a group of words fail to meet communicative demand, the utterances become noise. Nigerian English has the duty to enhance communication among its users. Based on the social environment of Nigeria, Standard British English cannot solve all communication needs of the people. This gap necessitated the emergence of Nigerian English. Therefore, meaning, as it suits the Nigerian social environment, whether denotative or connotative is conveyed by Nigerian English. To fulfil the semantic role in the Nigerian context, Ejie and Ikupa (2024) opine that one of the most important aspects of Nigerian English is its incorporation of Nigerian expressions and proverbs into the language. Indeed, the domestication of English language in Nigeria is the merger of the English language and the Nigerian culture.

Yahaya (2022, p. 2) quotes Achebe (1975), "We should bend the language (English) to accommodate our thought patterns and perform tasks suitable to us instead of looking at it as the language of the colonisers" This statement explains the existence and uniqueness of Nigerian English and significantly its purpose. Standard British English lacks some culture-specific elements in the Nigerian socio-cultural environment. However, in the view of (Ekpe 2010), Nigerian culture has assimilated the English language and beautified it with proverbs, idioms, and vocabulary; its usage is often intra-national rather than international. To enjoy the semantic and pragmatic value of Nigerian English, one must be familiar with Nigerian culture, socio-political activities, and history.

At the level of vocabulary, the Nigerian English has borrowed from major languages like Igbo, Yoruba and Hausa as well as other languages. These loan words have retained their original meaning from the donor languages. Words like 'Oga'(Master), 'Iyawo' (married Yoruba woman) 'loi- loi' (solid food from cassava), and others make up the vocabulary of Nigerian English. The Nigerian English is also rich with neologisms/coinages. *Mama-put, sweet mouth, eye-service, chewing stick, notice-me, go-slow*, and many others are coinages in Nigerian English.

Phrases and sentences reflect the social ideologies and culture of Nigeria. The meaning derived from some larger expressions is highly contextual. The speakers of Nigerian English can decode them because they share the culture and have a measure of social awareness (Anchimbe, 2007). There are Expressions such as *Stop bringing my leg outside*, *You are sick upstairs*, *He is playing 419*, *How was your night?* All of these have meanings based on the Nigerian context. Some meanings can be derived at semantic level while others are derived at the pragmatic level.

Summary of Findings

- a) The native speaker's English in Nigeria could not appropriately serve all the communicative needs of Nigerian speakers due to cultural differences. Therefore, the English language has been influenced by multiple cultures that exist in Nigeria in addition with socio-political activities. This has resulted in neologisms, lending of words, and semantic shift.
- b) Nigerian English has semantic and pragmatic values, but can only be appreciated by Nigerian speakers and others, who are aware of the socio-cultural environment of Nigeria. Nigerian English vocabulary, phrases, and other larger expressions are rich with idiomatic and proverbial colourations.

Conclusion

Language is culture specific. The socio-environment plays a key role in assigning meaning to utterances as demonstrated in the study. Nigerian English as used by Nigerians has served for effective communication. In fact, it represents the culture of Nigerian people by providing words of Nigerian origin and phrases which are understood by Nigerian speakers. Some proverbial words that are expressed in native languages are currently translated into English language by Nigerians and these expressions help to convey messages to the listeners.

There are identifiable differences between the English language spoken in Nigeria and the native speaker's English especially at the level of meaning. The socio-cultural environment of every society is made up of ideologies, perceptions, customs, activities, and social events. Nigerian society is rich with unique customs and practices as well as, social activities and these determine and shape meaning. This is the key contributor to the variation in the meaning of expressions in the English language spoken in Nigeria.

Recommendations

In view of the findings of the study, the following recommendations are made:

- Nigerians should continue to promote Nigerian English and allow the local languages to provide all necessary elements that can help to fill the gap created by the native speaker' English.
- Language teaching associations in Nigeria should use their platforms to promote research in Nigerian English. Efforts should be made to produce more comprehensive dictionary for Nigerian English.

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**Non-Citations of Domestic and Collegiate Papers by Writers of Global South
Descent: The Self-Crafted Neo-Imperialism in the Knowledge Industry**

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Abstract

The globalisation of scholarly communication has intensified asymmetries in whose knowledge is recognised and cited. This article examines the persistent practice whereby scholars from Global South (developing countries) under-cite, ignore, or marginalise domestic and locally produced academic work in favour of scholarship published in metropolitan, largely Western venues. The literature rooted in postcolonial perspectives, the sociology of science, and citation studies, provides a rich blend of historical anecdotes. While strands of The Citation Economy, Coloniality of Knowledge, and Academic Capital and Prestige Bias theories, espoused themes that shape citation behaviour. It is argued in the paper that this behaviour constitutes self-crafted neo-imperialism that reproduces epistemic dependency. It also, diminishes local research ecosystems, and reinforces unequal global knowledge hierarchies. The conceptual analytical extrapolations situated within the contexts of illustrative bibliometric patterns leveraged structural, institutional, and cultural drivers of non-citation conundrum. The study offers a conceptual model of the citation decision-making process in peripheral contexts and proposes multi-layered policy, institutional, and scholarly interventions to decolonise citation practices and strengthen local epistemic sovereignty.

Keywords: citation bias, epistemic coloniality, academic capital, Global South, self-crafted neo-imperialism, Global North

Introduction

In global academic ecosystems, citations perform several critical functions. They acknowledge prior work, situate arguments within scholarly conversations, and act as currency for reputational capital, hiring, promotion, and funding (Merton, 1968; Garfield, 1972). While they provide an avenue to offer credence to intellectual property owners, they also, exonerate the writer from unintentional duplication of patented works or accusation of plagiarism (Awak, 2022). Yet, the normative ideal of citations as impartial markers of intellectual debt collides with persistent inequalities in who is cited and whose knowledge counts. Scholars in developing countries frequently look outward for evidence, theory, and empirical comparisons, privileging works published in Western journals and presses, while neglecting domestic and collegial outputs (Altbach, 2004; de Sousa Santos, 2014).

Indeed, the globalisation of scholarly communication has intensified long-standing asymmetries in whose knowledge is recognised, cited, and legitimised within the global academy. For writers of developing nations descent, particularly those from Africa, Asia, Latin America, the Caribbean, and the Pacific, the institutional and cognitive architectures of knowledge production often end by incentivising the privileges of the metropolitan or Western scholarship at the expense of domestic and collegial contributions.

This patterned exclusion constitutes a self-crafted form of neo-imperialism wherein local scholars unwittingly reproduce epistemic hierarchies by under-citing or ignoring research emerging from their own backyard (institutions or regions). It is appalling that very good topics researched and produced for promotion are mostly utilised by shelves. There is no policy connection or collaboration between researchers and policy makers (Awak, 2019). Just as colleagues abhor citing or appreciating their fellow researchers for the simple reason that they are local or unindexed and would not amount to anything substantial in terms of recognition, appreciation, grading and elitist appeal deserving of their articles.

Citation is a scholarly gesture of intellectual acknowledgement and a mechanism of power. It is an instrument through which academic legitimacy, resource allocation, and symbolic capital circulate (Merton, 1968; Bourdieu, 1988). When domestic work is consistently omitted, its authors, institutions, and knowledge systems become marginalised, weakening research ecosystems and skewing policy decisions.

This paper explores with the central question, why do writers from the Global South often fail to cite or engage substantively with local scholarship? It is contended that this pattern

is not merely a byproduct of availability or quality differentials; rather, it is an enactment of a self-crafted neo-imperialism, which ofcourse, has to do with an internalised hierarchy of knowledge that offers special rights and privileges to metropolitan scholars, venues and norms.

The crux of the paper is designed to propose interventions that would not only build citation reflexivity and knowledge sovereignty, but extricate and emancipate scholars of the Global South descent from mental slavery enunciated through self-crafted neo imperialism.

Statement of the Problem

Despite the rapid expansion of higher education systems and academic publishing in developing nations, a persistent pattern of non-citation of domestic and collegiate research continues to undermine the visibility, legitimacy, and global integration of local scholarship. Scholars of Global South descent often bypass locally produced knowledge even when it is methodically rigorous, contextually and ideologically relevant, while disproportionately citing foreign, Global North (North America and Western Europe) literature. This practice entrenches a self-crafted neo-imperialism within the knowledge industry, whereby intellectual authority is outsourced to external epistemic centres, leaving domestic knowledge ecosystems dependent and underdeveloped.

Existing literature paints a vivid picture that depicts asymmetrical citation flows, prestige biases, and epistemic hierarchies that privilege Northern scholarship in the global knowledge production landscape. An unimaginable scenario is the emerging internal dynamic, where researchers within developing nations themselves reproduce these hierarchies by devaluing their own intellectual outputs (Awak, 2019, 2024). This internalised citation behaviour fuels a cycle in which domestic journals remain weak; local epistemic communities remain fragmented, and Global South perspectives are systematically excluded from shaping disciplinary theories, frameworks, and methodologies (ChatGPT, personal communication, September 2025).

This problem is further accentuated by structural constraints such as limited indexation of local journals, language barriers, editorial gatekeeping, inadequate research funding, and the dominance of Euro-American theories within academic curricula. Together, these factors create an environment where local researchers perceive foreign literature as more credible, more citable, and more valuable for academic advancement. As a consequence, domestic scholarship becomes epistemically invisible, lacking both local recognition and global influence.

The implication is profound and impacting. The non-citation of domestic and collegiate research reproduces intellectual dependency and erodes the development of indigenous knowledge traditions. Furthermore, it perpetuates a form of epistemic subordination that mirrors colonial patterns of knowledge domination, which is now sustained not by external actors, but by local scholars themselves. This phenomenon raises urgent questions about academic identity, knowledge sovereignty, and the future of scholarly development in the Global South.

There is therefore, a compelling exigency for a paper of this magnitude to critique how and why scholars from developing nations contribute to this self-imposed marginalisation. Within the package is the need to identify the systemic factors that sustain it, and the broader consequences, while situating multi-layered interventions within perspectives for knowledge democratisation, academic autonomy, and national development.

Literature Review

Conceptual Review

Historical context and intellectual genealogy: Colonial administrations established education systems that aligned with metropolitan interests, which in turn propelled Western epistemologies, while relegating indigenous knowledge systems to the margins. The legacy of this epistemic conditioning persists in postcolonial academic cultures. A cultural conditioning that instils deference to Western knowledge, but led to under-recognition of domestic scholarship (Ngũgĩ wa Thiong'o, 1986; Said, 1978).

Post-independence academic development: As emerging institutions continue to struggle with underfunding, limited infrastructure, and reliance on foreign-trained academics, the obvious outcome manifest in epistemic orientation toward Western traditions. The craving for foreign journals juxtaposed with the position of domestic journals that perpetually struggle and become subservient in their quest to gain legitimacy.

Globalisation and the rise of international publishing hegemony: Indexing systems such as Web of Science and Scopus reinforced visibility hierarchies. University, polytechnic and similar institutions' promotion criteria, which reward indexed publications further incentivised citation of Western sources. In Nigeria for instance, one must have published not less than five articles in international journals in addition to articles from other sources as a condition before one is considered for promotion to the cadre of professorship. The hegemony is akin to asking a fresh graduate to apply for a

job, where one of the requirements is acquisition of three to five years cognate experience. By so asking, the applicant is already knocked off, while seasoned employees would continue to gain access to career mobility at will.

By this practice, the implication includes Scopus, Web of Science, Elsevier, Academia, and others are overloaded with work to assess, review and grade. They continue to accumulate high volume of articles sent, leading to delayed publication and high publication fees that are beyond the financial capacities of the Southern authors. Indeed, to publish in the “assumed high impact journals” in the UK is a herculean task, while some papers from the Global South are termed “predatory” just to foster the existing hegemony.

Internalisation of academic coloniality: Over generations, writers of Global South descent have indoctrinated and mastered the ethos of Western citation tradition that inadvertently propel self-crafted neo-imperialism. This has not only created self-doubt and dependency, but subtly reproducing external epistemic dominance voluntarily.

Thematic Review

Coloniality of Knowledge and Epistemic Dependency

Postcolonial writers such as Said (1978), Fanon (1961) and Quijano (2000) have illustrated the extent to which knowledge hierarchies have persisted over the decades. The persistence is accordingly argued to favour and provide undue privileges to Western epistemologies and their proponents. This is why de Sousa Santos (2014) has asserted that the marginalisation of local knowledge paves the way for the internalisation of metropolitan authority. In the same vein, Grosfoguel (2011); Maldonado-Torres (2007), and Ndlovu-Gatsheni (2018) are united in concluding that the persistent colonial power relations are only to the advantages of Euro-American epistemologies as the only acceptable sources of knowledge.

Citation Behaviour and Symbolic Capital

Merton's (1968) “Matthew Effect” focuses on how recognition and citations accumulate disproportionately among already prestigious authors and journals. To Merton, renowned scientists or institutions often receive disproportionate credit, funding and recognition for collaborative work, which overshadows lesser-known contributors. It is the situation that those who are already advantaged get more, while the disadvantaged drip further down the line. The rich get richer, while the poor get poorer (for instance, TetFund's disproportionate allocation of resources between universities, polytechnics and others). Corroborating Merton, Bourdieu (1988) conceptualises that citations

constitute a form of academic capital, with the potential of converting symbolic recognition into career advancement, funding opportunities, and institutional influence. In this manner, those who hold the power can readily convert it to capital against those without such a privilege.

Citation Inequalities and Global Knowledge Hierarchies

Western journals benefit disproportionately due to the Matthew Effect (Merton, 1968). Studies show scholars in developing nations cite Northern work more, even when domestic research exists (Chan et al., 2019; Powell, 2021).

Reward Structures and Incentives

Evaluation criteria that emphasise high-impact journals inadvertently instigate scholars to cite internationally recognised work, rather than local research, and this deeply reinforce epistemic dependence (Altbach, 2004; Yudkevich, Altbach, & Rumbley, 2016). As authors and editors with substantial experience, the obvious suffices that this practice kills local journals and the spirit of publication. There are many instances that writers refuse to send their papers after hearing that the journal is not Scopus or Google indexed or that there is yet to exist impact factor for the journal. Moreover, there are many writers within a department or faculty or school churning out papers for assessment, yet, most of these writers hardly referenced their own papers published previously; not to mention citing their colleagues' papers, no matter how good the papers might have been. This is not ignorance, but self-imposed negativity.

Structural Barriers in Global South Publishing Ecosystems

Challenges include limited funding, irregular peer-review processes, poor indexing, and open-access sustainability issues (Onyancha, 2020; Owusu-Ansah, 2022). Evaluation criteria that emphasise international journals exacerbate the problem. Again, English-language dominance and exclusion of domestic journals from major indexing databases reduce visibility and access for peripheral scholars thereby, shaping their citation patterns, (Meneghini & Packer, 2007).

Theoretical Framework

The Citation Economy Theory

The theory is an accumulation of ideas on academic capital and power. However, key figures are Pierre Bourdieu (1988, 1993), Robert Merton (1968) and Bruno Labour and Steve Woolgar (1979). Citations function as intellectual currency in the knowledge industry. The academia, scholars, journals and institutions participate in the economy where the value of knowledge is partly determined by how often it is cited by whom, and

in what venues. It is explained in the theory how citations shape academic reputation, influence career progression and determine the visibility and legitimacy of research.

Obviously, citations are traded much like financial currency in such a way that the more citations an author, article, journal or institution receives, the more valuable they become. Therefore, citations are reflective of intellectual influence, knowledge worth and academic visibility. With all these, citation economy reproduces academic hierarchies, centre-periphery patterns, gender inequality and discipline dominance.

The implications of this are the inducement of certain strategic behaviour by authors such as self-citation to increase personal metrics; getting involved in citation rings where a group of scholars cite each other to boost impact; over-citing popular authors to align with certain dominant schools of thought, as well as avoiding controversial or low status authors to maintain prestige.

The instruments of citation economy include h-index, impact factor, Scopus citations, Google Scholar counts and Journal quartile rankings. Since institutions, promotion panels, funding agencies and global ranking systems comfortably rely on these metrics, they lend credence to citations as a serious academic capital. This practice makes citation a determinant of whose knowledge is visible, respected, reproduced and institutionalised. The theory concludes that digital platforms such as Google scholar, ResearchGate, Academia.edu, Scopus and Web of Science amplify the citation economy, while under-citation diminishes local epistemic capital.

The Nigerian context presents a precarious picture where researchers struggle to get their works cited in international sources due to low journal visibility. This is even made worse by the rising demands by TetFund, NBTE, NUC and institutional promotion guidelines that researchers must acquire certain citation metrics before their articles are counted.

Coloniality of Knowledge Theory

Anibal Quijano (2000), Walter Mignolo, Nelson Macdonaldo-Torres and Boanaventura de Sousa Santos (2014) in their various conceptions explain that although political colonialism seems to have ended with political independence, the global systems of knowledge production have continued to reflect the power, hierarchies, and epistemic dominance established during colonialism. This is so because the manner in which knowledge is defined, valued, produced and circulated have continued to radiate around colonial epistemic structures.

The central theme of the theory is that colonialism reorganises global epistemology by creating hierarchy where Western/ European knowledge is superior, universal and scientific, while non-Western knowledge such as African, Indigenous, Asian, Latin American are inferior, local and primitive. These hierarchies shape academic publishing, citation practices, research funding, higher institution's curricula, global recognition and what is constituted as "valid knowledge".

According to the theory, knowledge is validated only when it is through Eurocentric Gauge such as Western theories, white authors and Global North journals. These have translated into who gets published, whose work is cited and whose knowledge is considered rigorous. The fallout of these practices is that scholars from Africa, Asia and Latin America experience limited visibility, systematic under-citation, discriminatory peer review, linguistic barrier, thematic constraints where local topics are regarded as inconsequential. Infact, Western knowledge is regarded as universal and objective while others are indigenous, cultural, traditional, area studies and non-scientific.

Academic Capital and Prestige Bias Theory - Bourdieu (1988)

This is an offshoot of the theory of academic capital pioneered by Bourdieu. The main assumptions of the theory are that citations, publications, and impact factors operate as forms of symbolic capital such that journals and scholars with prestige capital attract more citations; Global South journals and scholars lack such capital due to structural inequalities; and that citation practices have become self-reinforcing cycles favouring already prestigious Global North. With all these in place, the attendant results include situations where researchers in the Global South over-cite Global North authors just to gain credibility for their papers. Again, even when high quality domestic research exists, it is often ignored as a result of prestige bias.

The strands of the three theories considered here are at the root of the topic of discourse. They are interconnected and interdependent on each other and radiating around the central theme, which is the neglect of domestic ideas, research results and the subjugation of their essence to contribute to the growth of knowledge. The theories have laid bare the continuous propagation of Western colonial ideologies and the extent to which they have dominated the thinking and actions of Global South scholars. Indeed, the theories reflect persistent Eurocentric epistemic dominance. Non-citation reflects internalised hierarchies positioning Western authors as default authorities, and authors of the peripheral enclave as nothing but inferior, followers and dependent, who have no right to originate anything novel and authentic. These are the albatross of the Global South scholars, and cannot be partakers (maybe spectators) in the knowledge capital economy.

Methodological Orientation

Scope of Conceptual Analysis

this synthesises postcolonial theory, sociology of knowledge, bibliometrics, and higher education research to understand ideological, institutional, and cognitive foundations of citation behaviour.

Use of Illustrative Bibliometric Patterns

The bibliometric design uses representative patterns documented in bibliometric literature to exemplify the problem of non-citation of domestic scholarship in developing regions.

Bibliometric depiction of Global Citation Asymmetry

To demonstrate how scholars from developing nations under-cite domestic and collegiate research, this section provides a simplified bibliometric illustration based on typical patterns reported in global citation studies (e.g., Meneghini & Packer, 2007; Onyancha, 2022; Mosbah-Natanson & Gingras, 2014).

Table 1

Distribution of sources cited by scholars in Developing Regions

Source Region of Cited Works	Average % of All Citations	Interpretation
Global North (US, UK, EU)	65-78%	Heavy dependence on Euro-American scholarship.
Other Global South Regions	10-15%	Selective but low cross-regional citation.
Domestic (same country)	5-12%	Systematically under-cited despite local relevance.
Collegiate (same institution or national network)	1-4%	Lowest level of citation despite proximity.

The picture painted by the above table is clearer that even when the topics are locally generated or context-specific, the reality holds that scholars will still prefer to cite the Global North at a staggering rate of 7-12 times higher than domestic scholars.

Table 2

Citation visibility gap between local and foreign journals

Journal Category	Average Annual Citations	Indexing Status	Notes
Foreign high-impact journal	150-800	Indexed (Scopus/WoS)	High visibility → attracts more citations.
Regional journal (Africa/Asia)	20-60	Partially indexed	Moderate visibility.
Domestic journal (developing country)	2-10	Non-indexed / locally indexed	Often cited only within a small circle.

From the above table, it is obvious that indexing inequalities create structural invisibility, which ultimately reinforce the existing bias toward citing foreign literature.

Bibliometric plot

A typical bibliometric plot usually depicts a situation where:

- High local relevance but low citation frequency for domestic studies.
- Low local relevance but high citation frequency for Global North studies.

This plot results in a skewed citation landscape where relevance does not correlate with recognition.

Table 3

Self-citation against collegiate citation gap in Developing Countries

Citation Type	Typical Frequency (per 100 references)
Self-citation	3-6
Citation of colleagues in same country	2-4
Citation of foreign landmark texts	40-60

The perceived pressure and misconceptions have made scholars to rely heavily on established foreign citation networks, but rarely build domestic citation ecosystems, thereby weakening the national knowledge base.

Journal Prestige Bias and Impact Factor Effects

A bibliometric breakdown often shows that:

- Articles published in high-impact foreign journals receive 10–20 times more citations than similar domestic articles.
- Even when domestic research is more methodologically relevant, it is marginalised because scholars pursue journals with symbolic capital (Bourdieu, 1991), rather than contextual fit.

Consequences of the Bibliometric Pattern

- a. Knowledge export without local circulation:** There is dearth of local citation that stems from poor institutional and national circulation of locally produced research results and materials, while research procedures, results and materials from the Global North are circulated unhindered everywhere owing to abundance of channels and facilities.
- b. Internalised academic coloniality:** This is where indigenous writers and scholarships are unconsciously coerced to accelerate the process of internalisation of external citation norms. This process only manifests in the production of people and ideas that are dependants of foreign knowledge.
- c. Collapse of national research ecosystems:** Under-citation weakens national research impact, funding justification, scholarly continuity and institutional knowledge production

Scope of Conceptual Analysis

The conceptual analysis in this study is focused on understanding the phenomenon of non-citation of domestic and collegiate research by scholars from developing nations and its implications for the global knowledge industry. Specifically, the scope covers:

- **Theoretical Scope:** This examines interesting frameworks such as Coloniality of Knowledge (Quijano, 2000; de Sousa Santos, 2014), Citation Economy (Bourdieu, 1988,

1993; Merton, 1968), and Academic Capital and Prestige Bias (Bourdieu (1988). Exploration of epistemic hierarchies, symbolic capital, and prestige biases in citation practices. Analysis of the internalised neo-imperialistic tendencies among scholars in the Global South.

- **Content Scope:** This focuses on academic citation behaviours in higher education, scholarly publications, and research outputs from developing nations. It expands the understanding of the various dynamics that instigate and sustain citation behaviour. While considering structural, institutional, and cultural drivers, it was glaring that they influence citation decisions, including indexing, language dominance, reward systems, and colonial legacies.
- **Geographical Scope:** This segment primarily revolved around scholars and research institutions in developing regions, including Africa, Latin America, and parts of Asia. References to the Global North are contextual, since it is used as the dominant benchmark in citation and knowledge hierarchies.
- **Temporal Scope:** The analysis considers contemporary scholarly practices, while tracing the historical and colonial roots of knowledge hierarchies. The timeframe spans postcolonial academic development from the 1960s to the present, emphasising ongoing patterns.
- **Analytical Scope:** The study focuses on conceptual, theoretical, and systemic dimensions of citation behaviour, rather than quantitative bibliometric measurement. Although illustrative empirical examples are used to contextualise conceptual claims, they are not the primary analytical focus of the study.
- **AI use disclosure:** The authors adopted ChatGPT (OpenAI), 2025 to support idea refinement, language clarification and extraction of some quantitative data during manuscript development. All AI generated ideas were subjected to critical evaluation and edited by the authors for the purpose of ensuring accuracy and originality of information
- **Limitations:** The analysis does not cover all disciplines or global research outputs exhaustively; it is illustrative of broader systemic trends. Non-academic forms of knowledge (indigenous or community knowledge outside formal academia) are mentioned only in relation to epistemic marginalisation.

Citation Flows

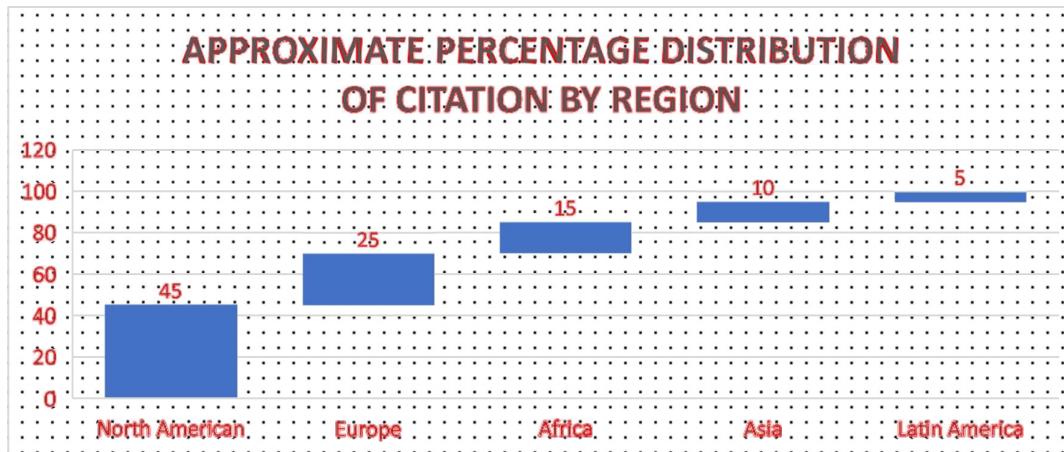


Figure 1: Approximate citation distribution by region

Table 4

Approximate citation distribution by region

Region of Cited Author	percentage of Citations (%)
North America	45%
Europe	25%
Africa	15%
Asia	10%
Latin America	5%

Figure 2: Indexing Status of Domestic Journals

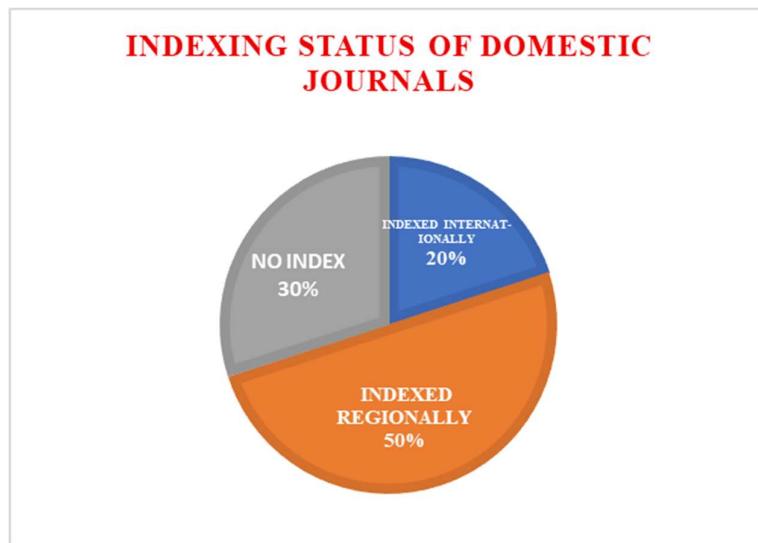


Table 5

Citation preferences between foreign and local sources by discipline

Discipline	Domestic	Foreign
Social Sciences	20%	80%
Natural Sciences	15%	85%
Health Sciences	25%	75%
Engineering & Tech	10%	90%

Drivers of Non-Citation of Domestic Work

Structural drivers: Domestic citations are hindered by factors that include indexing disparities, resource limitations, language barriers, digital access and discoverability gaps (Onyancha, 2020; Owusu-Ansah, 2022).

Institutional drivers: The prevalent aphorism “Publish or Perish” serves as a very potent instigator of the razzmatazz of foreign citations and publications. Promotion and hiring metrics in tertiary institutions in most of the developing nations favour international journals. In the same vein, curriculum design, granting and evaluation systems,

mentorship practices are add-ons to reinforcing Northern-centric citation norms, (Powell, 2021).

Symbolic and cultural drivers: Internalised academic coloniality or colonial educational legacies., perceived prestige, status anxiety and cultural capital continuously engage the psychic, intellectual domain and rationality of scholars' citation choices.

Consequences for Knowledge Sovereignty

Erosion of research ecosystems: Non-citation limits local journal visibility, reduces recognition for early-career researchers, and perpetuates dependency on external knowledge (Grosfoguel, 2011; Onyancha, 2020).

Knowledge fragmentation: Local context and continuity are lost.

Perpetuation of epistemic injustice: Marginalised voices remain unheard.

Policy and practice misalignment: Recommendations may be ill-suited to local realities. Marginalisation of domestic research affects evidence-based policy, reducing societal relevance and effectiveness of any perceived interventions.

Discussion

Non-citation is a structural and symbolic phenomenon. This is submerged in the fact that structural, institutional, and cultural drivers create a self-perpetuating cycle of epistemic marginalisation. South-South epistemic solidarity is critical to reclaim intellectual agency, and coordinated multiplex interventions are required.

Conclusion

Non-citation of domestic work is a structural and cultural phenomenon, producing a self-crafted neo-imperialism that undermines local research ecosystems and perpetuates epistemic injustice. It constitutes a systemic issue with implications for knowledge production, policy relevance, and academic development in the Global South. Interventions across scholars, journals, academic institutions, funders, and indexers are required to achieve a more equitable knowledge system, which can strengthen recognition and legitimacy of domestic scholarship and advance knowledge sovereignty.

Recommendations

- **Deliberate citation of local sources:** There must be a deliberate practice where certain percent of references and citations are reserved for local materials. Also, mentorship (which is a very rare practice in developing institutions) must be

strengthened as an institutional policy and one of the academic promotion requirements from the senior faculty members. There must be serious engagement with domestic journals to foster collaboration.

- **Journal editorial policies:** These should include stepping up actions on indexing efforts, strengthening peer review, and promoting bibliodiversity. Special issues that foreground domestic scholarship should be published, while local institutions must partner to accept and encourage such initiatives to thrive.
- **Academic institutions and regulatory frameworks:** It is about time that academic institutions revised promotion criteria to recognise domestic journal contributions, diversify metrics, policy impact and community scholarship to value local engagement and curriculum integration to boost domestic citations.
- **Funders and Indexing Bodies:** Funding incentives to support local journal capacity-building, enhance indexing of domestic journals, revise inclusion criteria to favour multi-lingual and regional visibility, and support for open access.
- **Collective responsibility:** There is a compelling need to develop regional and institutional citation platforms, as well as the conduct of departmental citation audits. Authors should not fret about citing non-English sources, rather, this should be done with summaries or translations.

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