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Goddey Wilson, PhD
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DEMOCRATIC LEADERSHIP AND SOCIAL SERVICE DELIVERY IN EDUCATIONAL SECTOR RIVERS STATE, NIGERIA 2015-2022

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Abstract
This research examined the impact of democratic leadership on social service delivery in Rivers State, considering the challenges of service delivery in the state. The study adopted the system theory as the theoretical framework of analysis. The study adopted the survey research design and obtained data from both primary and secondary sources, with self-structured questionnaire to collect primary data for the study. The primary data were analysed with the use of inferential statistic of simple percentage, frequencies and mean. The findings showed that the poor democratic leadership in Rivers State is responsible for the low level of performance in social service delivery; the reason for low level of performance in this area was the absence of a well-articulated policy framework to guide educational service delivery; poor educational employee welfare, policy and programme discontinuity and lack of transparency and accountability leading to high level of corruption are factors that have undermined educational service delivery in Rivers State. Based on the findings the study recommended that informed and active participation in governance by the citizens can promote quality service delivery in Rivers State. The study also recommended that there should be citizen's demand for participation, transparency and accountability amongst others.

Keywords: Democracy, democratic leadership, social service, social service delivery.

Introduction
Service delivery is key in the development of states including Rivers. For instance, services provided by government such as public education, health care, well maintained roads, safe drinking water, security of lives and property are fundamental for any country's economy to be stable, survive and people to prosper. It is the duty of government by virtue of the social contract entered with the people to provide social service (welfare) and security of life and property. In doing this, the society reconstruct itself. The task of any society is to reconstruct and revitalize itself, build its own capabilities and educate, organize and mobilize its citizens with the view to ensuring that democratic space is expanded; democratic culture is deepened, and democracy itself is consolidated and made to become sustainable and irreversible.

Within the context of democratic governance, the growing demands generated a quest for open political space that allows for a proper articulation of social needs and problems to guide policy formulation in Nigeria. Fundamentally the idea of rewriting the wrongs of governance is to check the arbitrariness and authoritarian system of governing the people through a democratic system. The practice of democracy became imperative because of desire and calculated plans by politically motivated people to better the lives of the people and the society at large. This is in pursuant of Bentham's postulation that governments at all levels exist for the greatest happiness of the greatest number of persons in a polity

(Gauba,2006). The goods that give the happiness is within the context of this study described as social welfare service. The provision of social welfare requires an equitably regulated socio-economic context in which social services, social securities and opportunities are within the reach of the teeming population without discrimination.

Rivers State experiment with democratic leadership has not yielded the desired results. This is largely due to extreme level of corruption, crude politics, civilian authoritarianism, selfishness and greed of the political leadership (Adefarsin,2020). The deteriorating standard of living of the majority of citizens in rural and urban areas is due to the absence of good governance. The much-needed development in terms of social provision has continued to elude the people of Rivers State as many of the people are living below the poverty line. In Rivers State the demands of social service delivery are myriad. However, the demand for quality education is high. This is because the education sector is considered to be more critical as a driving force for other sectors. Education, whether formal or informal, has the capacity of inculcating lifelong learning and knowledge that will spur the development of ingenuity and progress to the individual, community, and society at large. In the 2020 budget of Rivers State, the sum of N49.471 billion was allocated to the education. This sum represents 20% of the total budget and is the highest ever budgetary allocation to education.

The budgetary allocation is for systematic rehabilitation, upgrade and transformation of our primary, secondary and tertiary institutions and builds new ones for conducive learning across Rivers State. There has however, been a positive trend in improved budgetary within the period. But is there a clearly formulated policy driving educational service delivery in Rivers State.

It is against this background that this research set out to examine the impact of democratic Leadership on and social service delivery in Rivers State, 2015 to 2021 in the Universal Basic Education.

Research Questions
The following research questions guided the research:
  i. How democratic leadership ha influence social service delivery in Rivers State?
  ii. What are the factors hindering effective social service delivery in Rivers state?

Objectives of the study
The general aim of this study is to interrogate the impact of democratic leadership on social service delivery in Rivers State Nigeria. However, the specific objectives of this study is:
  i. Examine the influence of democratic leadership on social service delivery in Rivers State;
  ii. Examine the factors that hinders social service delivery in Rivers State.

Conceptual Explanation
The Concept of Democracy
The concept of democracy has been viewed in different ways by different scholars. It is instructive to say that democracy has a water tight definition and thus, many scholars have proffered different definitions on the concept depending on their point. The word "democracy" literally means "rule by the people", taken from the Greek terms, demos (meaning "people"), and kratos (meaning "rule") (Gauba, 2006).
According to Agbor (2012) the basic sense of democracy as a form of governance rests on its etymology as rule by the entire people rather than by any aristocrat monarch philosopher, bureaucrat, expert or religious leader.
Nweke (2015) views democracy from a theological angle when he asserts that the individual is best governed when he is

allowed to make decisions that will affect him. He stated that democracy was born in the Greece but did not come to maturity in that culture because of the poor concept of equality stating that, it was the impact of the Christianity that was necessary in order to achieve a full awareness of the fundamental equality of all men which was generally outside the biblical tradition. The above ideas show that Christianity amongst other religions teaches the importance of equality of man before God.

In explaining the claim, Prince (2011) argued that the political structure of some African tribes make provision for general assembly of all citizens similar to that of Greeks city states. Thus, in traditional Africa Akinwale (2010) the people saw participation in politics as the essence of citizenship. They form a sovereign assembly which meet occasionally to take decisions on important issues like war, public order, laws, finance, etc. such decisions were consensus. There was the brother's keeper. Love and care was a way of life, the principles of reciprocity guided their work relationship and also sprit of togetherness guided the people's mentality.

According to Karibu (2016) Democracy simply defined, is government of the people, for the people. While there is general agreement that the nation of democracy can hardly stand the test of time, democracy is based on popular participation and mandate. That is, those who rule are given the mandate by the people. According to Akinwale (2010) standards of accountability were even stricter than in the western societies, chiefs and compound heads were answerable not only to their own action but for natural catastrophes, such as famine, epidemics, the community chiefs could be required to go into exile or asked because democracy was historically taken to mean direct rule by the people meeting occasionally. (Jega 2007,p.91) observed that there were three

views of democracy, two of them are variants from which analysis, theories and schools of thoughts have been grouped. They are:

1. Participatory or direct democracy. This pattern of democracy believes that all citizens should be involved in taking decisions that affects them.
2. Anti - democrats: the scholars of this group see little or nothing in democracy.
3. Representative democracy: majority studies on democracy in contemporary times are found in direct representative democracy. At this point in time we may discuss briefly on variant of democracy.

The Concept of Democratic Leadership
Democratic leadership is a product of the people. In democratic leadership, decisions on social policy and resources allocation, as exerted by pattern representatives (Okadigbo, 1987).This definitions suggest that the leadership process is hinged on the capacity to allocate scarce resources, which determines the locus of power.

Leadership also involves the exercise of social power. Thus, by exerting a profound effect on personal behaviour, individual and organization productivity, adjustment to working situations, and morale in organizations, leadership should not be viewed separately from social power (Nwagboso & Duke 2012). Omolayo (2006) describes leadership as an essential oil that keeps the wheel of government working without any difficulty. The purpose is therefore governance.
According to Kolade (2012), governance involves participation of the leader and the followers. Governance entails the procedure through which governments are selected, monitored, held accountable, and replaced. It is government's ability to judiciously manage resources well and formulate, implement as well as enforce good policies and regulations; and the

respect of citizens and the state for the institutions that govern economic and social interaction between them. Dickson (2011) therefore reiterated that good governance does any type of leadership, but a focused, visionary leadership imbued with intellectual comprehension, selfless devotion, statesmanship, a burning sense of mission.

The World Bank has identified governance crisis as the bane of development in Africa. It noted that African countries have got leaders who are basically pre-occupied with self-accumulation. They have personalized public office thus, almost normalizing patronage and prebendalism. This consequently undermines leadership, and making same anti-progress and anti-development. It stifles sustainable and dynamic economic growth and development (World Bank, 1989).

Social Service
Social service constitutes a set of programmes that are developed to achieve certain goals within a given social system or political community called the state. Social service generates from deliberate social policies of the government directed at the making of positive changes not only in the structure and institutions of the state but to also improve the quality of life of the people in the state (Dike, 1995)

Social service, therefore, cannot be complete without the making of decisions and actions, which manifest in terms of programmes carried out by the government and its agencies that are directly related to the provisions of welfare services to people and the community Some of the social programmes include child protection, free education, healthcare services, and housing. These programmes enable the people to attain the level of self-actualization and

also help prevent the spontaneous reactions against the state for being non-responsive and accountable to the people as a matter of democratic regime. The central focus of the provision of social service is about empowering people and alleviating them from poverty (Lawal, 2012)

Social Service Delivery
According to Okafor (2014), social service delivery is a component of public service delivery. Public service delivery largely deal with the consequence of the intentions, resolution of government and government institutions, and the performance undertaken and decision made by people employed in government institutions. It takes the form of social service delivery when it involve deliberate well designed actions of government aimed at the provision of public goods or social (education, health), economic (grants) or infrastructural (water, electricity) services to those who need (or demand) them. It also includes empowering citizens, enhancing transparency. Social service delivery is therefore concerned with delivery quality social service to the people (the citizens). This also include provision of social welfare.

Theoretical Paradigm
The theoretical tool of analysis used in this paper is the systems theory of David Easton (Easton, 1957; 1965). Easton used the general system theory to the study of political system. Other pioneers of the system theory are Gabriel Almond, G. C Powell, Morton Kaplan, Karl Deutsch and Robert Dahl. The system theory is the behavioural approach to the study of politics. As such it can be used to study political institutions such as structure and behaviour of government or the state, political party, the executive, judiciary etc.

Flow Model of Political System Theory
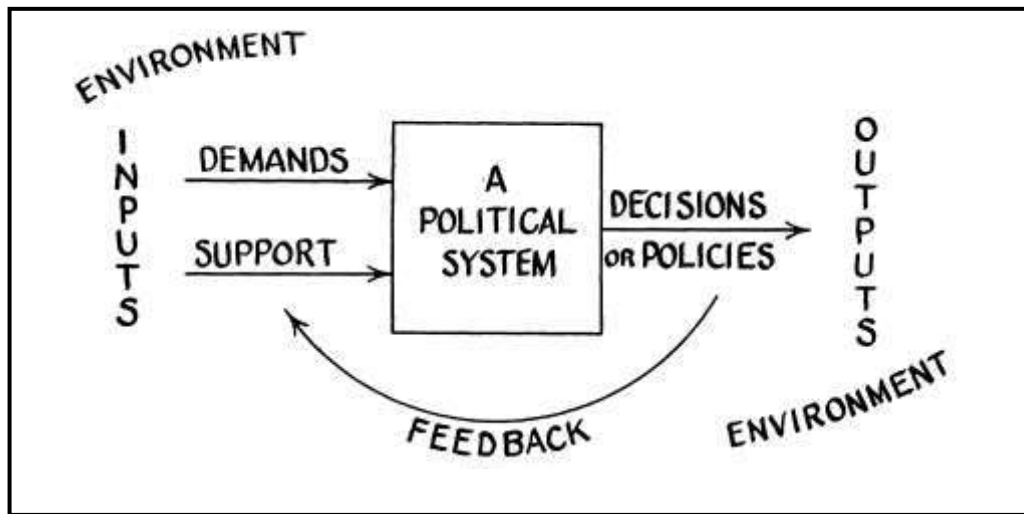
Sources: Easton (1965)

A system is a set of elements standing in inter-action; and a political system is a system of interactions found societies; which performs the functions of integration and adaptation (both internally and vis-à-vis other systems in the environment) (Dahl, 1971). The system theory is relevant for the understanding of democratic leadership and social service delivery. Rivers State is a political system. Democratic leadership operates in Rivers State which has political and democratic environment. The environment of the Rivers political system. The people make input and demands into the system. These input and demand are evaluated and converted by leadership into output. The outputs come out as decision and policies for the authoritative of values. It is by this that social service policies and programme and formulated and delivered

Methodology

The research design used for this study is the descriptive survey research design. It is important to note that a survey research design is an attempt to understand a particular phenomenon and population at a particular time and to ensure that the amount of uncertainty characterizing decision situation is well defined. According to Amara and Amaechi (2010), The population of this study is the population of Rivers State Nigeria. According to the Nigeria Informer (2022) and the Nigeria Population census (2022) the projected population of Rivers State is 9,567,892. The unit of analysis are the individual persons. They shall be targeted as respondents

I adopted multi-stage sampling. In doing so, the researcher shall first follow geo-political sub-divisions of the state along senatorial district lines. From each of the Senatorial District, three Local Government Areas (LGAs) selected. From the selected LGAs simple random technique shall be used to select 400 respondents. The multi-stage sampling is applied as shown in the table below:

Senatorial Districts of Rivers State and Sample L.G.As

Senatorial Districts	L.G.As contained therein	Selected LGAs.
Rivers West	Ogba/Egbema/Ndoni, Ahoada West, Ahoada East, Abua/Odual, Degema, Akuku Toru, Asari-Toru, Bonny	Ahoada-East, Abua/Odual, Degema,.
Rivers East	Port Harcourt, Ikwerre, Okrika, Ogu/Bolo, Obio/Akpor, Etche, Omuma, Emohua. L.G.A:	Emohua, Etche, Port Harcourt, Okrika
Rivers South- East	Tai, Eleme, Gokana, Oyigbo, Opobo/Nkoro, Andoni, Khana	Gokana, Andoni, Oyigbo, Eleme, Opobo/Nkoro

Source: Researcher Compilation (2023).

The Taro Yamene statistical formula shall be used to determine the sample size. This is as shown below:

$$N = \frac{N}{1 + N(e)^2}$$

N = Population size = 9,567,892

E = Margin of error at 5% or 0.05

1 = Unit

Hence,

$$N = \frac{9567892}{1 + 9567892(0.05)^2}$$

$$N = \frac{9567892}{1 + 9567892(0.0025)}$$

$$N = \frac{9567892}{1 + 23919.73}$$

$$N = \frac{9567892}{1 + 23919.73}$$

$$N = \frac{9567892}{23920.73}$$

N = 399.9

Approximately ($\cong$) = 400

Simple random sampling shall be used to select the 400 respondents from the twelve (12) LGAs selected above. Each LGAs shall have 33 questionnaire with Eleme Local Government having 34 to round up 400 respondents.

Data presentation and Analysis
Research Question 1: How has democratic leadership influence social (educational) service delivery in Rivers State?

S/N	ITEMS	SA	A	SD	SD	TOTAL	$\bar{X}$	DECISION
1.	Democratic leadership influence social service delivery	164 654	126 378	63 126	47 47	400 1207	3.01	Accepted
2.	Democratic leadership is an effective vehicle of social service delivery	164 656	126 376	63 126	47 47	400 1207	3.01	Accepted
3.	Citizens are feeling the impact of social (education) service delivery in Rivers State	93 372	41 123	102 204	164 164	400 863	2.16	Rejected
4.	There is citizen participation in the planning and execution of educational programme and projects in Rivers State	82 328	32 96	123 246	163 163	400 833	2.08	Rejected
					Grand Mean	=	2.09	

Source: Field survey, 2023

The analysis of the data presented in table 4.1.1 above showed that the research questionnaire item on democratic leadership having influence our social service delivery scored a mean value $\bar{X}$ = 3.01.. However, it was established by a mean score $\bar{X}$ = 3.01 that democratic leadership is an effective vehicle for social service delivery. Needless, the research questionnaire item No.3 with a mean score $\bar{X}$ = 2.16 showed that citizen are not particularly feeling the impact of educational service delivery in Rivers State. The mean score $\bar{X}$ = 2.16 was below the criterion mean the criterion mean it was rejected. The 4th research questionnaire item on citizen participation in the planning and execution of educational programme, project and service for a mean value $\bar{X}$ = 2.08. This was also rejected indicating citizens are not involved or do not participate in the planning and execution of educational service, programme and project in Rivers State. Generally, the grand mean value of $\bar{X}$ =2.09 strongly indicated that currents democratic leadership in Rivers State has not positively influence.

Research Question 2: What are the factors hindering effective social service delivery in Rivers State.

S/N	ITEMS	SA	A	SD	D	TOTAL	$\bar{X}$	DECISION
11.	Non-availability of funds	83	41	128	148	400	2.14	Rejected
		332	123	256	148	859		
12.	Lack of policy framework	196	162	93	9	400	3.21	Accepted
		784	306	186	9	1285		
13.	Policy and programme discontinuity	182	128	69	21	400	3.17	Accepted
		728	384	138	21	1271		
14.	Lack of transparency and inclusive budgeting	181	126	42	51	400	3.14	Accepted
		744	378	84	51	1257		
15.	Corruption	199	112	42	47	400	3.15	Accepted
		796	336	84	47	1263		
						Grand mean	**=2.96**	**Accepted**

The analysis of table 4.3 above was in response to issue of factor that hinder effective social service delivery in Rivers State. The result showed that non-availability of fund scored a mean $\bar{X} = 2.14$. It was rejected as not being a factor hindering educational service delivery in Rivers State. The research instrument item on lack of policy framework scored a mean of $\bar{X} = 3.21$. lack of policy framework was therefore accepted as factor hindering educational service as a component of social service delivery state programme and policy discontinuity scored a mean value $\bar{X} = 3.17$. It was also accepted as factor hindering social service delivery in Rivers State. Tracking transparency and inclusive budgeting scored a mean value of $\bar{X} = 3.14$; and corruption scored 3.15. These were accepted as factor undermining effective social service delivery in Rivers State. Generally the grand mean $\bar{X} = 2.96$ indicated the lack of policy framework, policy and programme discontinuity, lack of transparency and inclusive budgeting, and corruption are the factor hindering effective social (educational) service delivery in Rivers State.

Discussion of Finding Based on the data presented and analysed above, the following finding were made:

1. Poor Democratic leadership occasioned low level of social (educational) service delivery.
2. Absence of a well-articulated policy framework for social (educational) service delivery
3. Poor employee welfare undermine effective social (educational) service delivery
4. Problem of discontinuity of policy and programme
5. Problem of accountability and corruption.

1. Absence of well-articulated policy framework for social (educational) service delivery. The study found that there is absence of well articulated policy framework for social (educational) service delivery in Rivers State under the

current Democratic leadership. A policy is a well thought-out plan of action with set goals and objective as well as time framework for actualization. It also has a mechanisms for evaluation of the performance of the policy apart stated goals and objective. This is completing lacking in Rivers State under the present administration. The only document nearest to a policy document has been the yearly budget. Unfortunately, the budget has not been a product of the citizens, it has not been a citizen budget.

2. **Discontinuity of policy and programme of government**

   The data presented and analysed in response to research question 3 indicated there is the problem of policy and programme discontinuity in Rivers State. This is one serious problem undermining the delivery of educational service in Rivers State. It is on record the last administration in Rivers State had a reboots and well-articulated educational policy in Rivers State. Every programme and project in the educational sector was properly synchronized with expected goals and effective as target and the time frame for actualization.

   The policy and programme on the construction of 350 model primary school in Rivers State to represent at least one in each community was construction of I model Secondary school in each of each of the 23 local government area of the stat. training and retraining of teachers, awarding of scholarship to academic staff , increases budgetary allocation to the education and the adoption of public -private partnership for the development of the educational sector, free education covering free books, school uniforms and scandals for UBE, were all abandoned and discontinued.

3. **Problem of accountability and corruption:**

   The study found problem of accountability and corruption as a major factor hindering educational services delivering in Rivers State. The finding indicated that the major factor hindering educational service delivering in Rivers State. However, lack of transparency, accountability and inclusive budgeting got a large mean $\bar{x}$ = 3.14 and corruption $\bar{x}$ = 3.15 as factors hindering educational service delivering in Rivers State. Transparency, accountability and inclusivity are the hall marks of leadership. This was found to be lacking in the current leadership of Rivers State.

   Conclusion
   From the findings, of this study conclude that this current democratic leadership has not effectively delivered impactful social service to the people where attempt has been made such developmental efforts are not inclusive at all . They are sectional and there is urban bias. There seem to be more emphasis or providing physical structure, with less emphasis on social service delivery. The educational sector is badly undermined and this will affect the growth and development of the state. This is because social service delivery especially in the educational sector as an indication of human capital development and is a major driver of growth and development. Largely this is the transactional style of leadership that has occasioned such negative development.

   Recommendations
   i. **Policy and programme continuity government must be seen and taken as continuum**: The Rivers State House of Assembly should evolve a law to sanction continuity of government good policies programmes by every successive administration. This will

enhance consolidation of gain of every policy and programme of government. Discontinuity amount to waste of public resources. The uttering of uncompleted projects also deface the state

ii. **Citizen demand for participation, transparency and accountability**: The study showed that there is lack of citizen participation in planning and execution of social service delivery. It also found that there is lack of transparency and accountability. These are not given to society on the platter of gold. They are demanded for by citizens and overtime achieved. Therefore citizen must be awaken to their responsibility of keeping eternal vigilance over to leadership. They must consistently, aggressively but legally demand for transparency and accountability in government. In doing this, corruption will be reduced and largely citizen guide the path to effective delivery of social service and development to the people.

iii. **Improvement of employee welfare**: The work findings showed that in some cases government have erected or renovated physical structures, but with little or no alternation to the welfare of the human element that populate and run the physical structure. As such the essence in providing to structures has not produced desired result and therefore unimpactful. As such government or leadership should give attention to employee welfare to motivate them drive social service delivery programmes of government, otherwise same demotivated employee will work against the system.

iv. Citizen involvement and active participation in governance the finding reviewed that poor leadership brings about poor level of performance and social service delivery. Therefore citizens should not abandon leadership for leaders alone. Citizen should equip themselves with the right kind of information that will enable them be make informed choice in the elections of leaders. Citizen should see leadership as a joint responsibility of the leader and the follower and therefore take serious interest in governance.

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NUMERICAL ANALYSIS OF BIODIVERSITY VARIABLES OF TWO INTERACTING CROP SPECIES: A CASE OF WATER LEAF AND PUMPKIN

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Abstract
This work investigated a set of non linear differential equation model involving two interacting plant species: water leaf and pumpkin biomass. The purpose of this study is to predict the impact of inter competition coefficient on biodiversity. One of the methods of predicting this biodiversity interval phenomenon is the application of numerical simulation. The application of this method is to study and quantify the differential effects of decreasing and increasing the inter competition coefficient of resource biomass that is environmental-driven on the biodiversity change scenario. On adopting the MATLAB Ordinary Differential Equation of order 45 (ODE45) numerical simulation, results have clearly shown that the decreased variations of the inter competition coefficient rates have predicted more instances of biodiversity gain with few intervals of biodiversity loss for the water leaf biomass and biodiversity gain for pumpkin biomass. In this context, it was also observed that an increased variation of the inter competition coefficient rates have predicted more instances of biodiversity gain with some incidences of biodiversity loss for water leaf biomass and biodiversity loss for pumpkin biomass. The study recommended that water leaf should be planted more compared to pumpkin leaf because of biodiversity gain and there is the need to reduce environmental factors that will lead to low yield of pumpkin and increase environmental factors that will lead to an increase in the yield of water leaf.

Keywords: Biodiversity, Crop species, Modelling, Inter competition coefficient, Numerical analysis

Introduction
The model description of two interacting crops is a dynamical system of a non linear first order differential equation consisting of two rates of change components which is otherwise known as first degree sensitivity. Since no model prediction of a dynamical system is deemed to be complete without testing for the intelligence of the dynamical system in question, it is therefore imperative to test for the first degree sensitivity characterization of the proposed model.

The dynamical system which is being proposed to model the interaction between two competing crops can either be stable or unstable. Therefore, in the context of predicting the impact of inter competition coefficient on the yield of these two crops, it is scientifically tractable to test the proposed dynamical system for its existence of steady state solution and its type of stability, hence the mathematical ideas of the first degree sensitivity, steady state solution and stability from the strong panacea mathematical preliminaries that underpin the expected numerical prediction of biodiversity in the event of change variations on the two competing crops for limited resources.

This functions on the simplifying assumption of using a logistic model formulation and inter-competition Lotka-Volterra mathematical formulation in terms

of equal and unequal population size simplification. The diversity of species and genes in ecological communities affects the functioning of these communities. These ecological impacts of biological diversity (biodiversity) in turn are affected by climate change and biodiversity, causing a rapid loss of biodiversity and extinction of species.

Climate change alters the functions of ecological systems. Consequently, the provision of ecosystem services and the well-being of people that rely on these services are being modified. If naturally, biodiversity is vital for the provision of services that are essential to human beings, then this provides an additional reason for conserving biodiversity (Mace et al., 2015). Jonsson (2012) observed that any possible negative effect on ecosystem functioning is not due to only the loss of species per se, but to the rate at which they are currently disappearing. Additionally, understanding how biodiversity influences ecosystem functioning and the delivery of services could pave the way for a sustainable management of biodiversity for the reinforcement of ecosystem performance and resilience.

Biodiversity is fundamental to sustaining life, supplying critical ecosystem services such as food provisioning, water purification, flood and drought control, nutrient cycling, and climate regulation. These services are essential to support human well-being and economic growth. Yet despite the significant economic, social and cultural values of biodiversity and ecosystem services, biodiversity worldwide is being lost and in some areas at an accelerating rate (Tilman et al., 2014). Today, it is unanimously agreed that biodiversity has manifold effects on processes at the ecosystem level, and that this conclusion holds not only for biodiversity experiments but also for real-

life ecosystems (Eisenhauer et al., 2016; Wardle, 2016).

There is no generally acceptable definition of biodiversity but following Rawat and Agarwal (2015) defined biodiversity as the variety of different form of life on earth, including the different plants, animals, micro-organisms, the genes they contain and the ecosystem they form. It refers to genetic variation, ecosystem variation, species variation (number of species) within an area, biome or planet.

Every human being is affected by biodiversity loss in one way or the other. Biological diversity (biodiversity) underlies all goods and services provided by ecosystems that are essential for the survival and well-being of human beings (Dejene, 2018). Misra (2014) studied the effect of toxicants in a three species food chain system with food limited growth of prey population. It was revealed that, if the toxicant input rate is increased, then all the three species may tend to extinction and if the toxicant input is decreased, then the steady-states of all the three species increase. Uka and Ekaka-a (2012) carried out a research on numerical simulation of interacting fish populations with bifurcation. Their results showed that the co-existence steady-state solution will be stable when the birth rate of each fish population outweighs its death rate. They also discovered that the stability of the co-existence steady-state solution of the interacting fish populations is lost when the birth rate and the death rate are not changing. Finally, their results also showed that the co-existence steady-state solution will be unstable when the death rate of the fish population is more than its birth rate. Staudinger et al. (2012) carried out a research on impacts of climate change on biodiversity, ecosystem and ecosystem services. The results of their finding showed that climate change is causing many species to shift their geographical

ranges, distributions and phonologies at faster rates and there is an increasing evidence of population declines and localized extinctions that can be attributed to climate change.

Wilting et al. (2017) emphasized the urgent need to implement a numerically driven database on how human consumption affects biodiversity losses for the purpose of effective monitoring and future management of biodiversity and sustainable development. The method of a nursery function has been utilized by Liquete (2016) to test this challenging link between ecosystem services and biodiversity. One of the key contributions of this mathematically driven debate on the link between ecosystem services and biodiversity is the undeniable fact that the loss of biodiversity can be attributed to the loss of ecosystem services. Therefore, to alleviate and mitigate against the huge loss of biodiversity, it is important to put in place the relevant environmental policies to address these issues.

It has been a standing gap in knowledge that most specific literatures on biodiversity and the economics of biodiversity have neglected the inclusion of a simulation modeling which is vital as a short term cutting-edge method that can be utilized to predict the extent of biodiversity loss and gain and has the possibility and rich potential of providing early signals on the model parameter values that lead to severe loss of ecosystem services and the sustainability of biodiversity gain. It is against this background that a more detailed approach of tackling this challenging ecological problem involving incidences of bifurcation has been proposed.

Materials and methods
For the purpose of this study, a continuous dynamical system of the first order nonlinear ordinary differential equations having Lotka-Volterra mathematical structures will be considered.

Formation of Model Equation

$$\frac{dw}{dt} = \alpha_1 w - \beta_1 w^2, \quad w(0) = w_0 > 0 \tag{1}$$

$$\frac{dp}{dt} = \alpha_1 p - \beta_1 p^2, \quad p(0) = p_0 > 0 \tag{2}$$

$$\frac{dw}{dt} = \alpha_1 w - \beta_1 w^2 - r_1 wp, \quad w(0) = w_0 > 0 \tag{3}$$

$$\frac{dp}{dt} = \alpha_2 p - \beta_2 p^2 - r_2 wp, \quad p(0) = p_0 > 0 \tag{4}$$

Where
$w(t)$ defines the water leaf biomass at time t.
$p(t)$ defines the pumpkin biomass at time t.
α_1 and α_2 define the intrinsic growth rates of the two interacting plant species.
β_1 and β_2 define the intra-competition coefficient of the two interacting plant species.

r_1 and r_2 define the inter-competition coefficient of the two interacting plant species.
$w(0)$ and $p(0)$ define the initial plant biomass for each of the interacting plant species at the initial time of growth.
In this present analysis, $\alpha_1 = 0.14$, $\alpha_2 = 0.08$; $\beta_1 = 0.0034$, $\beta_2 = 0.0024$; $r_1 = 0.0012$ and $r_2 = 0.0012$.

Equations (3) and (4) were proposed by Iyagba et al. (2012).

Mathematical Preliminary 1: Steady State Solutions

The focus of this section is to derive the steady state solutions and their type of stability for the logistic model equations and the inter-competition equations. Consider the logistic equations:

$$\frac{dw}{dt} = \alpha_1 w - \beta_1 w^2$$

$$\frac{dp}{dt} = \alpha_2 p - \beta_2 p^2$$

With initial conditions $w(0) = w_0 > 0$ and $p(0) = p_0 > 0$.

Following Ekaka-a (2014), let

$$\frac{dw}{dt} = 0$$

And

$$\frac{dp}{dt} = 0$$

Then solve for w and p. These values of w and p are called steady state solutions.

From

$$\frac{dw}{dt} = \alpha_1 w - \beta_1 w^2$$

when

$$\frac{dw}{dt} = 0$$

$$\alpha_1 w - \beta_1 w^2 = 0$$

This implies that

$$w(\alpha_1 - \beta_1 w) = 0$$

Assume that $w \neq 0$,

$$\alpha_1 - \beta_1 w = 0$$

This implies

$$\beta_1 w = \alpha_1$$

Therefore,

$$w = \frac{\alpha_1}{\beta_1}.$$

Similarly, when $\frac{dp}{dt} = 0$,

$$\alpha_2 p - \beta_2 p^2 = 0$$

This implies that

$$p(\alpha_2 - \beta_2 p) = 0$$

Assume that $p \neq 0$, then

$$\alpha_2 - \beta_2 p = 0$$

Hence

$$\beta_2 p = \alpha_2$$

Therefore,

$$p = \frac{\alpha_2}{\beta_2}$$

When

$$\alpha_1 - \beta_1 w \neq 0$$

then $w = 0$; when

$$\alpha_2 - \beta_2 p \neq 0$$

then $p = 0$.

In summary,

1. A point $(w, p) = (0, 0)$ is a steady state solution. This implies that the two interacting crops will be vulnerable to the risk of ecological extinction.

2. A point $(w, p) = \left(\frac{\alpha_1}{\beta_1}, 0\right)$ is a semi-trivial solution, meaning that water leaf will out-compete pumpkin and drive pumpkin into extinction and survive at its carrying capacity value of $\frac{\alpha_1}{\beta_1}$.

3. A point $(w, p) = \left(0, \frac{\alpha_2}{\beta_2}\right)$ is a semi-trivial solution, which means that pumpkin will compete water leaf and drive water leaf into extinction and survive at its carrying capacity value of

$\frac{\alpha_2}{\beta_2}$. Therefore, the two semi-trivial steady state solutions are consistent with the theory of competitive exclusion in the concept of mathematical ecology.

4. A point $(w, p) = \left(\frac{\alpha_1}{\beta_1}, \frac{\alpha_2}{\beta_2}\right)$ is a positive unique steady state solution, which means that both water leaf and pumpkin species will coexist together.

Mathematical Preliminary 2: Stability using the Process of Linearization

$$F(w, p) = \alpha_1 w - \beta_1 w^2 - r_1 wp$$
$$G(w, p) = \alpha_2 p - \beta_2 p^2 - r_2 wp$$

It follows that,

$$J_{11} = \frac{\partial F}{\partial w} = \alpha_1 - 2\beta_1 w - r_1 p$$

$$J_{12} = \frac{\partial F}{\partial p} = -r_1 w$$

$$J_{21} = \frac{\partial G}{\partial w} = -r_2 p$$

$$J_{22} = \frac{\partial G}{\partial p} = \alpha_2 - 2\beta_2 p - r_2 w$$

To show the type of stability for $(p, b) = (0, 0)$:

$$J_{11} = \alpha_1 - 2\beta_1(0) - r_1(0)(0) = \alpha_1$$
$$J_{12} = -r_1(0) = 0$$
$$J_{21} = -r_2(0) = 0$$

$$J_{22} = \alpha_2 - 2\beta_2(0) - r_2(0) = \alpha_2$$

Therefore,

$$J = \begin{pmatrix} J_{11} & J_{12} \\ J_{21} & J_{22} \end{pmatrix} = \begin{pmatrix} \alpha_1 & 0 \\ 0 & \alpha_2 \end{pmatrix}$$

The characteristic equation is

$$|J - \lambda I| = 0$$

Hence,

$$\left| \begin{pmatrix} \alpha_1 & 0 \\ 0 & \alpha_2 \end{pmatrix} - \lambda \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix} \right| = 0$$

This implies that

$$\left| \begin{pmatrix} \alpha_1 & 0 \\ 0 & \alpha_2 \end{pmatrix} - \begin{pmatrix} \lambda & 0 \\ 0 & \lambda \end{pmatrix} \right| = 0$$

$$\begin{vmatrix} \alpha_1 - \lambda & 0 \\ 0 & \alpha_2 - \lambda \end{vmatrix} = 0$$

Therefore, finding the determinant,

$$(\alpha_1 - \lambda)(\alpha_2 - \lambda) - 0 = 0$$
$$\alpha_1 \alpha_2 - \alpha_1 \lambda - \alpha_2 \lambda + \lambda^2 = 0$$
$$\alpha_1 \alpha_2 - (\alpha_1 + \alpha_2)\lambda + \lambda^2 = 0$$

which is a quadratic equation

Solving using the quadratic formula,

$$\lambda = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

where $a = 1$, $b = -(\alpha_1 + \alpha_2)$ and $c = \alpha_1\alpha_2$

Therefore,

$$\lambda = \frac{\alpha_1 + \alpha_2 \pm \sqrt{(\alpha_1 + \alpha_2)^2 - 4(1)(\alpha_1\alpha_2)}}{2(1)}$$

$$= \frac{\alpha_1 + \alpha_2 \pm \sqrt{\alpha_1^2 - 2\alpha_1\alpha_2 + \alpha_2^2}}{2}$$

$$= \frac{\alpha_1 + \alpha_2 \pm \sqrt{(\alpha_1 - \alpha_2)^2}}{2}$$

$$= \frac{\alpha_1 + \alpha_2 \pm (\alpha_1 - \alpha_2)}{2}$$

$$\lambda_1 = \frac{\alpha_1 + \alpha_2 + \alpha_1 - \alpha_2}{2} \quad \text{and} \quad \lambda_2 = \frac{\alpha_1 + \alpha_2 - \alpha_1 + \alpha_2}{2}$$

$$\implies \quad \lambda_1 = \frac{2\alpha_1}{2} = \alpha_1 \quad \text{and} \quad \lambda_2 = \frac{2\alpha_2}{2} = \alpha_2$$

Since $\lambda_1 = \alpha_1$ and $\lambda_2 = \alpha_2$ and they are both positive real numbers, therefore the steady state solution $(0, 0)$ is said to be unstable.

Results and discussion

Table 1: Predicting the impact of decreasing inter competition coefficient by 20% on biodiversity using ODE45 numerical scheme. $r_1 = 0.00024$, $r_2 = 0.00024$

Time(days)	W(t)	Wm(t)	EBG	P(t)	Pm(t)	EBG
1	0.2500	0.2500	0.0000	0.2500	0.2500	0.0000
31	11.8521	11.5873	2.2336	2.5051	2.2893	8.6160
61	38.9715	37.5911	3.5420	13.4684	6.6339	50.7447
91	39.5054	37.8807	4.1125	25.7102	10.1065	60.6906
121	39.1698	36.9117	5.7648	28.9109	12.6845	56.1255
151	39.1091	36.3069	7.1650	29.3596	14.1724	51.7284
181	39.0979	35.9956	7.9347	29.4144	14.9010	49.3410
211	39.0897	35.8350	8.3262	29.4208	15.2271	48.2437
241	39.0751	35.7552	8.4962	29.4204	15.3675	47.7660
271	39.0895	35.7309	8.5919	29.4222	15.4297	47.5576
301	39.1037	35.7269	8.6356	29.4238	15.4575	47.4659
331	39.0960	35.7285	8.6133	29.4230	15.4700	47.4220
361	39.0829	35.7214	8.6009	29.4215	15.4738	47.4066
391	39.0673	35.7098	8.5941	29.4198	15.4737	47.4040
421	39.0991	35.7037	8.6842	29.4233	15.4734	47.4112
451	39.1005	35.6984	8.7009	29.4235	15.4727	47.4137
481	39.0918	35.7113	8.6474	29.4225	15.4755	47.4027
511	39.0714	35.7188	8.5808	29.4203	15.4770	47.3934
541	39.0759	35.7127	8.6067	29.4208	15.4758	47.3983
571	39.1023	35.7037	8.6916	29.4237	15.4740	47.4096

Biodiversity gain was predicted for both interacting species due to a decrease in the inter competition coefficient by 20%.

Table 2: Predicting the impact of decreasing inter competition coefficient by 40% on biodiversity using ODE45 numerical scheme. $r_{1=}$ 0.00048, $r_2 =$ 0.00048

Time(days)	W(t)	Wm(t)	EBG	P(t)	Pm(t)	EBG
1	0.2500	0.2500	0.0000	0.2500	0.2500	0.0000
31	11.7834	11.5873	1.6640	2.4488	2.2893	6.5125
61	38.4227	37.5911	2.1643	11.3349	6.6339	41.4735
91	38.4410	37.8807	1.4576	21.3318	10.1065	52.6222
121	37.7465	36.9117	2.2116	24.9395	12.6845	49.1389
151	37.5736	36.3069	3.3712	25.6734	14.1724	44.7975
181	37.5397	35.9956	4.1132	25.8014	14.9010	42.2472
211	37.5369	35.8350	4.5340	25.8234	15.2271	41.0337
241	37.5069	35.7552	4.6706	25.8221	15.3675	40.4871
271	37.5278	35.7309	4.7882	25.8267	15.4297	40.2566
301	37.5362	35.7269	4.8202	25.8283	15.4575	40.1527
331	37.5516	35.7285	4.8548	25.8311	15.4700	40.1107
361	37.5278	35.7214	4.8134	25.8268	15.4738	40.0864
391	37.5281	35.7098	4.8453	25.8269	15.4737	40.0870
421	37.5388	35.7037	4.8887	25.8288	15.4734	40.0925
451	37.5203	35.6984	4.8557	25.8255	15.4727	40.0874
481	37.5314	35.7113	4.8496	25.8275	15.4755	40.0814
511	37.5275	35.7188	4.8198	25.8268	15.4770	40.0738
541	37.5204	35.7127	4.8179	25.8255	15.4758	40.0754
571	37.5165	35.7096	4.8160	25.8248	15.4752	40.0760

Table 2 showed the effect of decreasing inter competition coefficient by 40% on biodiversity of interacting species. Biodiversity gain was observed for water leaf and pumpkin biomasses.

Table 3: Predicting the impact of decreasing inter competition coefficient by 60% on biodiversity using ODE45 numerical scheme. $r_{1=}$ 0.00072, $r_2=$ 0.00072

Time(days)	W(t)	Wm(t)	EBG	P(t)	Pm(t)	EBG
1	0.2500	0.2500	0.0000	0.2500	0.2500	0.0000
31	11.7164	11.5873	1.1020	2.3940	2.2893	4.3756
61	38.0311	37.5911	1.1570	9.5103	6.6339	30.2448
91	37.8791	37.8807	-0.0044	17.2143	10.1065	41.2899
121	36.8985	36.9117	-0.0359	20.9480	12.6845	39.4476
151	36.5603	36.3069	0.6931	22.0486	14.1724	35.7222
181	36.4691	35.9956	1.2984	22.3208	14.9010	33.2415
211	36.4413	35.8350	1.6637	22.3839	15.2271	31.9729
241	36.4157	35.7552	1.8138	22.3950	15.3675	31.3798
271	36.4311	35.7309	1.9218	22.4022	15.4297	31.1241
301	36.4423	35.7269	1.9632	22.4055	15.4575	31.0102
331	36.4557	35.7285	1.9948	22.4086	15.4700	30.9638
361	36.4532	35.7214	2.0074	22.4081	15.4738	30.9455
391	36.4239	35.7098	1.9604	22.4019	15.4737	30.9270
421	36.4301	35.7037	1.9940	22.4032	15.4734	30.9324
451	36.4430	35.6984	2.0432	22.4060	15.4727	30.9438
481	36.4555	35.7113	2.0412	22.4086	15.4755	30.9395
511	36.4470	35.7188	1.9981	22.4068	15.4770	30.9272
541	36.4288	35.7127	1.9657	22.4030	15.4758	30.9205
571	36.4257	35.7096	1.9657	22.4023	15.4752	30.9212

The impact of decreasing the inter competition coefficient by 60% was observed in Table 3. Biodiversity gain was observed for water leaf biomass with few intervals of biodiversity loss and biodiversity gain for pumpkin biomass

Table 4: Predicting the impact of increasing inter competition coefficient by 120% on biodiversity using ODE45 numerical scheme. $r_{1=}$ 0.00144, r_2= 0.00144

Time(days)	W(t)	Wm(t)	EBG	P(t)	Pm(t)	EBG
1	0.2500	0.2500	0.0000	0.2500	0.2500	0.0000
31	11.5251	11.5873	-0.5402	2.2391	2.2893	-2.2395
61	37.4937	37.5911	-0.2600	5.5163	6.6339	-20.2599
91	38.2319	37.8807	0.9185	7.3192	10.1065	-38.0822
121	37.6099	36.9117	1.8563	8.7682	12.6845	-44.6650
151	37.1305	36.3069	2.2182	9.8327	14.1724	-44.1350
181	36.7995	35.9956	2.1846	10.5363	14.9010	-41.4250
211	36.5810	35.8350	2.0394	10.9693	15.2271	-38.8156
241	36.4431	35.7552	1.8876	11.2245	15.3675	-36.9103
271	36.3733	35.7309	1.7662	11.3735	15.4297	-35.6642
301	36.3244	35.7269	1.6448	11.4569	15.4575	-34.9193
331	36.3130	35.7285	1.6097	11.5066	15.4700	-34.4452
361	36.3006	35.7214	1.5954	11.5335	15.4738	-34.1633
391	36.2897	35.7098	1.5979	11.5480	15.4737	-33.9938
421	36.2661	35.7037	1.5508	11.5534	15.4734	-33.9297
451	36.2728	35.6984	1.5836	11.5595	15.4727	-33.8526
481	36.2857	35.7113	1.5828	11.5644	15.4755	-33.8195
511	36.2915	35.7188	1.5781	11.5670	15.4770	-33.8037
541	36.2938	35.7127	1.6010	11.5682	15.4758	-33.7793
571	36.2703	35.7096	1.5458	11.5650	15.4752	-33.8114

A variation of biodiversity gain with few incidences of biodiversity loss and biodiversity loss was observed for water leaf and pumpkin biomasses respectively in table 4.

Table 5: Predicting the impact of increasing inter competition coefficient by 140% on biodiversity using ODE45 numerical scheme. $r_{1=}$ 0.00168, r_2= 0.00168

Time(days)	W(t)	Wm(t)	EBG	P(t)	Pm(t)	EBG
1	0.2500	0.2500	0.0000	0.2500	0.2500	0.0000
31	11.4643	11.5873	-1.0734	2.1904	2.2893	-4.5142
61	37.4529	37.5911	-0.3691	4.5745	6.6339	-45.0200
91	38.6801	37.8807	2.0666	5.1121	10.1065	-97.6972
121	38.5044	36.9117	4.1364	5.4958	12.6845	-130.8028
151	38.3503	36.3069	5.3282	5.8134	14.1724	-143.7860
181	38.1867	35.9956	5.7379	6.0662	14.9010	-145.6394
211	38.1025	35.8350	5.9510	6.2692	15.2271	-142.8872
241	38.0155	35.7552	5.9459	6.4246	15.3675	-139.1972
271	37.9343	35.7309	5.8085	6.5420	15.4297	-135.8578
301	37.9054	35.7269	5.7473	6.6337	15.4575	-133.0147
331	37.8781	35.7285	5.6751	6.7021	15.4700	-130.8246
361	37.8716	35.7214	5.6775	6.7544	15.4738	-129.0924
391	37.8203	35.7098	5.5802	6.7888	15.4737	-127.9289
421	37.8134	35.7037	5.5792	6.8173	15.4734	-126.9731
451	37.8255	35.6984	5.6234	6.8400	15.4727	-126.2107
481	37.7903	35.7113	5.5013	6.8524	15.4755	-125.8392
511	37.7835	35.7188	5.4648	6.8634	15.4770	-125.4992
541	37.7761	35.7127	5.4621	6.8713	15.4758	-125.2238
571	37.7579	35.7096	5.4248	6.8759	15.4752	-125.0662

The impact of increasing the inter competition coefficient by 140% was observed in Table 5. A variation of biodiversity gain with some incidences of biodiversity loss and biodiversity loss was observed for water leaf and pumpkin biomasses respectively.

Table 6: Predicting the impact of increasing inter competition coefficient by 160% on biodiversity using ODE45 numerical scheme. $r_{1=}$ 0.00192, r_2= 0.00192

Time(days)	W(t)	Wm(t)	EBG	P(t)	Pm(t)	EBG
1	0.2500	0.2500	0.0000	0.2500	0.2500	0.0000
31	11.4049	11.5873	-1.5997	2.1430	2.2893	-6.8243
61	37.4547	37.5911	-0.3643	3.7838	6.6339	-75.3233
91	39.1458	37.8807	3.2317	3.4570	10.1065	-192.3535
121	39.3615	36.9117	6.2239	3.1327	12.6845	-304.9080
151	39.5298	36.3069	8.1532	2.8698	14.1724	-393.8464
181	39.6273	35.9956	9.1645	2.6512	14.9010	-462.0443
211	39.7562	35.8350	9.8632	2.4697	15.2271	-516.5495
241	39.8426	35.7552	10.2590	2.3146	15.3675	-563.9485
271	39.8916	35.7309	10.4299	2.1803	15.4297	-607.6859
301	39.9940	35.7269	10.6695	2.0655	15.4575	-648.3560
331	40.0546	35.7285	10.8006	1.9640	15.4700	-687.6721
361	40.1074	35.7214	10.9357	1.8743	15.4738	-725.5629
391	40.1434	35.7098	11.0444	1.7943	15.4737	-762.3814
421	40.1999	35.7037	11.1847	1.7233	15.4734	-797.8909
451	40.2635	35.6984	11.3381	1.6597	15.4727	-832.2582
481	40.2598	35.7113	11.2977	1.6008	15.4755	-866.7332
511	40.2977	35.7188	11.3628	1.5483	15.4770	-899.6363
541	40.3541	35.7127	11.5016	1.5008	15.4758	-931.1651
571	40.3381	35.7096	11.4742	1.4560	15.4752	-962.8681

In table 6, by increasing the inter competition coefficient by 160%, a variation of biodiversity gain with few incidences of biodiversity loss and biodiversity loss was observed for water leaf and pumpkin biomasses respectively.

Discussion

The impact of decreasing the inter competition coefficient by 20% was observed in Table 1. Results showed that the water leaf biomass is vulnerable to a biodiversity gain by 8.7009 approximately whereas the pumpkin biomass is vulnerable to a biodiversity gain by 60.6906 percent approximately. From Table 2, by decreasing the inter competition coefficient by 40%, the water leaf biomass is vulnerable to a biodiversity gain or an increase in the yield of water leaf biomass by 4.8946 percent approximately whereas the pumpkin biomass is vulnerable to a biodiversity gain or increase in the yield of pumpkin biomass by 52.6222 percent approximately. The impact of decreasing the inter competition coefficient by 60% was observed in Table 3. Results showed that the water leaf biomass is vulnerable to a biodiversity gain by 2.0432 approximately with two intervals of biodiversity loss whereas the pumpkin biomass is vulnerable to a biodiversity gain by 41.2899 percent approximately. In Table 4, increasing the inter competition coefficient by 120%, the water leaf biomass is vulnerable to a biodiversity gain or an increase in the yield of water leaf biomass by 2.1846 percent approximately with few intervals of biodiversity loss whereas the pumpkin biomass is vulnerable to a biodiversity loss or a decrease in the yield of pumpkin biomass by -44.6650 percent approximately. The impact of increasing the inter competition coefficient by 140% was observed in Table 5. Results showed that the water leaf biomass is vulnerable to a biodiversity gain by 5.9459 approximately with two intervals of biodiversity loss whereas the pumpkin biomass is vulnerable to a biodiversity loss or decrease in the yield of pumpkin biomass by -145.6394 percent approximately. in Table 4.1.9, increasing the inter competition coefficient by 160%, the water leaf biomass is vulnerable to a biodiversity gain or an increase in the yield of water leaf biomass by 11.5016 percent approximately with few intervals of

biodiversity loss whereas the pumpkin biomass is vulnerable to a biodiversity loss or a decrease in the yield of pumpkin biomass by -962.8681 percent approximately.

Conclusion

A decrease in the initial value of the inter competition coefficient showed biodiversity gain with few intervals of biodiversity loss for water leaf biomass and biodiversity gain for pumpkin biomass. An increase in the initial value of the inter competition coefficient showed biodiversity gain with few intervals of biodiversity loss for water leaf biomass and biodiversity loss for pumpkin biomass. This study agrees with Liquete (2016) whose findings showed that there is a relationship between inter competition coefficient and biodiversity.

Based on the findings of this study, it is recommended that water leaf should be planted more compared to pumpkin leaf because of biodiversity gain and there is the need to reduce environmental factors that will lead to low yield of pumpkin and increase environmental factors that will lead to an increase in the yield of water leaf.

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UTILIZATION OF DIGITAL SKILLS ON STUDENTS' ACADEMIC ASSESSMENT IN PUBLIC SECONDARY SCHOOLS IN RIVERS STATE

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Abstract
The study, examined the relationship between of utilization of digital skills and students' students' take-home assignment in public junior secondary schools in Rivers State. Two research questions and two null hypotheses were formulated to guide the conduct of the study. The study adopted correlational research design. The population of the study comprised of thirty-eight thousand five hundred and eighteen (38,518) students. Taro Yamane formula was used to select a sample size of 400 students for the study. The instrument for data collection was designed by the researcher and titled Utilization of Digital Skills Questionnaire (UDSQ). The reliability of the instrument was 0.80. Pearson Product Moment Correlation Coefficient was used to answer both research questions and hypotheses at 0.05 level of significance. The result showed that there was a significant relationship between use of computer and students' take-home assignment in public secondary schools in Rivers State, there was a significant relationship between use of smartphone and students' take-home assignment in public secondary schools in Rivers State. The study concluded that use of computer on students' students' take-home assignment in public junior secondary schools in Rivers State was high and strong, the study also concluded that use of smartphone on students' students' take-home assignment in public secondary schools in Rivers State was high and strong. Based on the findings, the researcher recommended that Students use of computer and smartphone for take home assignment should be encouraged and should be monitored to know when the students is abusing it.

Key words; Academic Assessment, digital skills

Introduction
Digital skill means knowledge of digital technologies, and includes communication devices such as smart phones, computers telephone, satellites, telex, facsimile, internet, email, fax, radio, television etc. Generally, it refers to any device related to computing technology. These devices have made communication, learning and assessment easier hence teachers and students can meet for the purposes of learning virtually. Today, schools can exist without a physical structure hence there is online studies. The use of digital skills has made this possible. Essentially, materials for learning could be accessed with ease, as there exists online libraries and books on the Internet, which has made the world a global village; communications between persons who are physically in distant locations can be actualized in a matter of seconds. Time, energy and money that ordinarily would have been spent in going from one place to another are saved by the use of digital technology.

Digital skill in education has transformed the existence and activities of contemporary man particularly in the setting of globalization (Evey, et al 2010). In recent times, there has been and extraordinary advocacy both nationally and internationally on the use of digital technology in assessment of instructional

and learning process (Okoro & Ekpo, 2016). The educational fsector has been influenced by digital technological skills, which has explicitly influenced instructional process and research. Davis and Tearle (2014) as cited in Yusuf (2015) believe that utilization of digital skills in technology has the strength to speed up, improve and extend aptitude reforms as it has the capacity to boost teaching and assessment by inspiring and engaging learners, and help schools reform to assess students in understanding functional practices.

Ashley (2016) reiterates that digital technology helps educators in preparing students for the real world setting and stresses that as our country turns out to be progressively more technology dependent. It becomes significantly more essential that students must figure out how to use digital technology in doing their home works. The utilization of digital technology in teaching and assessment is a pertinent and practical method for providing education to learners that will enrich them with the required abilities with regard to the world of work. It offers totally new and advanced learning environment for learners.

Abubakar, (2016) stressed that the role of digital skills should be overemphasized. This is because digital skills enable learners and educators to access multitude of online educational content as well as create and provide knowledge of a range of digital tools and services, which allow educators to offer a number of approaches to learning and assessment. It helps learners to choose best approach that suits them. Digital skills not only enable educators to offer learners the opportunity to collaborate online with others from across the world in addition to their peers within their school or early years setting. It also assists educators to deliver learning and assessment in a digital context using digital tools and services. This better aligns with learners' experience

of today's digital world (Barun, 2014). In addition, it enables educators to provide learners with access to a range of digital resources which allow 'anytime/anywhere learning' and build a level of digital skills which will be vital in today's digital world, reduce workload by using appropriate digital assessments that provide instant results and personalized feedback. Digital skills allow online digital networks educators to share resources and digital tools and services expedite lesson planning.

Digital technology has increasingly played a critical role in students' assessment. It is being used globally to translate ideas into realizable goals and develop it into curriculum and demonstrate high levels of effective and appropriate digital technology use to support assessment of teaching and learning across a wide range of subject areas. However, some other schools are in the early phase of adopting digital technology for enhancements of learning and assessing process. Digital technology has the potential to contribute to substantial improvements in the students educational system (Fried, 2018). However, to date, relatively little of this potential has been achieved in spite of digital technology having significant influence on student assessment system. They have provided innovation for teaching, learning and assessment and have engendered advances in research about how people learn, thereby bringing about rethinking in the structure of students education (Siraj-Blatchford et al., 2019).

The standard of assessment is grossly measured by the performance or learning outcome of pupils. Asiegbu (2015) evinced that students' learning outcome is the extent to which students has achieved their educational goals. It is commonly measured by examination or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important. Students' learning outcome

refers to what the student has learned on what skills, assessments like standardized tests, performance assessments and portfolio assessments (Smith et al, 2019). It is also widely acknowledged that digital technology can be used to improve the quality of assessment in the school system (Clarke, 2006).

The prevalence and rapid development of digital technology has transformed human society into the knowledge age (Caron, 2014). In fact, digital technology is becoming a natural part of man's daily life thus; its used in assessment is becoming a necessity. More so, the pace of change in digital technology field currently exceeds the pace of progress of making effective use of digital technology in assessment. There is an international consensus on the importance of intellectual input in creating value, underlining the need for investment in student's education and skills in general with a special focus on digital technology skills, assessment and research development. Digital technology has changed the face of modem assessment, requiring research organizations to be linked to each other through advanced network that is connected to the rest of the world. Furthermore, assisting the students in assessment and testing brings a permanent solution to brain drain problems as we now live in a global village. This study is therefore aimed at examining the relationship between the utilization of digital technology and students' take-home assignment in public junior secondary schools in Rivers State.

Research Question
The following research questions guided the study;
1. To what extent use of computer relates to students' take home assignment in public junior secondary schools in Rivers State?
2. To what extent use of smartphone relates to students' take home

assignment in public junior secondary schools in Rivers State?

Research Hypotheses
The following research hypotheses were tested at 0.05 level of significance.
1. There is no significant relationship between use of computer and students' take home assignment in public junior secondary schools in Rivers State.
2. There is no significant relationship between use of smartphone and students' take home assignment in public junior secondary schools in Rivers State.

Method
Correlational research design was adopted for this study. The population of the study consists of all junior secondary school students in Rivers State. Information obtained from the ministry of Education indicated a total of one hundred and seventy-eight (178) junior secondary schools in Rivers State with a population of thirty-eight thousand five hundred and eighteen (38,518) students (source: River State Post Primary Schools Board 2018).

Taro Yamane formula was used to determine the sample for the study. The sample of the study was 400 students drawn from the population of the study. Simple random sampling by balloting was used to select 40 students from 10 schools selected using purposive sampling technique. Therefore, a total of four hundred students were selected from the population of the study while ten senior secondary schools were sampled.

A researcher-made questionnaire titled: Utilization of Digital Skills Questionnaire (UDSQ) was used. The instrument was divided into two sections A and B. Section A contained the bio-data of the respondents while section B contained five item statements of Strongly Agreed, Agreed,

Strongly Disagreed and Disagreed for each variable. That is section B contained twenty items, which elicit information on the Information Technology (computer and smartphone).

The researcher developed the study instrument. Research supervisors and two other experts in the researchers' department were consulted to review the instrument and its items. The purpose was to ascertain the face and content validity.

Thirty copies of the instrument were administered to students separately twice. The scores obtained were correlated using Pearson's Product Moment Correlation Coefficient (PPMCC) analysis and the reliability coefficient was established at .80, which was reliable enough for the study. The researcher and two-research assistance administered the instrument. The researcher administered 400 as 380 copies

were retrieved and used for the data analysis; the retrieved recorded 95.6% success. Data collected from the respondents were answered using Pearson Product Moment Correlation Coefficient for both research questions and hypotheses at 0.05 level of significance. The data analysis was done using the Statistical Package for Social Sciences (SPSS) version 22. The acceptance and rejection of hypotheses were based on the value that was obtained from the study.

Results

Research Questions One: To what extent use of computer relates to students' take home assignment in public junior secondary schools in Rivers State?

Hypothesis One: There is no significant relationship between use of computer and students' take home assignment in public junior secondary schools in Rivers State

Table 4.1: Relationship between use of computer and Students' take home assignment

Correlations

		Use of computer	Students' take home assignment
	Pearson Correlation	1	-0.18**
Use of computer	Sig. (2-tailed)		.001
	N	380	387
	Pearson Correlation	-0.18**	1
Students' take home assignment	Sig. (2-tailed)	.001	
	N	.387	387

**. Correlation is significant at the 0.05 level (2-tailed).

Table 4.1 revealed that the relationship between use of computer and students' take home assignment in public junior secondary schools in Rivers State is -0.18. This result shows that there is a weak negative relationship between use of

computer and students' take home assignment in public junior secondary schools in Rivers State.

Table 4.1 also showed that the relationship between use of computer and students'

take home assignment in public junior secondary schools in Rivers State is significant at 0.05 level of significance. This means that the null hypothesis is rejected. This is because the p-value (0.001) is less than the level of significance (0.05). The result of this null hypothesis is that there is significant relationship between use of computer on students' take home assignment in public junior secondary schools in Rivers State.

Research Questions Two: To what extent use of smartphone relates to students' take home assignment in public junior secondary schools in Rivers State?

Hypothesis Two: There is no significant relationship between use of smartphone and students' take home assignment in public junior secondary schools in Rivers State.

Table 4.2: Relationship between the Use of Smartphone and Students' Take Home Assignment in Public Junior Secondary Schools in Rivers State

Correlations

		Use of smartphone	Students' take home assignment
Use of smartphone	Pearson Correlation	1	-0.65**
	Sig. (2-tailed)		0.000
	N	380	387
Students' take home assignment	Pearson Correlation	-0.65**	1
	Sig. (2-tailed)	0.000	
	N	387	387

**. Correlation is significant at the 0.05 level (2-tailed)

Table 4.2 reveals that the relationship between use of smartphone and students' take home assignment in public junior secondary schools in Rivers State is -0.65. This result showed that there is a strong negative relationship between use of smartphone and students' take home assignment in public junior secondary schools in Rivers State.

Table 4.2 showed that the relationship between use of smartphone and students' take home assignment in public junior secondary schools in Rivers State is significant at 0.05 level of significance. This means that the null hypothesis is

rejected. This is because the p-value (0.000) is less than the level of significance (0.05). The result of the null hypothesis is that there is significant relationship between use of smartphone and students' take home assignment in public junior secondary schools in Rivers State.

Discussion of Findings
The result of research question one and hypothesis one (Table 4.1) indicated that there is weak negative relationship between use of computer and students' take home assignment in public junior secondary schools in Rivers State. The negative relationship between use of computer and

students' take home assignment in public junior secondary schools in Rivers State means that as scores on use of computer increases, there is a corresponding decrease in the scores on junior secondary school students' take home assignment in public junior secondary schools in Rivers State. However, the result showed that the relationship between use of computer and students' take home assignment in public junior secondary schools in Rivers State is significant at 0.05 level of significance. The finding of the study contradicts the early finding of Antonelli (2018), Andoh (2017), Avinash (2018) who revealed in their separate studies that use of computer lowered academic performance with the explanation that it was an opportunity cost: use of computer took time away from their studies.

The result of research question two and hypothesis two (Table 4.2) showed that there is negative relationship between the addicted use of smartphone and students' take home assignment in public junior secondary schools in Rivers State means that as scores on the use of smartphone increases, there is a decrease in the scores on junior Secondary school students' take home assignment in public junior secondary schools in Rivers State. However, the result also showed that the relationship between use of smartphone and students' take home assignment in public junior secondary schools in Rivers State is significant at 0.05 level of significance. The finding of the study disagreed with the early finding of Murray (2017), Marriem and Cafarella (2019) and Ndubueze (2018) who found negative correlation between use of smartphone and students' academic assessment.

Conclusion
Based on the results of the study, the researcher concluded that there is a significant relationship between use of computer and students' takes home

assignment in public junior secondary schools in Rivers State. It was also concluded that there is a significant relationship between use of smartphone and students' take home assignment in public junior secondary schools in Rivers State.

Recommendations
Based on the findings of the study, the following recommendation are made,
1. Student utilization of computer for students' academic assessment should be encouraged and should be monitored to know when the student is abusing it.
2. Student utilization of smartphone for students' academic assessment should be encouraged and should be monitored to avoid being abused.

Suggestions for Further Studies
The researcher suggest as follows;
1. Other digital technology not used in this study should be investigated to see their influence on students' assessment.
2. Further studies in this area should encompass larger population that was used in this study.

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ADULT EDUCATION, COMMUNITY DEVELOPMENT AND SUSTAINABILITY IN THE 21ST CENTURY IN NIGERIA

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Abstract

The purpose of this paper is to examine adult education, community development and sustainability in the 21st century in Nigeria. It is also to examine how adult education and community development programme could be used for sustainable national development. Despite the Nigeria's richness in human capacity and material resources they were still classified among the countries with high level of illiteracy. This paper also x-ray sustainable national development and makes a case for adult education as a varying means for achieving the sustainable national development through continuing education programme. Moreover, adult education has been often recognized in theory as essential to enhance development, especially in an area of globalization and not only because it produces human capital and capacity building, but also because it enables people to become well-informed citizen capable of thinking critically and active participation. It is therefore recommend among others, that, adult education, community development programme and sustainability in the 21st century require proper affirmation of the states agencies, non-governmental organization (N.G.O) and government to address several community conflicts for peaceful co-existence.

Keywords: Adult Education, Sustainable, Co-operation, Community Development

Introduction

One of the major vehicles for achieving national development is education and education is the backbone of any national development and the key to human capacity development. Ihejirika (2013), further explain that, most of the African countries pledged to develop their economic to democratize their political system and to promote social justice among their people through adult continuing education programme and this is because adults are

the major occupants of production sectors of the economy in Africa.

Moreover, Adult continuing education contributes immensely to the individual as well as collective development of the societies in many ways through non-formal adult education. To start with, adult education provides skills, knowledge and competences that can be used both in privates and professional life. It also promotes generic skills, examples analytical skills known as life skills, communication skills, and social skills.

Adult Education

Any form of learning undertaken by or provided for mature men and women whether is formal schools' system or otherwise is called Adult education. The main targets are specially defined as youth as well s women and men who are socially disadvantaged. Although literacy education contributes to be at its heart, adult education also includes numeracy, skills, and other knowledge.

The notion of adult education is often used interchangeably with other notions such as literacy, adult basic education, lifelong learning, adult basic and non-formal educations.

For the purpose of this presentation, adult education is understood as a translation process of general, technical or vocational knowledge, as well as skills, values and attitudes, which takes place out of the formal education system with a view to remedying early education inadequacies of mature people or equipping them with the knowledge and cultural elements required for their self-fulfillment and active participation in the social economic and political life, (Seya, 2014). Adult education in Nigeria is presently geared towards national development. The process of adult education and national development is to get the adults to learn and through learning to change their attitude and behavior.

The Nigeria national policy on education (2013), states the objectives of adult education as:

1. To provide functional and remedial education for those young people who permanently dropped out of the formal school system.
2. To provide further education for different categories of completers of formal education system in order to improve their basic knowledge and skilled.
3. To provide functional literacy education for the adult who have never had the opportunity of any formal education.
4. To give the adults citizens of the country aesthetic, culture and civic education for public enlightenment.
5. To provide in-service and on-the job vocational and professional training for different categories of workers and professionals in order to improve their skills.

The concept of development is complex as it has several connections. According to Onyeozu (2019), development can also be said to simply mean providing qualitative improvement in the lives of people or providing greater quality of life for humans. Development also means the act or process of bringing to a more advanced state of growth.

Sustainable Development

According to Idris (2017), sustainable development represents development that meets the needs of the present population without compromising the ability of the future generation to meet their own needs. Therefore, development initiative is said to be sustainable when its objective is realized and then effects of its outcome becomes not only enduring but regenerative. Sustainable development must be seen in terms of change in growth process leading to a more enduring process of development for the

future. This implies that the process of growth or development is a learning process. The people must have the understanding that the desired growth clamed for, must lead to meaning growth processes for the future generations. This underscores that need for a proper orientation that would enable the people engaged in meaningful development process.

Some Benefits of Adult Education for Sustainable Development

There is a deep rooted belief that adult learning has the potential to create personal, economic and social value (Motschilnig, 2014). Again, adult education affects people's lives in ways that go or beyond what can be measured by the labour market earnings and economic growth. Important as they are the wider benefits of adult learning are neither currently well understood nor systematically measured.

1. **Educational Progression:** Progression into other learning is an important outcome of adult education. Manninen (2010), found that 93 percent of courses participants said that their participation has motivated them to learn more. Furthermore, learners described their progress by referring to real life activities they could now do in a wide variety of life context in community and educational practice. Self-confidence, finding voice and opening up to learning were identified by almost all learners.

2. **Economic Benefits of Adult Education:** Adult learning can improve employability and income which is a key pathway to realizing a range of other benefits. For example, the people to some extent, choose and shape the context in which they live and work and even increase their social status.

3. **Poverty Reduction:** Adult education has been cited as a key in reducing poverty levels around the world (EAEA, 2015), as it has the capacity to positively affect many dimensions of poverty. Results shows that adult education has a role to play in nurturing the knowledge and skills necessary to both reducing the risk of poverty, but also for providing the capacity to withstand poverty.

4. **Civic and Social Engagement:** Some countries share a concern about declining levels of voter participation and about the state of civic participation. It is possible that adult learning might inspire a change in attitude, which in turn brings about a change in behavior. Field (2019), amongst others show that learning can promote social cohesion and strengthen citizenship. Adult learning may support the development of shared norms. Greater trust towards other individuals and the government.

5. **Attitudes Change:** Individual who participates in adult learning may differ from the one who does not in terms of prior attitude. It was found that adult learning is associated with more "open-minded" perspectives on race and authority, greater understanding of people from different background, challenging previously held beliefs and with a sustaining effect on non extremist views. Especially academic oriented courses are most suited for opening minds and generally link adult learning to increased racial tolerance.

6 **Health:** Adult learning can have both transforming and sustaining effects on health. Transforming effects are when adult learning changes health behaviors (changing from smoking to non-smoking) while the positive behavior is maintained. Therefore, people that are attending adult educational courses are more likely to have healthy lifestyles.

The Main Sustainable Development Goals (SDGs) are:

The Sustainable development goals (SDGs) have a 15years plan of action that focuses on achieving economic and social development. Amid at 2030, the Sustainable Development Goals have a tri-domain plant-prosperity. In total, there are 17 Sustainable Goals, with multiple targets which are:

1. End poverty in all formed ramification.
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
3. Ensure healthy lives and promote well-being for all at all ages.
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
5. Achieved gender equality and empower all women and girls.
6. Ensure availability and sustainable management of water and sanitation for all.
7. Ensure access to affordable, reliable, sustainable and modern energy for all.
8. Promote sustained inclusive and sustainable economic growth, full and productive employment and decent work for all.
9. Built resilient infrastructure, promote inclusive and sustainable industrialization and faster innovation.
10. Reduce inequality within and among countries.
11. Make cities and human settlements inclusive, sale, resilient and sustainable
12. Ensure sustainable consumption and production patterns
13. Take urgent action to combat climate change and its impacts.
14. Conserve and sustainably use the oceans seas and marine resources for sustainable development.
15. Protect, restore and promote sustainable use of terrestrial ecosystems sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss.
16. Promote peaceful and inclusive societies for sustainable development provide access to justice for all and build effective accountable and inclusive institutions at all levels.
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.

The Contribution of Adult Education to the Sustainable Development Goals (SDGs)

Adult education contributes immensely to the individual as well as collective development of societies in many ways. Adult learning plays a significant role for social inclusive, active citizenship as well as personal development and well-being, even though they are often not fully recognized as legitimate forms of education in that, the ways and results of learning may be less tangible than in formal education and learning. Adult education creates social change through enhancing employment prospects, improving health levels and financial literacy of those from deprived backgrounds as well as offering them opportunities to acquire the tools needed to run their own lives. Lifelong learning is another key for achieving social change and reducing poverty levels around the world. It has the capacity to positively affect many dimensions of poverty. Peace, reconciliation as well as conflict prevention. While keeping the concept of adult education in mind is it then possible to "use" adult education in order to induce and direct development. An instrumentalization of adult education should surely be met with a high degree of caution. Two aims of adult education are central in this context firstly, the aims of transmitting knowledge, competences and skills. Secondly, the aims of empowerment, i.e. the promotion of self-determined, bottom-up development of

communities and individuals through active citizenship and social inclusion.

The Skills, Knowledge and Competences to Achieve the Sustainable Development Goals

The SDGs tackle a large number of global challenges that were identical by the member states of the United Nations, alongside civil society and other stakeholders. However, adult education has contributed to their achievement? Non-formal adult education transmits the knowledge that is required to gain a better understanding of the issues at hand and it also transfers the skills and competences needed to take action and to work on a solution.

In addition, each of the sustainable development goals (SDGs) has at least one target that implies education, learning or training taking into account that learning activities are pivotal for achieving the SDGs goals. The "Manifesto for Adult Learning in the 21st century published by the European Association for the Education of Adults (2015),identify a number of areas in which adult education organizations and providers have been particularly active in the past few years. These correspond to the Sustainable Development Goals (SDGs) and include, among other, skills to lead a healthier life, knowledge about equitable and sustainable consumption, the promotion of gender equality, awareness about environmentally friendly transport and energy efficiency as well as the promotion of sustainable, inclusive economic growth. Curricula in adult education can either have the promotion of these skills and competences as a primary target, that is, focus for instance unsustainable consumption explicitly, or they can incorporate them as secondary target for examplethrough educating about a healthier lifestyle in a cooking course.

Conclusion

The awareness of adult education programme for achieving Sustainable Development Goals can be tailored towards equipping and empowering people. This should involve social, economic, political and cultural lives of the citizens. Adult education can educate the masses not to consume all the available resources in the name of development. Sustainable development concepts emphasize not only on economic development, but also on social, political and cultural development and the need to conserve the environment and its natural resources. The three tiers of government local, state and federal should empower and encourage the adults in the all communities to continue their education programme. They should as well allocate adequate funds to adult education programmes, especially continuing education and literacy programmes because we cannot achieve sustainable development where we have a nation where majority of the adult are poor, semi-literate and illiterates.

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FUNCTIONAL POLICIES FOR EFFECTIVE ADMINISTRATION OF UNIVERSITIES IN NIGERIA: IMPLICATIONS FOR ADMINISTRATORS

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Abstract

The focus of this paper was to explore the concepts and issues pertaining to functional policies and its implication for administrators in the University system. Functional policy was referred to in this work as those strategies or approaches deployed by an administrator on how a particular function in an institution of learning will be administered. The paper concluded that the implementation of functional policy in the University system must be spearheaded by the University administrators in order to ensure that the policies are effectively carried, applied to the target population and in all, ensure that the policy achieves the objectives that it was meant for. The study finally suggested that to ensure that the overall corporate objectives and strategy of the University is highly attained, government and other relevant stakeholders must ensure that they equip the administrators with all the necessary human and material resources required for them to drive home the functional policy down to the target audience.

Key words: Policy, Functional policy, University Administrator, Stakeholders

Introduction

Functional policy-making refers, to the activities performed to put into words and obtain approval of a policy. The policy-making process will usually start with the collection and processing of factual information about the subject matter of the envisaged policy and could require the obtaining of information and opinions from non-governmental, public institutions and interest or pressure groups. Functional policy implementation can be described as the results or actions by public officials directed at the achievement of goals and objectives set out in prior policy decisions. It involves the transformation of physical, financial, and intellectual resources into service delivery outputs in the form of facilities and services.

The functional policy or strategy refers to the approaches and strategies deployed by an administrator on how a particular function in an institution of learning will be administered. This implies that if the school must achieve its strategic objectives, then all the functional areas must be managed by the University in order to reach its strategic goals. Thus, it is important to note that functional strategies are usually developed under the umbrella of the business strategy of the University. The organization thus needs to have a strategy in place for all the functional areas – production, marketing, finance, R&D, etc. (Saroha, 2023).

There are four goals of functional policy implementation. Namely, equity or equality, efficiency, security, and liberty. Furthermore, there are different types of equality and these are based on the recipients of a public good, the item that is being distributed and the process by which the public good is being distributed. Efficiency in functional policy implementation is usually attained when the objective to creating the functional policy is achieved at the lowest cost. Fundamentally and according to Hornby (2010) the word effective refers to

producing the result that is wanted or intended for creating the functional policy.

The Concept of Policy

What comes to your mind when the word policy is mentioned? As stated in the introduction earlier, policy is defined as a decision rule not a decision. For example, of a policy- Hire only professionally qualified accountants for senior accounting positions. When such a person is hired it is a decision (National Open University of Nigeria, 2018). A policy is considered the general guideline for decision making. Kalejaye in NOUN (2018), defined policy as the objectives, the mode of thought and the body of principle underlying the activities of an organization According to Fagbemi (2006) a policy refers to what an organization or a person intends to do or does. Business policy therefore is what business organization intends to do. It aims at assisting the organization to deliver services to meet the needs and expectations of the goals of the organization.

Policies are plans in that they are general statements or understandings that guide or channel thinking in decision making. In actual business situation, not all policies are ―statements‖; they are often merely implied from the action of managers. The president of a company (organization), for example may strictly follow-perhaps for convenience rather than as policy-the practice of promoting from within; the practice may be interpreted as policy and carefully followed by subordinates (Weighrich & Koontz, 2005).

To be candid, it is incumbent upon the managers to ensure that subordinates do not interpret as minor managerial decisions that are not intended to serve as patterns. Policy provides the bedrock for vision and mission statement of the business organization along the corporate objectives and goal. Policy enables the business to be assessed and given an image by the way the carry

out their responsibility along with their relationship with their clients/customers. It is the ‗barometer' of playing by the rule and gives purpose to the strategy thrust of the organization. Disparate forms or types of policy exists. According to Commerceits (2023), some of these policies are highlighted as follows:

1. **Organizational Policy:** These refer to the overall policies of the organization. These policies decide the goals of the activities of the organization as a whole.
2. **Functional Policy:** Functional Policies are prepared for different functions such as production, marketing, finance, personnel etc. Functional policies are decided keeping in view the organizational policies. These policies help in coordination of efforts of different people.
3. **Originated Policy:** These are those policies which are initiated by the managers. These policies are prepared for the guidelines of the subordinates. It is also known as Internal policy.
4. **Appealed Policy:** This type of policy is formulated only on the request of the subordinates. This policy helps the subordinates to handle some situations. If the existing policy does not give any scope to handle extraordinary situations; appealed policy is to be formulated.
5. **Imposed Policy:** These policies are not formulated by the organization itself. These are the policies which are imposed upon an organization by outside forces like the government, trade unions, trade associations etc. This is a common form of policy in these days because the role of external agencies is increasing day by day. It is also known as External policy.
6. **General Policy:** A policy which does not create any impact on the performance of the employees. The

policy may represent the philosophy of the top management executives. For example: motivating the employees to perform the job in a better way. It is a general policy.

7. **Specific Policy:** It is a policy which is formulated with regard to any specific issue i.e. transfer, promotion, compensation etc. A specific policy must conform to the broad outlines mentioned in the general policies.

8. **Written Policy:** It is a policy which is formulated and intimidated in the written form. Here, there is no possibility of any degree of deviation. Everyone should adhere to the written policy.

9. **Implied Policy:** A policy is inferred from the behavior of the superior. It is an implied policy. Such policies are more flexible than other policies.

10. **Major Policy:** These are those policies which give a unified direction to the overall concern and imply the commitment of the resources. These policies give shape to the concern in the accomplishment of its purpose. They should also be supportive to the organizational objectives.

11. **Minor Policy:** The policies which do not influence the main objectives of the enterprise may be called minor policies. These policies may relate to some routine matters of some less importance. A policy maybe to hire some more workers in case of some emergency.

By way of conceptualization, policy can be seen as a course or principle of action proposed or adopted by individuals, groups, organizations or government. Policy is seen as being central to the operation and activities of both private and public organizations. However, a policy option made by groups or individual is referred to as private policy while the one made by the government is regarded as public policy. Here, we are concerned with policies of government known as public policy (Obono, 2016).

Policy provides an official backing for every organization action and activities without bias and a basis to be followed by all groups, departments or individuals for whom the policies were made. Thus, it can be opined that policy brings about a meaningful relationship between organization objectives, business functions and organization personnel, as it discourage deviations from unplanned courses of action. It is also pertinent to note that policies must not be rigid as room should be allowed for any necessary adjustment after its formulation and during its implementation. This is the case because, policy remains a guiding course of action that ensures consistency when an organization is governed by its approval as a principle and practice (Adetunji, 2015; Adetunji, 2014).

Okoroma in Adetunji (2015) defined policy as an overall guide that gives the general limits and direction in which the actions of the administration will be taken. On a similar note, Koontz and O'Donnel (2005) advised that policies should not only be formulated, but it should also be communicated, programmed, evaluated and monitored if the policy is to achieve the purpose for which it was established. It can therefore be implied that policies defines areas in which the organization's decisions are to be made.

The Concept of Functional Policy
Functional Policies are prepared for different functions such as production, marketing, finance, personnel etc. Functional policies are decided keeping in view the organizational policies. These

policies help in coordination of efforts of different people. Sound functional policies usually contain a combination of the following characteristics (NOUN, 2018): destiny, top management approval and commitment, intellectual input, consistency and long-term in nature, acceptability and genuine intention and application, balanced interpretation and alignment with objectives.

Destiny – A common characteristic of policy is that it denotes future action and intent. It usually describes a goal or destiny which is there to be achieved. In addition, it implies a conviction in a set of beliefs which is considered —right‖ for the people in the organization. The manner a policy is expressed and the detailed procedures which stem from it all point in the same direction and do not allow individual actions to follow a different direction. If the actual procedures and wording do not imply belief in a course of action, then it is probably a wrongly formulated policy.

Top Management Approval and Commitment – In practice, making contributions and recommendations on policy issues may be the function at the lower levels of management in the organization, but it is the hallmark of policy that it is approved and endorsed by the top management. This may be Board of Directors and Managing Director or the responsibility may be delegated to a top executive committee. Directors and top managers are primarily responsible for policy making and setting long-term objectives. Once the series of policies are approved at the top, there is every possibility that all segments of the organization will move to the same direction toward the set objectives.

Intellectual Input – Policy requires a high level of intellectual and intelligent inputs because policies are concerned about the future activities deemed to be just and right

for the organization. Policies must be able to withstand pressures, opposition and challenges from all parts of the organization and its environment which may see and treat the policies differently. Without a high degree of thorough analysis and deep thought of reasoning during formation, a policy may be less effective and may even fail to provide the framework for enduring decision making.

Consistency and Long-term in Nature – Usually, policy makers have thought through all aspects of a particular policy culminating into consistent and enduring policy thereby making frequent amendments difficult. Constant changes in the course of action and direction of an organization will surely bring about confusion, resenting and even generally derail all things that sound policies are trying to achieve. Practically, almost all policies are long-term in nature, although for practical purposes; long-term policies are sub-divided into short-term.

Acceptability – The degree of acceptance of organization policy to everyone is marked by the persistence and understanding of employees who want to know why the policy is made or changed. Genuine reasons must be forthcoming and management needs to provide supervisors with sufficient information to satisfy queries regarding a policy. There is danger in withholding information which often leads to gossip and speculation in an organization as this can be disorganizing, cause increased friction between management and employees, upset and strain relationships through general suspicion and mistrust.

Communicated to Staff – As soon as policies are formulated and ratified, they should be communicated to members of the organization. Everybody must be aware about the mission and objectives of the organization; hence, there should be no

exception in communicating policies to the members of the organization. Appropriate channels must be used in channeling policies throughout the organization, so that nobody is left out. This, of course, will cement relationship in the organization and motivate the staff to reach higher heights.

Genuine Intention and Application – It is not uncommon for management to declare policy for prestige purposes, such as publicity and then fail to put the policy into practice. Management's intention, in these circumstances, is to ignore and dump the declared policies.

Balanced Interpretation – While correctly interpreting policies, managers do rigidly conform to principles and procedures without due regard for the human elements of the organisation and emerging pressing issues. Something more than correctness is required in human society and ever changing complex environment; all these factors, when weighed carefully, might well provide a more balanced interpretation which would relegate to the background the narrow correct ones. A little of flexibility to accommodate the emerging factors and balanced interpretation of policies are the real art of managing and supervising which cannot be attributable to abuse of policy.

Alignment with Objective – All policies must follow parallel courses of action which are directly related to objectives. If they cross or oppose objectives, collective effect is lost and disorder would prevail. Misunderstanding and confusion are often the cause of problems and poor results rather than faults in the stated policy. these identified dangers highlight the need for careful checking of ambiguity in policy so as to avoid misunderstanding especially at the lower level of management hierarchy.

Kalejaye in National Open University (2018), examined the major sources of functional policies and classified them as originated, appealed, implied and externally-imposed. These are explained as follows:

Originated Source – The most acclaimed source of policies is the one from top management which originates for the express purpose of guiding the company's operations. Originated policies flow basically from the objectives of the enterprise, as they are defined by top executive authority. These types of policies may be broad in scope, allowing key subordinates to give them clearer definition or they might be promulgated so completely and comprehensively as to leave little room for definition or interpretation.

Appealed Source – In practice, in most cases, policies stem from appeal through the hierarchical level of management authority. If occasion for decision arises for executives who do not know whether they have sufficient authority or how such matters should be handled, they appeal to their supervisors for the necessary support and action. As appeals are taken upward and decisions are made on them, a kind of rules and procedures are established. Precedent, therefore, develops and becomes guides for future managerial action and serves as reference point.

Implied Source – Useful policies are developed from the actions which employees see about them and believe to constitute them. Employees will readily understand what real policy is if they work for a company that operate policies that produce high quality goals, or sound labour policy, for instance, though the real policy is implied.

Externally-imposed Source – To a large extent, policies are externally-imposed by such agencies as the government, trade unions, professional associations and others like trade association. This might come in form of direct regulation or one of the many conditions of accepting government aid or contract; it could also be to maintain industrial peace. Besides, local and state governments, professional associations, social and charitable organizations do influence the policies of organizations.

Role of Functional Policies in University Administrative System

Functional policies play important role in strategy implementation. A functional policy is formulated basically to control and reinforce implementation of functional strategies and also the corporate strategy. Control and reinforcement of strategy implementation are facilitated by functional policies in the following ways (Vskills, 2023):

1. Through the functional policies, top management can ensure that strategy is implemented by all parts of the organization as policies cover almost entire activities of the organization.
2. Policies specify the manner in which things can be done and limit discretion for managerial action. Thus, the top management of the organization can rest assured that all personnel of the organization will direct their efforts in a way relevant for strategy implementation.
3. Policies provide guidelines for managerial decisions. This aspect of the policies serves the strategy implementation in two ways. First, there will be uniformity throughout the organization in managerial action. Second, there will be considerable time savings in decision making as managers are well aware what kind of actions are required in a given situation.

4. Functional policies provide basis for control in respective areas as policies lead to consistent pattern of behaviors: This, in turn, acts as basis for controlling.
5. Policies provide coordination across different functions. Coordination among different functions is very important for strategy implementation.

Developing Functional Policies

University administrators usually develop policies which are decision guides and make the strategy work. Therefore, the critical element involved in analytical exercise for policy making is the ability to factor the grand strategy into policies that are compatible, workable and just theoretically sound. Thus, it is not enough for the an administrator to decide to change the strategy. A University administrator answers these questions by preparing policies to implement the strategy. For example, if an organization chooses to go for diversification, the policy maker has to decide what to diversify into, where to diversify, how much money will be needed, from where the money will come and what changes are needed in various functions of the organization. The decisions on all these aspects are much easier if proper policies have been formulated (Vskills, 2023).

The amount of policy making in the formal sense will vary with the size and complexity of the University. If the University is a small one with simple business, only a few policies will be sufficient. Moreover, the policies are generally understood and verbal. However, in large and complex organizations, large number of policies is needed, In whatever forms, the policies are developed, they must be judged on the following criteria: Do they exist in the areas critical to the success of the organization? Do they reflect present or desired organizational practices and behavior? Are they clear, definite, and

explicit leaving no scope for misinterpretation? Are they consistent with one another and do they reflect the timing needed to accomplish the goals ? Are they practical in given existing or expected situations? (Vskills, 2023).

The Top-Down Approach to Functional Policy Implementation

The top-down approach is often referred to as "classical generation" or "scientific management". Its distinguishing characteristic is that policy designers, who are usually at the apex of the bureaucratic pyramid constitute the key actors in both policy-making and policy implementation and in the effectiveness of policy implementation. The top-down approach assumes that subordinates, which are those working at the lowest level of administration are passive and unquestioning receivers and executors of instructions pushed down to them by officials at the top (Cloete & Wissink, 2000). This approach reflects an "Authoritarian neutral Weberian machine bureaucracy" which is defined as a hierarchical structure with clear lines of command, with the top dictating to the subordinates (Moya, 2002).

According to this model those with high status in any political system, such as executives, legislators, judges, and city councillors are policy-makers. It assumes policy implementation to be a machine-like process. It also considers subordinates, those whose daily job it is to provide services and goods to the community, because they start implementation obediently and dutifully (Moya, 2002; Cloete & Wissink 2000).

Arguments against the top-down approaches

Top-down approaches have also been criticized for claiming or assuming that policy-makers have the necessary skills,

abilities and all the information they need to make rational policy decisions (Ghenna, 2006). Considering the ever-changing and unpredictable environment in which policies are made and implemented, and the limited capacity of the human mind to process huge amounts of information. The main criticism of the top-down approach is its failure to take into account the fact that human beings do not function as pre-programmed robots or computers. The other drawback of the top-down approach is that it assumes that subordinates function with military precision and that is not the case (Cloete & Wissink 2000).

The Bottom-Up Approach to Functional Policy Implementation

The bottom-up approach is a more complex model which was introduced in the late 1980s and early 1990s to replace the top-down approach (de Leon & de Leon, 2002). It is a reversal of the top-down approach and arose largely as a reaction to the weaknesses and responses to the criticism of the top-down approach case (Cloete & Wissink, 2000). The bottom-up approach explicitly rejects the received notions of universal principles of management. It also emphasizes the importance of public participation, interest groups and lower-level public servants in the processes of both policy-making and policy implementation. Street-level bureaucrats, also referred to as front-line workers, are the real policy implementers and policy-makers, because they are the ones who change or adapt a policy while performing their duties. At the local government, where policies get implemented, street-level bureaucrats/senior officials do not only have professional training and experience, they also have a commitment to the effectiveness of a service whether it be in health or education. A practical example would be submitting reports and ideas to

councilors, and in so doing, strongly influence policy (Cameron, 2003).

Combining both Top-Down and Bottom-Up Approaches

The problem with the top-down and/or bottom-up frameworks is not whether they are right or wrong. It is that none of them is sufficiently comprehensive to make it possible to apply either one on its own in all circumstances (Brynard, 2000). Consequently, when used or applied on their own without regard to contextual factors, each one falls short of an understanding of the realities of the environment in which policy implementation takes place and the ways in which a model influences the effectiveness of policy implementation. Neither the top-down and bottom-up approaches are not, and should not be understood as two mutually exclusive alternatives approach (de Leon & de Leon, 2002). The challenge for policy-makers and administrators is therefore to determine the appropriate time to switch from one model to the other, or to combine different implementation models, in order to maximize the outcomes and efficacy of the policy being implemented (Brynard, 2000).

Conclusion

Conclusively, this work has described the concept of functional policy. It also x-rayed the issue of functional policy implementation in public institutions like the Universities. Policy implementation in the University setting, is more concerned about what happens to a policy especially after a bill or policy becomes a law. Functional policy implementation includes those actions carried out on a policy by University administrators after such policy must have been handed down to the school. The implementation of functional policy in the University system must be spearheaded by the University administrators. This is to further ensure that the policy is effectively implemented, and that it is actually applied to the target population and to also ensure that it achieves the objectives that were written in the policy. Moreover, the roles of functional policy implementation in University system were briefly discussed. Thus, it can finally be concluded that functional policy formulation and implementation in the University system is a significant task which every administration in the University system must get involved in.

Suggestions

Based on the points raised above, the following are suggested:

1. In order to ensure that there is increased level of functional policy enforcement within the University system, the University administrators should put in place adequate machinery that will facilitate the process of policy formulation and implementation.

2. Every member of the University community must be compulsorily required by the management to abide by every letter of the functional policy as established. This will help to ensure that the overall corporate strategy of the University is actualized.

3. To ensure that the overall corporate objectives and strategy of the University is highly attained, government and other relevant stakeholders must ensure that they equip the administrators with all the necessary human and material resources required for them to drive home the functional policy down to the target audience.

4. Government and her relevant agencies should closely monitor the University administrators and the system with the view to ensuring that the corporate strategy or policy made by government for the benefit of the Universities are implemented to the latter.

5. University administrators must ensure that the functional policies being formulated in the University system are not only workable but also practicable, logical, meaningful and beneficial to all concerned.

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MANPOWER DEVELOPMENT FOR SUSTAINABLE COMMUNITY DEVELOPMENT IN EMOHUA LOCAL GOVERNMENT AREA OF RIVERS STATE.

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Abstract
This paper examined manpower development on sustainable community development in Emohua Local Government Area of Rivers State. In recent years, the role of manpower development in sustainable community development has become increasingly important. The Elements of manpower development such as education, skill acquisition, occupational training, technical assistance, and microfinance have contributed significantly to the growth and development of the communities. This paper further examined current programmes of manpower development and their impact on the people of Emohua Local Government Area of Rivers State. It highlighted the various constituted bodies that promote sustainable community development and the challenges of manpower development in the area. The paper suggested ways to address these challenges.

Key words: Manpower Development, Sustainability, Community Development

Introduction

Emohua Local Government Area of Rivers State comprises seventeen major towns viz Alimini, Omudioga, Ubimini, Egbeda, Rumuekpe, Rumuodogo, Obele, Ibaa, Eveku, Oduoha, Elibrada, Isiodu, Rumuakunde, Rumuche, Rumuohia, Mgbueto and Mgbuitanwo. Emohua is one of the four local government areas that constituted Ikwerre Ethnic Nationality. Emohua is bound by the same heritage and have common language. Emohua people also have annual festivals, amongst them, are "traditional wrestling festival" and "Emohua Day with God". These festivals usually take place on the first and second days of January yearly. These annual events bring all sons and daughters of Emohua together to celebrate their cultural heritage and worship together in thanksgiving to God Almighty for His goodness and mercies upon the people of Emohua.

Emohua is endowed with fertile land for agricultural activities. There is an out-station of Nigeria Liquefied Natural Gas (NLNG) located in Emohua, which has been operational for over thirty years. Okirika (2022:48) noted, there is also SHELL station located in Rumuekpe Community, Omudioga community (Ahaia)), Elele Alimini (Mininta). As part of their corporate social responsibility, the company has contributed in the development of manpower and provision of basic infrastructures such as town halls, school facilities, community water scheme, and electricity. This has strengthened the cordial and peaceful relationship between the company and the people. Nevertheless, a lot of these projects that were executed have been abandoned and destroyed by the people owing to the fact the real ownership of some of these projects were not specified and no measures put in place for

sustainability of the projects. Consequently, the projects were regarded by many people as NLNG property and not the community property coupled with the crisis in Emohua and lack of human capital development programmes. It is against these backdrops that programmes for manpower development were initiated in order to promote sustainable community development in Emohua. Peretomode and Peretomode in Okirika (2022) noted that human resource is a veritable instrument in harnessing all other resources both financial and non-financial resources. In this sense, leaning is central to the development of man. Emohua Local Government Area experience sustainable community development if the development of individuals should be of topmost priority. Manpower development is a strategy for human capital formation and enhancing the skills of individuals. It is a process of equipping individuals with the knowledge, abilities, and skills required to perform certain tasks in the workplace. The people's knowledge and efforts will enable them to value and utilize the capital investment in the area, which will provide employment and income opportunities as well as improve access to education and healthcare. It will also improve productivity and working conditions of the people.

Manpower Development
Manpower development is the process of developing in a man sound mind, body, soul and spirit in terms of knowledge, memory, intelligence both in skills, good health, behavior, consumer's habit, freedom from servitude ability to read and write and above all to adequately function and contribute meaningfully to matters affecting him and society. Kosamani in Okirika (2022) using the theory of conscientization, recognized education as the bedrock of manpower development when he pointed out that people need to be conscientized, that is, a process by which learning or education can help the underprivileged to know, improve and make himself. It involves the power to act deliberately for self-determined purpose for expansion of self-consciousness and power over oneself, one's environment and one's society.

Manpower development is a vital aspect of any successful business environment, as it provides employees with training and skills required to reach their full potential in order to ensure that employees required are equipped with the tools needed to succeed in their roles. Organizations must invest in the development and support of their human capital. This is because manpower helps to cultivate the necessary skills and knowledge needed for organizational development and growth. It also helps to increase employee productivity and efficiency, as well as morale and engagement. Ekpo in Omedia (2009:113) defined manpower development as the "existence of unskilled and / or skilled humans that need training or retraining to perform specific task in society".

Manpower development is important for numerous reasons. Firstly, it allows for increased skill development, which can aid in the growth of an organization. Ake in Omedia (2009) affirmed this, "the indigenous manpower to serve as the propelling force for national growth and development is no doubt a key to Nigeria's socio-economic and political development. Well-trained employees are better adept at understanding and applying new knowledge and technologies, which can help to increase the overall efficiency of an organization. Secondly, an effective manpower development strategy helps to ensure that employees possess the necessary knowledge and skills needed for their job roles, and thus can contribute effectively to organization. Thirdly, manpower development is its ability to improve employee morale and engagement. When employees feel well trained and confident in their abilities, they are more

likely to be more productive. Additionally, improved morale and engagement can help to reduce turnover, which is beneficial for organizations as it ensures a more consistent workforce. Finally, manpower development can help to create a better work-life balance. As employees become more knowledgeable and confident in their abilities, they are more likely to be able to perform efficiently and effectively, thus freeing up time to devote to other activities. This in turn can lead to improved work-life balance, which can be beneficial for both the employee and the organization. In all, the individual should be able to solve their problems with their own wisdom, experience, resources such that they are able to eliminate from their lives poverty, pestilence and starvation.

Development

Development is a concept that focuses on improving the quality of life for individuals, communities, and countries by creating opportunities for access to resources, goods and services. Onyeozu (2007:9) perceived development as "a multi-dimensional process which involves the re-organization and re-orientation of the entire social, economic and cultural systems. Added to improvements in incomes and outputs, it involves radical changes or institutional, social and administrative structures as well as popular attitudes and sometimes, even customs and beliefs"

Development initiatives often involves public and private sector partnerships and designed to promote economic growth, reduce poverty, and achieve long-term stability. Systematic approaches to development typically involve the implementation of well-designed, comprehensive strategies that emphasize sustainable development. These strategies include promoting economic development through the expansion of industry and an increase in trade, reform of public institutions, and the support of human

capital investment. Development projects are also frequently implemented to reduce inequality, provide access to education, improve healthcare, and to protect vulnerable populations. Development initiatives can have both positive and negative impacts on individuals and communities, and careful planning and mentoring are essential for successful implementation and outcome.

Sustainability

Sustainability is a concept grounded in a set of principles and practices that originated in the environmental sciences and has grown to encompass economic, social, and environmental factors. In a broad sense, sustainability can be defined as the ability of societies to meet their present needs without compromising the ability of future generations to meet their own needs. Sustainability is also often associated with the intersection of ecology, economics, and ethics, wherein environmental protection and socio-economic development are seen as interdependent and inseparable (Kajuru, 2016).

Community Development

Community development focuses on empowering and mobilizing individuals and groups in order to create resilient and sustainable communities. Oyebamiji and Adekola (2008:23) defined community development as " a process by which efforts of members of a community are united with those of the governmental and non-governmental bodies for a gradual and positive reconditioning process with much reliance on local initiatives, leadership and resources for improvement in the physical structure of the community and general well-being of the inhabitants". The United Nation in Onyenemezu and Needom (2021) defined community development as a process by which the efforts of the people themselves are united with those of government authorities, to improve the economic, social and cultural conditions of

community to integrate those communities into life of the nation and enable them contribute fully to national progress. The relationship between community development and manpower cum sustainable development is strengthened by the fact they are often both driven by similar objectives as poverty alleviation, conservation, and conservation of natural and human resources. Also, many of the strategies employed to support community development also serve to support manpower cum sustainable development. For example, income generation activities provide economic security and often using sustainable technique. Thus, effective integration of manpower cum sustainable development initiatives can lead to greater success in terms of both economic and social progress. Through improved access to education, health, and other services, citizens are more likely to be involved in discussions regarding sustainable development. This increased engagement has the potential to improve policy outcomes and enhance the quality of life for citizens.

Programmes of Manpower Development and Their Impact on the People of Emohua Local Government Area of Rivers State
Vocational/ Skill Acquisition Scheme: This programme is aimed at assisting people in need of few more skills to improve themselves, develop skills that will be beneficial to them and the nation (Okirika, 2022:99). Ezimah, as well as Ihejirika, in Okirika (2022:100) further identified some vocational occupation as "carpentary, woodcarving, blacksmithing, tailoring, typing, shorthand, sewing, knitting, embroidery, baking and cookery. Other required skills include handset repair, electrical installation, electronic repairs, welding, photography, building and masonry, etc. The centres for this skill acquisition include Rumuji, Rumuakunde, mgbuitanwo under the auspices of Emohua

sons such as the former Honourable member representing Emohua and Ikwerre constituency in the National Assembly Chief Andrew Uchendu and the former Emohua Local Govrenment Area and former Chief of staff of Rivers State who is currently the Honourable Commissioner for Special Project Hon. Chief Emeka Woke. The vocational/ skill acquisition programme had impacts on the socio-economic development of the people in Emohua Local government Area of Rivers State. Akpama, Essang, Assor and Osang (2011) noted that acquisition of vocational skills lead to a significant reduction of poverty among adults who participated in skill acquisition programmes.

NLNG Scholarship Scheme. The Nigerian National LNG Scholarship Scheme is a programme funded by Nigerian National Petroleum Corporation (NNPC) created with the aim of providing educational opportunities to citizens of Emohua who were impacted by the oil industry in Niger Delta region of Nigeria. The programme provides direct financial support for students by offering scholarships at the primary, secondary and tertiary levels of education. Additionally, the programme has provided educational support services in the form of mentoring, remedial classes, and technical training. Furthermore, the programme has also implemented a number of community-based initiatives that aim to encourage social and economic development in Emohua communities. The scheme has enabled beneficiaries to obtain higher qualifications and pursue the professional development of their choice, thereby leading to the generation of income and the creation of employment opportunities in the area. In addition, the scheme has been a source of financial assistance for families and an impetus for local economic development.

Agricultural and Micro Credit: This scheme was set up by some prominent

indigens of Emohua such as Mrs Victoria Awuse, the wife of the famous politician, His Royal Majesty, Ohna Sergeant Awuse who currently occupy various respectable positions as the Paramount Ruler of Emohua kingdom, Pro-Chancellor of the Ladoke Akintola University of Technology (LAUTECH), Ogbomoso, Oyo State, and Chairman of Rivers State Traditional Rulers Council. This scheme enables farmers to be properly trained for efficiency. This programme further led to establishment of agricultural farm at Isiodu, and other areas in Emohua which has positively affected the socio-economic conditions of the people. Indeed, it addressed the problem of poverty and unemployment.

Animal Husbandry Scheme: According to Okirika (2022), this a training programme for the production of animal feeds. This scheme eventually gave birth to Duck Yard farm set up precisely in Egbeda in Emohua Local Government Area in the year 2014 by the former Governor of Rivers State Rt. Hon. Rotimi Chibuike Amaechi. The Duck yard farm is a large farm that deals with the production of animal / nursery seedlings, poultry and fishery" The effect of this scheme was seen in terms of improved access to agricultural productivity, access to business capital, access to extension services, improved income of farmers, improved employment opportunities and improved social capital. Okirika (2022:105) affirmed, "over two thousand (2000) indigenes of Emohua have been trained and gainfully employed in this farm, while some have established their private poultry and fishery".

Literacy Education: This programme is designed to improve the reading and writing abilities of illiterate adults of Emohua, especially women. The programme equipped the men and women with basic reading and writing skill, computation and ability to communicate fluently in official language (English). The programme has

assisted men and women in documentation and easy record keeping in their various trades to help their families and community. Most beneficiaries of this programme now have a feeling of self-confident and personal security and economically responsible. Some of them are self-employed while some are gainfully employed by corporate organizations.

Empowerment Support Programme: This is an educational programme established in Alimini and Eveku towns of Emohua Local Government Area by Dame Judith Amaechi, the wife of the Former Governor of Rivers State. This programme is designed to help children of all categories including the handicapped acquire knowledge and skills and encourage them to realize their full potentials. The handicapped are motivated to have a sense of belonging and inalienable right to decide for their own future. Today, some of these children have their ingenuity in super craftsmanship and other artistic skills which has led to income generation as they engaged themselves in economic activities to alleviate their financial burden and that of their family.

Amnesty Programme: According to Okirika (2022), amnesty programme by Federal Government to Niger Delta militants during the regime of late former President Umaru Musa Yar'Adua and the recent amnesty programme by Rivers State government in November 2016 to militants in all local governments of the State have made the cultists and hoodlums in Emohua to surrender their arms and engaged in meaningful training, home and abroad. The amnesty programme was successful in restoring peace and security to the local government, facilitated socio-economic development, and enabled political stability. The involvement of the local actors in the implementation process contributed to its success. The beneficiaries of this programme are now economically

responsible as they are gainfully employed and contribute to the growth of their communities. Many of them have houses of their own and respected in the society today. Peace is relatively found in Emohua presently than before as business and industries have been rejuvenated. There is no community development under the atmosphere of crisis. A peaceful environment gives room for sustainable community development projects.

Constituted Bodies that Promote Sustainable Community Development in Emohua Local Government Area of Rivers State.

- **Ohna Emohua Traditional Council:** This is the apex traditional council. The traditional roles include enforcing social norms, resolving conflicts among communities, and providing support and direction to members of the local government and community. In addition, the apex councils have commonly been involved in managing natural resources, providing financial, technical and legal support to projects and programmes initiated and managed by local government.

- **Committee for NLNG Scholarship**: These are representatives of communities that are affected by NLNG pipeline. They are responsible for monitoring and evaluation of scholarship and skills acquisition schemes of Emohua indigenes. Their function included the distribution of funds to qualified NLNG scholarship programme, and facilitation of community projects in host communities. This scholarship scheme had tremendous and positive effects on the lives of the beneficiaries, such as improved access to health care and improved infrastructural development.

- **Emohua Elites Forum:** The elites' organization take major decision as it

affects the people. Most of them are members of Emohua Council of Chiefs. The organization has been instrumental in overcoming numerous challenges in the land such as poverty and limited access to basic services. They have played roles in increasing access to services, promoting economic growth and investment, increasing public awareness and empowering local actors. The organization have also facilitated dialogue between the government and the community, which has led to improved service delivery and better governance in the area. This group with the Chairman of Emohua Local Government Area Dr. Chidi Lloyd supported A 5 day free medical outreach in Emohua in the month of October, 2023. This programme was organized by the Ogbakor Ikwerre USA/Canada incorporated in partnership with Emohua Local Government Area, the team comprises medical practitioners of Ikwerre extraction based in United States of America (USA) and Canada. The free medical outreach featured general diagnosis and treatment including surgeries and professional medical consultation. Their humanitarian services to the people of Emohua was of great relief and brought a significant change in the health condition of the people.

- **Emohua Peoples' Convention:** Emohua convention has been an integral part of the development of Emohua communities in Rivers State. It is a larger body that discuss on broader issues concerning Emohua in its entirety. As part of their duties, the convention focus on the inclusion of marginalized groups and the need to recognize the importance of traditional values in community development. The convention

advocates for peace and unity of Emohua people to ensure sustainable development in the community. The convention is a reliable source for resource management and economic development in the community through improved infrastructure, access to markets, access to credit etc.

- **Emohua Women's Organizations:** Women Organizations play vital roles in promoting sustainable community development in Emohua. They provide various services such as health education, micro financing and capacity building. They organise awareness programmes to sensitize the community on different issues and advocate for the rights of women and children. Furthermore, the women's organizations offer entrepreneurial training to help disadvantaged women in the community to start small businesses. They also provide capacity building and mentoring services for female students in order to improve their educational standing. In a bid to promote the health condition of the people, the women age grades in Oduoha Emohua built health centre in Oduoha community before it was later reconstructed to Modern Health Centre by the former Governor of Rivers State, Rt. Hon. Chibuike Amaechi. This has made it possible for easy access to medical treatment within the locality. Alimanma Women Organization in Omudioga community initiated and completed the building of some market stores in Ahia Woragor. They also initiated and completed the building of community town hall. The reason for this establishment include such factors such as wanting to create economic opportunities, empowering women, and serving as a focal point for civic engagement.

- **Emohua Youth Organizations/ Federation:** Youth Organization/Federation (YOF) is an important organization and plays an instrumental role in the community' sustainable development. Their roles include promoting community welfare and essential services such as food and medical aid as well as educational and employment opportunities; advocating for the rights and needs of marginalized members of the community; works to build capacity building of the community and provide training on topics such as health and nutrition, financial literacy and entrepreneurship; ensure conservation and social cohesion.

- **Community Development Committee**: The CDC, have a range of functions in achieving sustainable community development objectives, such as providing technical expertise on community development activities. This expertise includes knowledge and skills in leadership, resource mobilization, and project management. In terms of leadership, the members possess knowledge of the principles of conflict resolution, communication, consensus building, and other forms of problem solving. Additionally, they are able to mobilize resources from local and external sources to support community development projects. Finally, the members have considerable experience in the implementation of community development projects. Okirika (2022) reported that CDC also possess knowledge and skills in conflict management, policy making and advocacy

All of these technical skills combine to make them invaluable partners in community development efforts in Emohua locality.

The CDC works to identify and address current challenges, such as poverty, illiteracy, and a lack of access to basic facilities. The CDC works collaboratively with other stakeholders in the locality to coordinate and implement initiatives that promote sustainable development. The CDC also works to foster a sense of community identity and pride in Emohua locality. It promotes local culture and heritage, and promote businesses and services through its initiatives. To achieve this, the CDC works in collaboration with local groups, such as cultural institutions, to ensure their interests are represented in development processes. The CDC in collaboration with Oganuruhnu Oduoha Emohua moved for government approval of Community Secondary School Oduoha. They also worked with Chief Macdonald Amadi and his group known as Ntueli Oduoha Association to ensure the construction of hospital Road which is also known as Amadi Road. The collaboration of these groups led to the initial provision of electricity in Oduoha by Directorate of Food, Road and Rural Infrastructure (DFRRI), which later changed to OPADEC and NDDC respectively. The availability of these infrastructures promoted community development in the area.

Manpower Development Challenges in Emohua Local government Area of Rivers State.

- **Lack of Monitoring and Evaluation**: A number of factors that contribute to the lack of monitoring and evaluation of community representatives in Emohua, include limited resources, lack of training, and lack of institutional support. Possible solution to these challenges include improved training and capacity building for community representatives and enhanced institutional support.

- **Limited of Availability of Appropriate Tools and Facilities**: This hinder the implementation of development projects, making them difficult and inefficient. Hence, there is need to increase access to the appropriate tools and facilities, as well as secure increased and long-term funding for development initiatives. Government and stakeholder should continue to invest in the provision of these resources in order to ensure the implementation of manpower development programmes in this region.

- **Failure of Multi-National Companies in their Commitments**: Okirika (2022) stated that there is Nigeria Liquefied Natural Gas (NLNG) station in Rumuji community, SHELL Petroleum stations situated in Rumuekpe community, Omudioga community and Elele Alimini community. Regrettably, the affected communities have not been assessing the money for community development programmes for a long time, leading to grievances and protest. This has strained relationship between the communities and the companies.

- **Slight Crisis:** Despite the relative peace in Emohua land, there are still tension at minimal level because of cult activities and unresolved communal conflict. Examples of this crisis include leadership tussle between the Royal Highness and Omogbo family of Alimini as well as Rumuekpe leadership tussle over contact man or Community Liaison Officer (CLO) representing the community in SHELL. The consequences of this tussle were enormous as many lives and properties were destroyed. This crisis has caused delay for rapid sustainable

community development to strive and achieve its goals in some communities in Emohua Local Government Area of Rivers State. The crisis in Emohua is rooted in systemic poverty and inadequate infrastructure, which are exacerbated by various socio-economic, political and environmental factors. To overcome this crisis, effective policy and collaboration between multiple stakeholders, along with local initiatives, can help to address that challenges of manpower development and build a more equitable society in Emohua.

Conclusion

Investment in manpower development for sustainable community development in Emohua Local Government area of Rivers State is necessary for the effective development of the locality. It will help to reduce illiteracy levels, increased income and employment opportunities and improved access to basic infrastructure and amenities such as electricity and roads in the area.

Suggestions

To ensure effective manpower development for sustainable community development, the following suggestions are made:

- There should be regular scholarship schemes to ensure the development of human capital to reduce the high level of poverty in Emohua and the country at large.
- There is need for the local government to develop effective manpower development projects and ensure that they are properly funded.
- Government initiatives should be strengthened to enhance access to quality education, healthcare, and finance, creating for human capital development, and providing an enabling infrastructure for businesses.

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ADULT EDUCATION, CONTINUING EDUCATION, TECHNOLOGY AND SUSTAINABLE DEVELOPMENT IN CONTEMPORARY SOCIETY.

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Abstract

This paper discussed Adult education, Continuing education, Technology and sustainable development in a contemporary society. Education is a critical vehicle for economic development of every nation, either developed or developing. It brings freedom and emancipation of people from all forms of social-economic disadvantages through skills, knowledge and attitudinal acquisitions from one generation to another, as to promote sustainable livelihood in the society. It is open to all ages, sex, race, status, and so on. Based on this fact, one will say that education is continuous and need to be continuous either at formal or informal levels. This is the reason why 'adult education' was introduced into the educational system of Nigeria as to assist eliminate poverty, ignorance, diseases, illiteracy, environmental defections and as well as create room for the awareness for self-sufficiency and reliance through strategies of conscientization, dialogue, sensitization, public enlightenment, inter-generational learning, social mobilization amongst others. Therefore, adult education is a participatory grassroot approach to helping people to clarify and address man's needs. It is on this pivot that continuing education stand as a strata of Adult education in national development, which must be fostered through Technology and technological apparatus in the era of digital age so as to engender sustainable national development through a paradigm shift in continuing education towards embracing the utilization of information and communication technology (ICT). Bearing in mind that ICT occupies an important position in the delivery system of adult education in recent times, as the use of the internet facilities grows in other sectors of the knowledge economy. The paper will discuss Adult education, roles, continuing education, Technology, and Sustainable Development.

Keywords: Adult Education, Continuing Education, Technology and Sustainable Development.

Introduction

The human society are faced with several challenges that needs attention and solutions, such as war, earthquake, flood, crime and criminality, ignorance, diseases, illiteracy, poverty, inequality, oppression, marginalization, environmental degradation (deforestation). These are caused by human activities as a result of quest for progression and sustainable growth in all spheres of human existence and endeavor. These calls for solutions or remedies to such crises situations that can only be achieved through the mechanisms or methodologies of Adult education.

Adult education as a discipline uses whole lot of multi-disciplinary approaches in contributing to the betterment of man in any given developed and developing nations of the world. Adult education is an intellectual activity. It is on this premise that adult education is singled out to actualize the dreams of awaken the consciousness of man in a depressed society, caused by the destruction of nature.

The answer is a call for a desirable change to improve ways of human actions in the universe. Adult education is education for life.

UNESCO in Ojokheta (2020) observed that adult education is a fundamental human right for alleviating poverty and for building equitable, tolerant, sustainable and knowledge-based societies. This is because adult education components has made outstanding evolutionary journey from being merely a second chance opportunity to illiterate adults to acquire basic literacy and numeracy skill, rather it is now providing education for all, throughout life as lifelong and life wide learning opportunities to adult learners.

Nzeneri in Aliwa and Ibeh (2020) supporting the above view said that adult education has been recognized as one of the potent instruments for both human and national development. It is an indispensable tool for socio-economic, cultural and political development of any given society. Adult education accommodates all forms of formal, non-formal and informal aspects of education. This is because it places more emphasis in lifelong learning by seeing education as a process and agent of liberation, a tool for adjustment of human unpleasant situations, cultural transformation and awareness for integration, conscientization and group dynamics. Adult education by description is not only concerned with preparing people for attitudinal change alone but it tries in assisting and helping people live more successful and useful life acceptable to the societies by contributing meaningfully to the development of mankind and entire universe.

The scope of adult education encompasses; population education, workers education, distance education, cooperative education, literacy education, environmental education, political education, community education, community development, functional education, prison education, technological education, vocational education, continuing education and so on. In achieving the target goals of adult education, one will not fail to mention some of the philosophies of adult education. They include:

1. Liberal Adult Education Philosophy
2. Progressive Adult Education Philosophy
3. Behaviourist Adult Education Philosophy
4. Humanistic Adult Education Philosophy
5. Radical Adult Education Philosophy

Liberal Adult Education philosophy deals with the development of intellectual powers of the adult's mind and to make a person literate. Liberal tradition believes that freedom comes through a liberated mind and all human beings are endowed with a reasoning ability to liberate themselves. Progressive Adult education philosophies has the purpose of transmitting culture and societal structure and promotes social change and give the learner practical knowledge and problem solving skills.

Behaviorist Adult Education philosophy is to bring about behavior that will ensure survival of the human species, societies and individuals to promote behavioral change, as the learner engages in learning and practicing new behaviors through feedback mechanisms. Humanistic Adult education philosophy purpose is to develop people open to change and continued learning to enhance personal growth and development as to facilitate self-actualization. Radical Adult education philosophy purpose is to bring about fundamental changes to social, political and economic changes in the society through the application of education (Onyeozu and Okorie, 2018).

These philosophies are based on the characteristics of the adult learner viz:

1. Being autonomous and self-directed
2. Having accumulated a foundation of life experiences and knowledge that may include work related activities, family responsibilities and previous education.
3. Goal-oriented
4. Relevancy-oriented
5. Practical by focusing on the aspects of a lesson most useful to them in their work activities
6. Spirit of respect in all doings
7. Wealth of information
8. Established values, beliefs and opinions
9. Style and pace of learning have probably changed
10. Relate new knowledge and information to previously learned information and experiences
11. Bodies influenced by gravity
12. Have pride on what he or she is doing
13. Individual differences increase with age.
14. Have problem-centered orientation to learning.

However, society needs adult education to encourage career development and opportunities in personal life, health, professionalism that will create room for pleasure, happiness and self-independent. Therefore, it will not be out of place to mention that adult education is a veritable tool for individual and national growth and development for sustainability.

Continuing education as earlier mentioned is a strata of Adult Education in lifelong learning activities of every society, as recorded in FRN (2004). Continuing education is a tool for national development, as it emphasizes the provision of educational opportunity for individuals after the cessation of formal schooling. Osuji in Bankole (2010), described continuing education as re-education, training and retraining opportunities that are made available to out-of-school youths and adults, employed and unemployed, to enable them cope with new challenges of life. The programme is available to all ages and could be provided either on part time or full time basis. Continuing education discussion powered by the use of technological gadgets and apparatus available in the 21st century for sustainability of the entire process of building the capacity of Humanity in a global existence. In building the said capacity it requires a lot of applications of human thoughts and agendas embedded in lifelong learning, which in turn will drive a genuine process of social change and social actions for a better society.

Generally, continuing education in the digital era makes use of technological apparatus in course delivery, especially in open and distance learning which involves the use of online/internet delivery amongst others. This means that continuing education runs in synergy with the 21st century technological advancement to achieve the objectives of:

1. Providing functional literacy education for adult who have never had the advantage of any formal education.
2. Provide functional and remedial education for those young people who prematurely dropped out of the formal school system.
3. Provide under education for different categories of completers of the formal education system in order to improve their basic knowledge and skills.
4. Provide in-service, on-the-job, vocational and professional training for different categories of worker and professionals in order to improve their skills.
5. Give the adult citizens of the country necessary aesthetic, cultural and civic education for public enlightenment (FRN, 2013).

Continuing education centres are managed by the Federal Government and at the Local Government level and private organizations. Their duties are to ; ensure uniform standards and quality control; coordination of practices; inspectorate services to improve and maintain standards; coordination of adult education committee; in-service training for personnel; policy making; evaluation; recruitment of facilitators or instructors; curriculum design; provision of audio-visual materials amongst others. This implies that the programme is managed by the three tier of government in Nigeria.

Organization and Management of continuing education centres (CCE) in Nigeria tertiary institutions are in the hands of the Vice–Chancellors, or chief executives who appoints directors and deputies, governing council members, board of trustees, centre managers or coordinators who reports directly to their principal. It is a programme that requires proper planning of its complex nature. Let us note that the more established our continuing education are, the greater the need for more effective management and organization and styles to actualize her set goals. Continuing education centres applies all the elements of management and organizational approaches such as: organizing, planning, staffing, coordinating and so on.

Technology and Information and Community Technology (ICT)**:** The integration of technology and ICT into the practice of continuing education in Nigeria in the 21st century of technology driven economy as a paradigm shift is a welcomed development because one of the basic goals of continuing education is to provide functional literacy education to her citizenry. Application of technology and ICT to this sector is a revolutionary education to improve the standard of the said education that will in turn cause rapid transformation in all spheres of the human society. This implies that globalization has become an enabling environment for global education. This is also noticeable in the relationship between adult education learning (continuing education) and technology started after the world war 1&11 that ushered the era of Industrial revolution. This was an era of the introduction of mechanical and technological gadgets in the production of goods and services and retraining of war returnees on how to manipulate such gadgets for better livelihood. This calls for skill acquisition and manpower development for the young and old of every nation of the world. The technology and assistive gadgets are computers, laptops, desktop, cell phones, Google, email, zoom, Braille machines, radio, projectors, camera, whatsapp, television, digital devices amongst others (Oji and Okirika, 2023).

Technology through Information and Communication Technology (ICT) activities have become the steering tool of education, economic and social development. It is strategically useful for the repositioning of adult education (continuing education) in the developed and developing nations including Nigeria. This is because they provide access to information through telecommunications and other allied gadgets. Several societal issues and problems have been addressed by the availability and usage of ICT, which have provided the nations with array of community capabilities. Koledoye, Ekwealor and Imo (2020), affirm that ICT have linked individuals from all over the world together and have created global village. Meaning that globalization has become a critical element in changing the educational landscape or process including continuing education and opens the door to providing enabling environment for global education.

Summarily, these tools of technology and ICT have helped in Continuing Education delivery especially in the assessment and monitoring of adult learners progress and feedback, retention and engagement, provision of improved adult leasing experiences, teaching material and methods, offer of opportunities for greater information search by use of Open Education Resource (OER) and production of functional and self directed adults towards the bridging of educational gap for the marginalized in the society.

Obiora & Esoswo in Koledoye, Ekwealor and Imo (2020) also add through the speech of the former Minister of Education, Sam Egwu, that the quest for Nigeria for a place among the 21st century economics of the world by 2020 is possible, if access to ICT technology, at every level of educational sector should be given recognition as well as preference. He further said that ICT is the only strategy that can be used to reposition the educational system to meet global standards and respond adequately to the requirements of society, as other countries like Singapore, India, South Korea, China and NGOs have done to hasten their economy.

Williams (2021) supporting this view, mentioned that the paradigm shift from analogue to digital learning in adult education programmes (continuing education) introduces adult educators and learners to new dimension in adult learning and the growing technological revolution. Analogue to digital signals are used to transmit information, usually through electronic signals. Technology also, in open and distance learning education has been used to extend adult literacy curricula in a multilevel classroom by enabling learners to have immediate access to internet-based resources that provide content of interest of their life situations and allow for the teaching of skills in the context. Technology has the potentials to increase

flexibility; provide access to expertise; facilitate discussion among learners who cannot meet face to face; reduce feelings of isolation often experienced by non-traditional learners; increase learners' autonomy; support and promote constructivist and collaborative learning. Therefore, the discuss above became very pertinent to say that for the "continuing education centres" in Nigeria to achieve their set goals or objectives and philosophy, there is the need to invest and reinvest massively in the knowledge-based economy through the application and use of ICT gadgets and technological innovative approaches.

Sustainable Development (SD): The concept of sustainable development has gained recognition and patronage in relationship to human activities in the universe. The Brundland Commission, published by world commission on Environment and Development (United Nations, 2010) defined Sustainable Development as development which meets the needs of the present generation without compromising the ability of the future generations to meet their own needs. According to Ahenkan and Osei-Kojo (2014), Sustainable Development is the course of development that maximizes human well-being for the current generation without compromising the well-being of future generations. The justification for this is that any such growth has to result in an improvement in the people's quality of life with regard to their vision, shift in values, or process of transformation toward a desired future. The SD is projected continuously. The UN has approved a new projection called "2030 Agenda for Sustainable Development: Transforming the World" (Ojokheta, 2020). In particular, Goal 4.7 of Sustainable Development focuses on ensuring that all learners gain the knowledge and abilities necessary to advance Sustainable Development, including the defense of

human rights, gender equality, development of a peaceful and nonviolent culture, global citizenship, appreciation of cultural diversity, and the use of culture to advance Sustainable Development.

The Roles of Adult Education, Continuing Education and Technology on Sustainable Development

There is a deep rooted belief that adult education, continuing education and technology has the potential to create personal, economic and social value. Thus the benefits are enormous and include the following:

1. **Economic empowerment:** Enhancing employability and income through technology, continuing education, and adult education is a crucial step towards achieving a number of other advantages. For instance, it gives people the ability to select and mold the environment in which they work and live, as well as gradually rise in social standing by building resilient infrastructure, promote inclusive and sustainable industrialization that will foster innovation in new world design.

2. **Educational Progression:** One significant result of adult education is the ability to advance into other areas of study. There is ample evidence that learning that is engaged in successfully encourages learning more. According to research by Manninen (2010), 93% of course participants claimed that their involvement had inspired them to learn more. Additionally, students illustrated their growth by citing practical tasks they could now perform in a range of real-world settings, including employment, community service, and everyday leisure activities. Nearly all students highlighted self-confidence, discovering one's voice, and being open to learning; these qualities

appeared to be fundamental to their understanding of learning. Their lives were made better by these results, which also became a part of who they were as learners.

3. **Health:** Studies have indicated that technology, adult education, and continuing education can have a transformative and long-lasting impact on health. While sustaining effects occur when health behavior is maintained, such as the probability of continuing to be a non-smoker, transforming effects occur when adult learning modifies health behavior (for example, from smoking to non-smoking). As a result, those who enroll in adult education programs tend to lead healthier lives, and adult learning and mental health are related in a number of academic works. Additionally, life can be improved and sustained via knowledge of and application of health technology.

4. **Poverty Alleviation:** Adult education has been identified as a crucial factor in lowering poverty levels globally, despite its incomplete understanding (EAEA, 2015). This is because adult education has the potential to favorably impact numerous aspects of poverty. The findings demonstrate the importance of adult education in fostering the information and skills required to both lower the probability of poverty and provide the ability to resist the influences that lead to it. Additionally, the UK's Inquiry into the Future of Lifelong Learning (IFLL) in Sabates (2008) came to the conclusion that taking part in adult education can significantly lower poverty by improving job prospects, boosting the health of the impoverished, and increasing their chances of obtaining the skills necessary to manage their own lives. Since it takes a variety of initiatives to pull people out of poverty, it should

be a part of every strategy to reduce poverty.

5. **Civic and Social Engagement:** Concerns regarding the state of civic engagement and the diminishing rates of voter participation are shared by many nations. A shift in attitude may lead to a change in behavior, and this could be sparked by adult learning. Learning can increase citizenship and foster social cohesiveness, according to Field (2009) and others. The formation of common norms, increased civic cooperation, and trust in the government and other people may all be aided by adult learning.

6. **Attitudinal Change**: The prior attitude of a person who engages in adult education and continuing education may be different from that of a person who does not. Research has shown that adult education challenges preconceived notions, fosters a sustaining influence on non-extremist viewpoints, and is linked to more "open-minded" perspectives on race and authority as well as a deeper understanding of people from diverse backgrounds. Courses with an academic focus, in particular, are best for opening minds. Adult learning is typically associated with greater racial tolerance, decreased political cynicism, and a greater propensity for democratic ideals.

7. Environmental issues: Adult education through continuing education has concern for ensuring healthy lives by eating and producing good food and water devoid of pollution. Sanitation by keeping the environment neat due to knowledge acquisition. Elimination of dumping of hazardous waste or chemicals into the rivers, streams, conservation, protection, restore of the ecosystem as to combat deforestation, degradation of land and halt biodiversity loss and so on.

8. Agriculture: Farmers are taught through extension education on how and what to provide as food for mankind, especially by the application of new methods of farming practices. This will assist to end hunger, poverty, achieve food security, improve nutrition and promote sustainable agriculture, consumption and production patterns.

9. Provision of peaceful and secured society through better access to justice, accountability band incorporation of institutions for co-habilitation is also achieve through knowledge acquisition for adult education and continuing education.

A crucial human right for achieving fairness and inclusion, combating poverty, and constructing just, tolerant, and long-lasting knowledge-based societies is adult education through continuing education. It takes one step further in educating the public about the need to refrain from using up all of the resources available for development. Therefore, in a modern culture such as ours, the concept of ongoing support for Sustainable Development will bring or enhance national global prominence. In recent years, continuing education has made a significant contribution to the manpower and career development of citizens, particularly in Nigeria, who work as employees, government employees, or independent contractors. A component of adult education that should focus on the community is continuing education. Its contents need to encompass life in all its forms and aim to teach both the society and individuals all the life management skills necessary for sustained survival.

Conclusion
This paper discussed Adult education, Continuing education, Technology and Sustainable development in a contemporary society. The hallmark of this discuss is to

link the relationship between Adult education, a pivot of continuing education to technological usage and practices in the 21st century which will in turn allow for minimal safe transfer to a new generation by meeting up their present and future needs. As a component of adult education, continuing education offers enlightenment and empowerment that come from pertinent, people-focused education. People who have choices and authority are more likely to reject harmful policies, select leaders wisely, and choose growth patterns that suit them. It is impossible to overstate the contribution that technology, adult education, and continuing education have made to the advancement of social, economic, cultural, environmental, and political sustainability. In order to help develop human potential, eliminate poverty, crime and criminality, ignorance, illness, and environmental degradation, amongst others. Sustainable Development can be accomplished through investments and reinvestments in adult education, continuing education, and technology. In the long run, this will guarantee steady growth in all areas of human endeavor connected or linked to the global village that will facilitate the achievement of Sustainable Development Agenda 2030, which focused on learners acquisition of knowledge and skills and a functional society in a contemporary society is the position of this paper.

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CORPORATE GOVERNANCE AND VALUE FOR INCOME SMOOTHING OF ADMINISTRATORS IN PUBLIC UNIVERSITIES IN SOUTH-SOUTH GEO-POLITICAL ZONE, NIGERIA

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Abstract
The study examined the extent to which corporate governance relates with value for income smoothing in public universities in. South-South Geo-Political Zone of Nigeria. Two objectives and two research questions were raised to guide the study while two null hypotheses were formulated and tested at 0.05 level of significance. The study adopted the correlational survey design. The total population of the study is 21 University Vice Chancellors drawn from the public universities in the 6 states that makes up the South-south zone of Nigeria. The sample of the study is 21. This was based on the manageable size of the population. Data for this study were collected using two self-made research instrument titled: "Corporate Governance Questionnaire" (COGOQ) and "Income Smoothing Questionnaire" (INSMOOQ). The questionnaires were validated by three experts from the Faculty of Education in Rivers State University which includes two front Business Education and one from the field of Measurement and Evaluation. The reliability of the instruments were established using test-retest method, it yielded a reliability coefficient of .0.81 and 0.89 respectively. The collected data were used for analysis using Pearson Product Moment Correlation (PPMC) to answer the research questions while z-ratio transformation associated with the correlation coefficients for each research questions was used to test the corresponding hypotheses at 0.05 level of significance. The findings of the study revealed that transparency and fairness correlates with value for income smoothing in public universities in South-South. Based on the findings of the study, it was concluded that the transparency as an index of corporate governance relates with value for income smoothing among public universities in South- South, it was also concluded that fairness as an index of corporate governance relates with value for income smoothing among public universities in South-South. Finally, it was recommended that University administrators such as the Vice Chancellors should be encouraged to attend regular workshops on capacity building which will help to improve their technical and administrative abilities that can bring about the promotion of accountability among the organizational employees.

Keywords: Corporate governance, income, smoothing, income smoothing, value for income smoothing

Introduction

Corporate governance and income smoothing is currently one of the burning issues that is dominating the agenda of the business world and scholarly research. Unsurprisingly, a series of regulatory measures (corporate governance reforms) have been developed in the corporate environment to mitigate the impact of these high-profile scandals and failures as a result of artificial income smoothing. Undoubtedly, one of the major imprints of the corporate governance reforms regime has been the thrust to improve or enhance

the reliability of reported financial information. There has been a considerable debate in recent times concerning the need for strong corporate governance, with countries around the world drawing up guidelines and code of conduct practice to strengthen governance (McConomy & Bujaki; Cadbury in Manukaji, 2018; Central Bank of Nigeria, 2014).

The task of defining the concept of corporate governance is enormous, yet a clear definition of the concept is very essential in order to create the needed awareness and to achieve good practice in Nigeria and beyond. Describing as a nebulous concept, Wilson (2006) defines corporate governance as the manner in which corporations are directed, controlled and held to account with special concerns for effective leadership of the corporations to ensure that they deliver on their promise as the wealth creating organ of the society in a sustainable manner. Jayashree (2006) defines corporate governance as a system of making directors accountable to shareholders for effective management of the companies in the best interest of the company and the shareholders along with concern for ethics and values. It is a management of companies through the board of directors that hinges on complete transparency, integrity and accountability of management.

The scholar puts it in another dimension: Corporate governance is concerned with the establishing of a system whereby the directors are entrusted with responsibilities and duties in relation to the direction of corporation affairs. It is concerned with accountability of persons who are managing it towards shareholders. The Report of Securities and Exchange Board of India (SEBI) Committee defines corporate governance as the acceptance by the management of the inalienable rights of shareholders as the true owners of the corporation and their own role as trustees

on behalf of the shareholders. It is about commitment to values, ethical business conduct and about making a distinction between personal and corporate funds in the management of a company.

Corporate governance is the system by which companies are directed and controlled. This definition became the most universally accepted definition of corporate governance and the basis of modern theory and practice of corporate governance. Two managerial concepts underpin the principle of corporate governance. These principles are: directing and controlling. Directing involves the use of communication, leadership and motivation to guide organizational members towards the attainment of organizational objectives (Cadbury Report in Eke. 2018; Nwachukwu in Eke 2018). Controlling on the other hand, is the measurement and correction of performance in order to make sure that enterprise objectives and plans devised to attain them are being accomplished (Weirich, Cannice & Koontz, 2010).

Control involves three steps which are: establishment of standards, which are simply criteria for performance; measurement of performance, which involves comparing performance against established standards and plans. In specific terms, the managerial function of control involves ensuring that the actual activities of employees correspond to the planned activities (Nwokoye & Ahiauzu in Eke 2018). The important elements in the control function are setting standards, which involves establishing objectives and predetermined levels of performance against which actual results or performance are compared; obtaining information on employee's activities and performances, which involves monitoring the activities of employees by observing them, this can also be done through establishing a system of audit or review of subordinates' activities

and adopting appropriate corrective action, which involves introducing measures to ensure that actual performances conform with set standards (Eke, 2018).

There are four major principles that lie at the heart of good corporate governance. These four principles includes: accountability, transparency, fairness and responsibility. These four principles of corporate governance impact the decisions of board members make each principle require the right data and the right level of interaction to be effective. One of the principles of corporate governance which this study considered is transparency. Transparency, being another principle that truly makes for good governance, engenders confidence in the system. It leaves people with the positive impression that there is nothing that the management is actually hiding while at the same time, attempting to smooth the income of the organization. Transparency is seen as the willingness of the business organization to provide clear information to all shareholders and stakeholders regarding its performance especially in the aspect of the efforts it is making to smooth the overall organizational income. That is to say that, informed income smoothing in a business organization is only possible within a systems that provide accurate and reliable information (transparency).

Thus, transparency allows managers to make prompt, informed and powerful decisions about the income smoothing activities of the business organization. That is to say that no organization can actually achieve complete income smoothing without being transparent with its dealings with the major stakeholders. In today's data driven world, technologies can collect and support data visualization from almost any source. This data helps form bedrock for strategies to tackle current and future challenges (Diligent, 2022). It is also pertinent to note that another component of

corporate governance that can facilitate income smoothing within an organization is fairness which is closely tied to the principle of transparency.

Fairness in this regard talks about the fact that good corporate governance requires equal treatment of all shareholders within each share class. Fairness is as much about ethics as good business sense. Unequal treatment leads to lack of support and interest in the institution. This is because, individual would want to invest in an organization that treats some individuals better than others. Apart from the fact that the lack of fairness within a bank hampers on the ability of bank managers to smoothing the income of the bank, it also creates implications that are far beyond the emotional well-being of the internal customers (employees) (Sheri) Venkataramani & Gajendran in Kenan-Flagler Business School (2022). When University administrators practice fairness which include: making transparent decision, providing staff with opportunities to provide input, acknowledging staff to provide input on decisions when possible and treating staff with respect, the institutional staff will tend to give in their whole best in their service delivery to the institution. The institutional attitude gives the University administrators the necessary enablement to break-even through income smoothing (Sherf, Venkataramani & Gajendran in Kenan-Flagler Business School (2022). From the foregoing, it could be contended that failing to follow the principles of corporate governance which are transparency and fairness adversely impacts on any Nigerian money deposit bank.

Over time, it may interest you to note that some public universities have shown just how damaging bad corporate governance could be. Even though it may not seem easy to implement good corporate governance, the utilization of the right

technologies can also be of help. However, to ensure good corporate governance, the organization can leverage on data, keep up with news and public opinion, know where the organizations stands, and establish informed policies and strategies. Good corporate governance often uses a data-driven approach to setting the rules and policies that guide an institution (Dilgent, 2022).

Corporate governance has been perceived as a vital tool in assessing the institution's health, especially under conditions of financial distress, such as financial crisis. Ayeni, Aina and Ibitoye (2017) noted that the weakness of corporate governance is perhaps the most important factor blamed for the institutional failure, reason why the issue of good corporate governance practices gains a vivid importance, especially after the economic and financial crisis. Recent corporate scandals such as Enron Corporation, Lehman Brothers, WorldCom, Health International Holdings (HIS) Insurance Group and Board of Control for Cricket in India (BCCI) have played a critical part in attracting the increased attention and spotlight on corporate governance issues (Abdelfattah & Ahmed, 2020).

Income smoothing has varied definitions based on existing literatures. Income smoothing is a technique that can deployed by managers and administrators of corporate organizations to reduce the change in the reported amount of income by means of artificial or real earnings management so that it can reach a desired income level. Smoothing is the reduction of income fluctuations from year to year by transferring income from the years of high earnings for the periods that are less favourable. Income smoothing can take place when administrators use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the

underlying economic performance of the organization or to influence contractual outcomes that depend on reported accounting numbers (Vakilifard & Allame; Belkaoui; Healy & Wahlen; Michelson, Jordan-Wagner & Wootton in Manukaji, 2018). Income smoothing is an active manipulation by administrators to reduce the earnings variability over a number of periods or within a single period toward a predetermined target (Beattie. Brown. Ewers, John, Manson, Thomas & Turner in Yang, Tan & Ding, 2012).

The goal of income smoothing is to reduce the fluctuations in earnings from one period to another to portray a company as if it has steady earnings. It is intended to smooth out periods of high income vs. periods of low income or periods with high expenses vs. periods with low expenses. Administrators do this by moving around revenues and expenses in a legal fashion. Examples of income smoothing includes deferring revenue during a good year if the following year is expected to be a challenging one or delaying the recognition of expenses in a difficult year because performance is expected to improve in the near future. Income smoothing does not rely on creative accounting or misstatements which would constitute outright fraud, but rather on the latitude provided in the interpretation of Generally Acceptable Accounting Principle (GAAP). However, it is safe to assert that by managing expectations fairly and ethically, banks that employ a touch of income smoothing do not generally raise a red flag. Some Nigerian money deposit banks adopt the practice of income smoothing for different reasons such as: tax reduction, to attract investors and to boost their business strategy (Kenton, 2021).

Income smoothing is a measure of the account manipulation theme that has been attracting a great attention in the recent accounting literature. Gordon in Samak, El

Said and El Latif (2014) observed that corporate organization managers or administrators may be motivated to smooth their own income, assuming that income stability and growth rates are preferred than higher average income streams with greater variability. There are two types of income smoothing: intentional and artificial. The intentional is based on a real intention and it indicates management actions that seeks to control economic conditions that directly affects corporate earnings in the future. It also affects cash flow considerably. On the other hand, the artificial income smoothing can show manipulation which is undertaken by management to smooth the earning. Thus, the action of this manipulation results in a fundamental or economic condition that can affect cash flow, but also shifts the cost and/or income from one period to another (Eckel in Samak, El Said & El Latif, 2014).

Consequently, investors may not get sufficiently accurate information about earnings to evaluate the returns and risks of their portfolios. Ronen and Sadan (1981) argued that income smoothing can be accomplished in three ways. First, management can plan the occurrence of certain events. Second, management can allocate certain expenses over different accounting periods. For example, management can choose either the straight-line or the accelerated method of depreciation. Third, management may have the discretion to classify certain income items into different categories (e.g. between ordinary items and extra-ordinary items). There are several metrics that can verify the presence of income smoothing. Among these metrics are Eckel's (1981) model and a metric developed by Leuz, Nanda and Wyosocki (2003). The income smoothing metric developed by Leuz, Nanda and Wyosocki (2003) uses the standard deviation of the operating profit divided by the standard deviation of the operating cash flow to generate a new variable that can aggregate all of the observations of a firm over the years.

Statement of the Problem

One of the objectives of corporate governance in every corporate organization and institution is to create a healthy and conducive environment where transparency and fairness is the norm. This can be achieved through the adoption of the income smoothing technique which can be used by University administrators to reduce the backward change in the reported amount of income by means of artificial or real earnings management so that it can reach a desired income level. Despite this obvious fact and the relationship between corporate governance and income smoothing, it is still very worrisome to observe that little or no value is being placed on the organizational culture and practice of income smoothing among some University administrators. Thereby, leading to a relative increase in income fluctuations from year to year consequent upon the inability of these administrators to transfer income from the years of high earnings for the periods that are less favourable. The consequence of this is that some University administrators now find it somewhat difficult to use judgment in financial reporting to influence contractual outcomes that depend on reported accounting numbers. It has also made it difficult for some of these University administrators to manipulate the earnings variability over a number of periods or within a single period towards a predetermined target.

Aim and Objectives of the Study

The purpose of the study was to establish the extent to which corporate governance relates with value for income smoothening in public universities in South-South. Specifically, the study sought to:

1. Determine the extent to which transparency relates with value for income smoothening in public universities in South-South zone,

Nigerian.

2. Determine the extent to which fairness relates with value for income smoothening in public universities in South-South zone, Nigeria.

Research Questions

The following research questions were raised to guide the study:

1. To what extent does transparency relate with value for income smoothening in public universities in South-South Zone, Nigeria.

2. To what extent does fairness and value for income smoothening in public universities in South-South Zone, Nigeria.

Hypotheses

The following research hypotheses were tested at 0.05 levels of significance:

1. There is no significant relationship between transparency and value for income smoothening in public universities in South-South.

2. There is no significant relationship between fairness and value for income smoothening in public universities in South-South.

Methods

Correlational survey research design was adopted for the study. This is so because, the researcher is interested in investigating and describing how the two variables - independent variable (corporate governance) and the dependent variable (value for income smoothening) are related in quantitative terms (Peretomode & Peretomode, 2015:205).

The total population of the study is 21 public university Vice Chancellors drawn from the 6 states that makes up the South-south region of Nigeria. The census sampling technique was used since the researcher considered the population to be small and manageable. Data for this study were collected using a self-made research instrument titled: "Corporate Governance Questionnaire" (COGOQ) and "Income Smoothing Questionnaire" (INSMOOQ). COGOQ encompasses two broad parts. Part "A" and "B". Part "A" contains the demographic data of the respondents while part "B" contains 2 clusters with a total of 15 items. The COGOQ and INSMOOQ adopted a 5-point rating scale of Very High Extent (VHE: 5points), High Extent (HE: 4points), Moderate Extent (ME: 3points), Tow Extent (LE: 2points) and Very Low Extent (1: point). They are non-cognitive research instruments. Face and content validation of the research instrument was carried out by three experts in the fields of Business Education and Measurement and Evaluation.

The reliability of the instruments were established using Test-retest method. The computation yielded a reliability coefficient of 0.81 and 0.89 respectively. A total number of 21 copies of the questionnaire were administered out of which 15 were completely filled and retrieved by the researcher. The researcher used Pearson Product Moment Correlation (PPMC) to answer the research questions while z-ratio transformation associated with the correlation coefficients for each research questions was used to test the corresponding hypotheses at 0.05 level of significance. Thus, the decision for the tested hypotheses was taken based on the following: 0.00 - 0.20 (Very Low Relationship), 0.21 - 0.40 (Low Relationship), 0.41 - 0.60 (Moderate Relationship), 0.61 - 0.80 (Substantial Relationship), 0.81 - 0.99 (High Relationship) and 1.00 (Perfect Relationship).

Results

Research Question 1: To what extent does transparency relate with value for income smoothing in public universities in South-South?

Table 1: Computed Result Showing the Relationship between Transparency and Value for Income Smoothing in public universities in South-South

Variables	N	$\sum X^2$	$\sum Y^2$	$\sum^{XY}$	r	es
Accountability	15	78.29	1 1 1.04	91.87	-2.939	Very Low

Key: *ES: Effect Size*

The computed r-value of -2.939 explicates the extent to which transparency relates with value for income smoothening in public universities in South-South. The calculated coefficient indicates positive interaction of the existing relationship and the result however shows very low relationship between accountability and value for income smoothing in public universities in South-South.

Research Question 2: To what extent does fairness relate with value for income smoothing in public universities in South-South?

Table 2: Computed Result Showing the Relationship between Fairness and value for income smoothing in public universities in South-South

Variables	N	$\sum X^2$	$\sum Y^2$	$\sum^{XY}$	r	es
Fairness	15	92.76	1 1 1.04	100.57	-0.15	Very low

Key: *BOI: Business Opportunity Identification; ES: Effect   Size*

The computed r-value of -0.15 shows the relationship between fairness and value for income smoothing in public universities in South-South. The calculated coefficient indicates positive interaction of the existing relationship and the result however shows very low relationship between fairness and value for income smoothing in public universities in South-South.

Hypotheses Testing
Hypothesis 1: There is no significant relationship between transparency and value for income smoothening in public universities in South-South.

Table 3: Analysis of Computed Correlation showing Relationship between transparency and Value for Income Smoothing in public universities in South-South

Variables	X	SD	N	Df	p. value	r-cal.	r-crit.	Remark	Decision
Transparency **(X)**	3.52	0.30							
			15	85	0.05	-0.190	.217	Sign.	Accepted H_0
Income Smoothening **(Y)**	3.70	0.25							

Source: Field Survey (2022)

The result of the hypothesis tested at 0.05 level of significance showed positive relationship of -190 for the calculated r and 0.217 for the r-critical. Thus, the hypothesis was rejected meaning that there is a significant relationship between

transparency and value for income smoothing in public universities in South-South.

Hypothesis 3: There is no significant relationship between fairness and value for income smoothing in public universities in South-South.

Table 4: Analysis of Computed Correlation showing Relationship between Fairness and Value for Income Smoothing in public universities in South-South

Variables	X	SD	N	Df	p.value	r-cal	r-crit	Remark	Decision
Fairness **(X)**	3.28	0.30							
			15	85	0.05	-0.150	.217	Sign.	**Accepted**
Income	3.70	0.25							
Smoothening **(Y)**									

Source: Field Survey (2022)

The result of the hypothesis tested at 0.05 level of significance showed positive relationship with r-value of -0.150 and 0.217 for the r-critical. Thus, the hypothesis was accepted meaning that there is a significant relationship between fairness and value for income smoothing in public universities in South-South.

Discussion of Findings
In Table 1, the computed r-value of -3.08 shows the relationship between transparency and value for income smoothing in public universities in South-South. The calculated coefficient indicates positive interaction of the existing relationship and the result however shows low level of relationship between transparency and value for income smoothing in public universities in South-South. On the other hand, the result of the hypothesis shows that there is a negative relationship between transparency and value for income smoothing in universities in Rivers States. This finding agrees with the work of Diligent (2022) who observed that informed income smoothing in banks is only possible within a systems that provide accurate and reliable information (transparency). They also noted that transparency allows managers to make prompt, informed and powerful decisions

about the income smoothing activities of the universities. That is to say that no organization can actually achieve complete income smoothing without being transparent with its dealings with the major stakeholders.

In Table 2, the computed r-value of -3.08 shows the relationship between fairness and value for income smoothing in public universities in South-South. The calculated coefficient indicates positive interaction of the existing relationship and the result however shows low level of relationship between fairness and value for income smoothing in public universities in South-South. On the other hand, the result of the hypothesis shows that there is a negative relationship between fairness and value for income smoothing in public universities in South-South. This finding is in consonance with the study of Sherf, Venkataramani and Gajendran in Kenan-Flagler Business School (2022). In their study, it was observed that apart from the fact that the lack of fairness within a bank a hampers on the ability of the managers to smoothing the income of the bank, it also creates implications that are far beyond the emotional well-being of the internal customers (employees). This implies that, when managers practice fairness which

include: making transparent' decision, providing employees with opportunities to provide input, acknowledging employees to provide input on decisions when possible and treating employees with respect, the organizational employees will tend to give in their whole best in their service delivery to the organization.

Conclusion

Based on the findings of the study, it was concluded as follows: that transparency as an index of corporate governance relates with value for income smoothing among public universities in South- South. Finally, it was also concluded that fairness as an index of corporate governance relates with value for income smoothing among public universities in South-South.

Recommendations

Based on the findings of the study, it was recommended that:

1. Transparent organizational leadership and management should be encouraged among University administrators such as the Vice Chancellors so as to promote financial management integrity in the banking sector.
2. School administrators and other critical stakeholders in the university sector should endeavor to adopt the principle of fairness as one of their corporate values in order to promote effective and efficiency within the sector.

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STRATEGIC MANAGEMENT AND CHALLENGES FACING UNIVERSITIES IN NIGERIA

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Abstract
The paper examines strategic management and its challenges in Nigeria Universities. Strategic management is the method used in the management of the universities to achieve the goals and objectives of the institution. Goal setting is a blueprint to achieve the objectives of the universities. While waiting for the achievement of the institution, there are certain barriers preventing the work ability of the strategic management. These challenges are seen as the tool preventing the successful implementation of the strategic management in the universities. This paper identified some of the problems such as poor goal setting, lack of alignment, shortage of resources, inadequate funding, brain–drain, academic corruption and political interference. The following suggestions were made that the management of the universities should have proper goal setting, staff should be made to align with their job, and Federal and State government should provide adequate fund, provide adequate resources, and provide welfare packages to lecturers to avoid brain–drain.

Keywords: Strategic management, Management, Stages of strategic management, Challenges.

Introduction
Management is the process of planning, coordinating, controlling, leading and organizing the efforts of organizational staff and using the organizational resources to achieve these goals and objectives. If the method(s) applied to the management of the organisation is faulty therefore, the organisation is bound to face challenges. These challenges should be inadequate funding, lack of planning, external factors, internal factors, political influence, poor organising etc. But if the process is appropriate, the organisation is to record high turnover and better performance of the in services in the administration of the

organisation. Peretomode (1996) sees management as an interaction process involving a sequence of coordinated events–planning, organizing, coordinating and controlling or leading in order to us available resources to achieve a desired outcome in the be stand most efficient way. Mgbodile (1986) describe management as the process where group of people at the to management level of the organisation plan, organize, communicate, co-ordinate, control and directs the actions and activities of those who work in an organization in order to achieved the goal and objectives of the organization.

Nwachukwu (1988) stated that management is the act of coordinating all the resources of an organization through the process of planning, organizing, directing and controlling in order to achieved organizational objectives. Obi (2003) sees management as the involvement of the strategy innovation, initiating change, creative problem solving, and decision making. As far as human beings exist there is every tendency to face challenges. Since every organisation is made of human being it is expected that the Organization is full of challenges which are expected to control and manage with the use of strategic management.

Therefore, every university management from the top to the bottom is to use strategic management control the excess of the challenges to enable them achieve the goals and objective.

The standard of Education and it policy formulation and implementation has been a major concern for Educational Administrators in Nigeria. In other to improve educational standards in Nigeria, both state and federal government came up with different policies in other to solve educational problem. For effective administration, management and regulation of the educational system, the Nigerian government designed and formulated the National policy on education for the administration and management of educational system in Nigeria.

Strategic management in this paper refers to how universities manage its resources to achieve its aims and objectives. It is a process of planning, analysing, monitoring, and evaluating all the necessary data, items, decisions, and activities the universities require at training its goals and objectives successfully. Strategic management is made up short-term and long-term planning for both predictable and unexpected conditions.

Strategic management is therefore defined as the process of planning, monitoring, and analysis of all necessities that educational needs to meet its goals, aims and objectives.

Concept of Strategic Management
Strategic management is concerned with how University understands its mission and vision, that is where It wants to be in the future; and the values that will guide its action. The concept needs a commitment to strategic planning and the educational management that in volves the university ability to set both short-and long-term goals.

The concept for managing educational strategies will help university to make logical decisions and develop new goals in order to keep pace with evolving technology and educational conditions.

Today the goal of education is to develop strategy and techniques which present the best in the teaching, learning and administrative process and effective way it aimed to reach goal and aims of educational system.
That is the possible with having a long-term mission to be able to adapt to their educational system. Institutions should

identify their aims and goals and the possible strategies which can achieve success. This process should be realized with a prudential and longtime perspective. This includes preparation of long-term aims, goals and priorities of strategies management operating budget, making resources allocation etc. (Mediha Yalcin, 2015 in Yakupeurmaz and Zeynep Derya Dusun 2016).

University Strategic Management
For the proper management of Educational systemin Nigeria, the establishment of agencies and parastatals were introduced by the federal government under the Federal Ministry of Education. These agencies are National Universities Commission (NUC), the National Commission for Colleges of Education (NCCE), and the National Board for Technical Education (NBTE), etc.

The National Universities Commission (NUC) is the parastatal under the federal ministry of education and was established in 1962 with the main aim of developing and managing university education in Nigeria. Their function is to grant approval for all academic programme in Nigerian universities, and also to grant approval for the establishment of all higher educational institutions offering degree programmes and to ensure quality assurance through regular accreditation of all academic programme in the universities, and Ogunode N.I. (2021).

The Management of universities in Nigeria are divided into two
1. External Management and the
2. Internal Management.

The external management is handled by the agencies and commissions established by the government to oversee the management of the universities in the country. While the internal management is handled by the various head of institution appointed by the government to supervise and manage the institutions with the aims of achieving the educational objectives.

The management structure in the university is the governing council headed by the chairman of the council who is charged with the functions in the university concerning setting of goals, formulation of policies, discipline of staff, financial approval of the institution, intermediary between the school and the university and government and staff development. Mgbekem (2004) in Ike Nnia (2012), stated that the universities in Nigeria are run through different committees which are either responsible to the Council or the Senate, these committees include: (**i**) Research Grants committee. (**ii**) Academic Planning committee. (**iii**) Appointments and Promotion committee (i**v**) Admissions committee. (**v**) Committee of Deans (**vi**) Finance and general purpose committees (vii) Development committee. (**viii**) Ceremonies committee and among others.

Management with Strategies
The purpose of strategies in terms of education is to identify the results for the institution in the uncertainty atmosphere. (Halvaci 2005 in Yakupeurmaz and Zeynep Derya Dusun 2016).
The strategy is about sustainability of plan, formulation of aims, and tools to be used systematically (Okur 2007 in Yakupeurmaz and Zeynep Derya Dusun 2016)..
Victoria University Online (2023) discuss the following as the process of strategic management:

1.   **Strategic Intent**
The successful execution of strategic management begins with strategic intent by defining the institutional objectives and using them as a benchmark to measure the activities of performance and growth. The institution should be able to outline the future objectives and focus on vision and direction should be specific.

2. Strategy formation:

This involves the formulating a strategy which require the institution to check strengths, weaknesses, opportunities and threat in management either externally or internally. This will help them develop ideas on how to overcome rivals and respond to changing conditions.

3. Strategy Implementation:

The institution blueprint is a good start to strategic management, but it must be put into action. For it to be successfully implemented, it requires,

- Developing structures and system
- Allocating resources
- Overseeing change management
- Developing risk management strategies
- Developing decision-making processes
- Developing project management capabilities
- Communicating strategies
- Rewarding performance
- Managing human resources by aligning individual roles with performance objectives

Strategy Evaluation

Strategy management is to analyse and assess the results achieved through the strategic process. This is by measuring the performance of an institution strategy. The institution can decide whether to stay on course, make adjustments to actions or adapt to changing market conditions. This process continues to allow institutions to review performance metrics and put interventions in place.

Stages of strategic management process

Strategic management process is a set of rules to follow in the institution. The process is be implemented when everyone in the institution understands the strategic process.

Setting of Goal

The purpose of setting goals is to have a clear vision of the institution. This stage consists of identifying three facts:

(i) Define the short-term and long-term objectives.
(ii) Identify the process of how to achieve the institution objectives.
(iii) Personalize the process according to workers, and give each employee a particular work with which they can be assessed.

Data Analysis: The analysis of data obtained will help access the following stages. The first stage is to collect relevant information and data to achieve the vision of the institution. Secondly the concentration of strategic analysis should be to understand the university required as a sustainable entity, with strategic plan and identify death at will help the university to grow in the future.

Strategy formulation: Designing a strategy is to help review the information gotten from the analysis resulting from it. Thereafter look at what resources the institution has presently, that can help achieve its goals and objectives, the issues the university might face must be prioritized for the success of the institution.

Implementation of the Strategy: The successful implementation of the strategy is significant for the success of the institution. If the strategy does not in any way work with the current reality of the university structure, a new one must be planned at the beginning of this stage. The people in the institution must be clear about their duties, responsibilities, and the overall goals of the institution.

Skills Required for Successful Strategic Management

Strategic management is and how it is implemented, leaders should develop the right skills to be effective. It is about

making key decisions, overcoming obstacles. Some of these skills are:

- Analytics: For every institution to be successful, strategic leaders need to be able to understanding complex circumstances and variable when making decisions and creating strategies.
- Leadership: Strategic leaders should know how to effectively manage their teams and bring out the best in their employees.
- Communication: Strategic leaders communicate with stakeholders and employees to facilitate their outlined strategies.
- Adaptability: Strategic leaders should engage in ongoing personal and professional development, challenging themselves and their teams to improve.

Benefit of Strategies Management

Razorpay 2020 discussed the following terms as strategic management

1. Improved decision-making: Strategic management provides a framework for better decision-making by allowing leadership to assess the potential impact of their decisions on the overall strategic objectives in the institution.
2. Enhanced collaboration: Strategic management encourage collaboration between departments and functions ensuring that everyone is working towards the same goals and objectives.
3. Better institution performance: Strategy management also helps institutions to focused on the areas that need improvement, identify the best ways to achieve their goals and objectives and measure progress.
4. Effective resource allocation: Strategic management encourages institutions to utilise their resources more efficiently by ensuring that resources are allocated to the most important areas.

Challenges of strategic management are:
In spite of the exposure on the virtues of strategic management, it has become Clear that most organizations suffer economic setbacks due to problems of internal nature r at herth an external. One of these problems which are almost endemic is that of introducing, developing and implementing strategic management. Some of the problems include the following:

Poor goal setting: Establishing clear goals across the university system will result in more clarity on priorities and responsibilities in the institution. The strategic management goals objectives are often large and complex. Aims and objectives that always require many resources scattered across many departments and units to accomplish. Every institution must ensure that they adopt the spirit of goal setting.

Lack of alignment: Even though there is proper goal-setting, if the people in the organisation cannot align with the prioritized work it can lead to challenges. Lack of alignment with the prioritization issues and collaboration will causes conflicts that they will have to face in their daily work to achieve the strategic goals. The cause of strategic miss-alignment is the non-strategic work that employees are used to. Establishing clear alignment on who is working on which strategic objective, and what each of those objectives will empower those people to drive the priority over non-strategic objectives.

Shortage of Resources: The University needs adequate facilities in the day to day running of the system. But inadequate infrastructural facilities in the university have posed a lot of challenges in the management of the institution. The university administrators' management can plan with what is available in a strategic manner. Lack of offices for staff, poor recreation centre, lack of sport equipment,

lack of halls, and many other facilities have hindered the management of the universities in Nigeria.

Inadequate funding is a major challenge to the management of universities in Nigeria. No university can survive without adequate funds. Adequate funds are very important to the management of the university. It has been observed by researchers that the availability of adequate funds helps the administration and management of university. The university is not money-making organisation to sponsor itself and so it depends only on government funding for better management.

Brain–Drain Another problem facing the universities is brain–drain. It is a means whereby many lecturers have abandoned higher institutions for another sector of the Nigeria economy where they can receive higher salaries and gain good recognition. This has led to movement of many brilliant lecturers to other parts of the world for better services.

Academic Corruption: Corruption is another problem hindering better management of the universities. The little funds made available for the management of the universities sometimes are looted and diverted to some individual pockets. Students are also not left of this they are indulging in bribing lecturers to earn unmerited grade. Another issue is that students are been extorted financially before they are shown their results and lecturers extorting money from parents on the promise of securing admission for their wards. Corruption has marred the administration and management of the educational system in universities.

Political Interference: This is another problem facing universities in Nigeria. The activities of the universities are interfered by the government through the appointment

of governing councilmembers. Another way of political interference is the constitution of visitation panels by the government at his will instead of in accordance with the act governing the institution. Another area is the appointment of vice chancellor by the visitor instead of deciding the best hand to be used. He liaised with the council chairman to appoint these political friends instead of taking Academics into consideration. Another one, is the internal politics hindering the strategic management. The vice chancellor appoints his friend to run the university as Head of Departments, influencing the election of the Deans of Faculties, appointment of Director of a programmes etc. While the other group who felt cheated will do everything possible to frustrate the effort of the management of the institution. Finally, the fear of management that strategic management might expose their weaknesses thereby refuses to cooperate by withholding vital information required for the strategic management by the management. This will cause a setback in the management of university and deprived them from the achievement of goal sand objective of the university.

Conclusion
The reason for strategic management in universities in Nigeria cannot be overemphasis since university is saddle with the responsibilities of producing or developing high-level man power in the nation. It has been discovered that the university system is a citadel of learning has a lot of challenges in the Country. Some of these challenges ranging from poor goal setting, lack of alignment, shortage of resources, in adequate funding, brain–drain, political interference, academic corruption.

Strategic management are methods, which have been developed and e applied by the public institutions over time. Strategic management is probably the most

important of all. Institutions aim to create a vision by developing long-term strategies with the strategic management concept. Therefore, deciding how to implement strategic plans best and requirements to achieve the goals is the subject of the strategic management. (Özgür, 2004 in Victoria 2023)

By determining a strategy, institutions also determine a way in accordance with the change in the modern era, and they also decide new goals within this way. Institutions which do not have any strategy cannot be sure of their future because their future is not preplanned and stays unclear. In such a case, it will naturally result in failure (Güçlü, 2003 in Victoria 2023).

Institution without a strategy cannot use their resources effectively and efficiently because they cannot make a strategic analysis that will enable an effective use of financial and human resources. Strategic management provides the Institutions an opportunity to make a strategic analysis because it contains adaptation, intuition, and creating change both in the institution and in the environment. Strategic management not only enables institutions to effectively compete in a competitive environment but it also helps them make sense of the future.

Suggestion

However, for strategic management to work effectively in the management of the universities, the following suggestion should be put into effect. The university management should have proper goal setting, staff should be made alignment with the job, while on the other hand, the government should provide adequate funding, adequate resources, enhance the welfare of lecturers to avoid brain drain, avoid undue interference, and finally discourage the academic in the universities.

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QUALITY ASSURANCE: AN IMPERATIVE FOR SUSTAINABLE TERTIARY EDUCATION IN NIGERIA.

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Abstract
Quality Assurance is a multifaceted concept that has elicited various definitions from scholars of old in the private sector. It is used to determine the fitness of a product for the purpose for which it is produced. Following the proliferation of higher education and globalization the pressure of quality assurance is moved to educational institutions to ascertain the quality of the learning outcomes as adjudged by the regulatory authority and society. The study discusses quality assurance as an imperative for sustainable tertiary education. The researcher is of the view that for sustainable tertiary education, there is a need for continuous monitoring and evaluation of not only the teaching and learning process but also infrastructural facilities. Effective quality assurance mechanisms will enhance sustainable tertiary education which is to provide not only quality education for now and future but inclusive education devoid of wastage. The study enumerates the inhibitors to quality assurance in higher education as inadequate funding, politicization of appointment of administrators of higher education, and corruption among others. In cognizance of the challenges of quality assurance in tertiary education, the researchers suggested that the federal government should provide a legal framework that ensures that all levels of government appropriate 20 per cent of their annual budgets to education among others.

Keywords: quality, quality assurance, sustainable, sustainable tertiary education

Introduction
The issue of quality has been an existing concept among scholars and entrepreneurs. It is used to determine the value, worth, and goodness of a product or service. It is an old concept in the production and manufacturing of products where customers equate the price as commiserate to values and the product's worthiness. The proliferation of education and globalization has called into question the values of the product of an educational system. The users of educational products have questioned the values of educational outputs in the mix of decay in the infrastructural and educational resources. Is the educational system worth its value in calculating worthwhile positive virtues that enable individuals not only to live a meaningful life but also contribute to the development of society?

Education as globally acclaimed is crucial in the development and growth of society hence the National Policy on Education averred that education is a veritable instrument for not only national development and social change but also for progressive and united Nigeria (FRN, 2014). It is in the same vein that tertiary education is saddled with the responsibility of not only producing relevant skilled manpower needed by society but also producing students with skills and knowledge of self-reliance in the world of work. It becomes incumbent on education managers to monitor and supervise education to ensure that the quality keeps

increasing and meets international best practices.

A cursory look at Nigerian tertiary education depicts multi-faceted challenges thwarting the essence of establishing tertiary education of providing the intellectual capacity that will help develop the economy. Some of these challenges are the poor infrastructure, inadequate funding of the educational system, and the incessant students' unrest which is now a norm in the education school calendar rather than an exception. More disturbing is the non-employability of the graduates seeking white-collar jobs instead of being employers of people. These unpalatable tales have brought to the fore the quality of the educational system in Nigeria. In the words of Akubuile and Okorie (2013), the education acquired is relevant to the extent that it makes a positive impact on the lives of individuals and society. Education should be relevant in providing plausible solutions to the problems of society. So, what is the quality of human capital development in tertiary education in Nigeria? What is the content, process and output? Are the problems a result of the inputs into the system or the process? Why are the graduates seekers of jobs either than providers of jobs? Why are graduates not gainfully employed? Jacob, Monsurat, and Musa, (2021), opined that over 90 per cent of Nigerian graduates from universities are not employable. Are the problems of curriculum not in line with the work reality? Being mindful of the fact that higher education is crucial for the socio-economic development of society coupled with these plethora of questions has spurred the researcher to discuss quality assurance as an imperative for sustainable tertiary education in Nigeria.

The researchers adopted a philosophical method of enquiry. A philosophical method of enquiry involves conceptual and logical analysis of proposition and ensuring orderly and sequential presentation to ascertain the reasonability and the authenticity of the variables under discussion. (Nwaokugha & Iheanachor, 2020).To achieve this, the researcher employed secondary data from the print media and online materials to justify the variables under discussion. The onus is on the researcher to logically and systematically analyse the concept of quality assurance and establish its relevance in the viability of tertiary education in Nigeria. It is against this background that the paper is structured into various sections, after the introduction, clarification of related concepts, agents of quality assurance, nexus between quality assurance and sustainable tertiary education, importance of quality assurance, challenges, conclusion and recommendation.

Concept of Quality Assurance

The synonyms of quality are excellence, superiority, value and worth, by implication, quality means something valued and worthy of. Quality means the specific standard desired for a particular product or standard that distinguishes it from other products and services (Wordu, 2023a). A quality product or service means that the product or service has certain characteristics that not only distinguish it from others but provide certain needs of society or a predetermined standard for society. It means the products or services have exceptional standards or value. It means meeting common agreed precepts or standards and the standard may be defined by the law, an institution or a professional body, (Obadara & Alaka, 2013). Quality assurance is a mechanism or the process of ensuring a continuous improvement of a product or service to ensure zero defects in the process. Quality assurance, according to Koko, Uwa, Bassey and Isong (2023), was first used in the Western world to ascertain if a product met certain acclaimed standards. Subsequently, it is applied in every facet of human activities to ensure

that the required standards are met in the production of goods and services.

Education is not exempted from quality assurance, especially in the face of dwindling revenue and the rots in the educational system which manifested in infrastructural deficiency in higher education. Quality assurance in education are series of events and services that are provided by the educational management to ensure proper control and coordination of educational activities to achieve excepted quality for goal attainment. (Ezugoh, Agu and Egwu, 2023). Quality assurance in higher education is the monitoring and evaluation devices used to ensure continuous improvement in the process of teaching, learning and research. It consists of monitoring and ensuring that the right calibre of teachers are employed, the right pedagogical content is taught, qualified student enrollment and the right infrastructural facilities are provided in an ambience of harmonious relationship. Ajienka, (2023), opined that quality assurance connotes the use of the best available human resources which consists of human and non-human resources, best operating policies and practices, and best available technology. This means that for tertiary education to continuously improve its quality the managers of tertiary education should invest in the best human resources with international best policies and practices with modern educational digital technology. It is expedient that the Nigerian educational system should integrate digital technology to remain relevant in a technologically skewed economy.

The history of quality assurance, according to Mogbyiteren, Azeez and Abina (2019), can be traced when the Federal Government of Nigeria through its agents were empowered to monitor, supervise and maintain minimum academic standard in the educational system. It is important to note that there are various federal government agencies responsible for maintaining academic standards. For instance, the National Universities Commission is saddled with the responsibility of orderly development of universities and ensuring minimum academic standards in universities. The joint matriculation board examination is responsible for providing quality student intake in universities among others.

Sustainable Tertiary Education
Tertiary education consists of universities, inter-university and other specialized institutions where students acquire knowledge and skills after completion of post-basic education. It is an educational institution where students acquire specialized education with higher certification and with the competence to expand the frontier of knowledge. It is where individual potential is identified, honed and developed for the betterment of individuals and society. Tertiary education is adapted to meet the social and economic development of society. Tertiary education contributes to the socio-political development of the nation through manpower training of skills relevant to the manpower needs of society (FRN, 2014).

The synonyms of sustainable are workable or viable, so sustainable tertiary education is higher educational institutions that are viable and can discharge the primary assignment of teaching, learning, research and community development. (Wordu, 2023b). The sustainability of tertiary education lies in its ability to provide the resources, educational facilities and the basic digital tools that enhance teaching and learning. To ensure that the learners are inculcated with the skills and knowledge that will make them relevant in the world of work. That will provide the learners with the prerequisite knowledge that will make them employers of labour and not seekers of jobs. It is imperative to state that

sustainable tertiary education is primarily aimed at providing quality education to learners and ensuring that future generations have access to quality education. This can be achieved through constant monitoring and evaluation of learning resources, avoiding wastage and that the participants in the teaching and learning process adopt sustainable practices in the administration of higher educational institutions.

Agents of Quality Assurance in Nigeria Tertiary Education

The importance of quality assurance in tertiary education cannot be overemphasized hence the federal government established various agencies and bodies to ensure that the tertiary education meets the expectation of users of the products. Also, ensure that the graduates of the institutions fit the purpose of training the manpower needs of society, and encourage research and scholarship. The federal government established the National Universities Commission NUC, the National Commission for Colleges of Education NCCE, and the National Board for Technical Education NBTE. The primary assignment of these boards is to ensure quality in tertiary education. Thus, emphasis is on the National Universities Commission as the apex board saddled with the responsibility of reviewing university's educational programmes and resources are maintained and of high academic standard.

National Universities Commission is the federal government agency saddled with the responsibility of ensuring the orderly development of university education in Nigeria. It is also within the purview of the commission to accredit university programmes to ensure that minimum academic standard is maintained. (Stanley, 2020). The commission by law is empowered to set minimum academic standards for universities and regulate the establishment of public and private

universities in Nigeria. According to the Council of Higher Education Accreditation, the NUC also ensures quality assurance of all programmes offered in Nigerian universities and channels for all external support.

The commission achieves the aforementioned functions through accreditation of university programmes. Accreditation of a university is the period when the commission and the cream of experts in other universities and/or sister agencies visit the school to scrutinize the faculty members, facilities, examination and grading system. It offered the commission the opportunity to examine various programmes in the university and the irrelevant programmes were eliminated while relevant ones with good quality were accepted.

It is imperative to state that the aforementioned process is the external quality assurance mechanism where the external board imposes the standard through which universities are rated. We are not unmindful of the various internal quality assurance directorates established in various universities that ensure that the essence of higher education is not compromised. The primary assignment of internal quality assurance is to ensure that lecturers attend classes and lectures delivered within the given periods. In the words of Obadira and Alaka (2013), internal quality assurance are process and mechanism adopted in the university to ensure that certain activities are adhered to and standards are maintained as applied to higher education in the country. It is imperative to mention that internal quality assurance adopts various methods to ensure that quality is not compromised. Some of these measures are peer review, student-teacher assessment, student complaints form, and periodic lecturer evaluation form among others.

Nexus between Quality Assurance and Sustainable Tertiary Education

Quality assurance and sustainable tertiary education are like two different sides of a coin but working to achieve the same objective. The life force of quality assurance is to ensure that tertiary education maintains and enforce the core values of education, that quality is enhanced and sustained in all spheres of educational activities, and that the learning outcome fits the purpose of education. The purpose of education fitness is not only the immediate society but to attain the international best practice.

Also, sustainable tertiary education is geared towards providing a viable educational system whose products will not only provide for the manpower needs of immediate society but be adjudged as best in international practices. The essence of sustainable tertiary education is to provide not only worthwhile and economic tertiary education but to provide high quality, and promote social equality, diversity and inclusion. The nitty-gritty of sustainable tertiary education is the reduction of wastage in the management of the education system and to adoption of sustainable educational practices in the administration of higher education. Like quality assurance, sustainable tertiary education is to ensure that the future generation has access to quality education.

Importance of Quality Assurance in Tertiary Education

The proliferation of higher education in Nigeria is unparalleled in Africa and the continuous demand for student enrolment has made it necessary to securitize the activities of the university not only to ensure the quality of academic programmes but also to ensure international best practices. The need for quality assurance cannot be over-emphasized. It not only sustains the core values of tertiary education but reinforces the core values and

provides a voice for students and society. (Eaton, 2021). In the same manner, Igbape and Idogho (2015), opined that maintaining quality is paramount to the administrator of higher education to protect students and other stakeholders in educational institutions from poor quality and meet the human, and socio-economic needs of society. According to Bwalya (2023), quality assurance helps to improve teaching, research and regulating higher education and ensures that education institutions provide standard quality. The author further asserts that quality assurance helps higher education to build its reputation and good status through continuous scrutiny and evaluation. Quality in educational institutions also attracts global visibility, creditability and a source of patronage and donation. The importance of quality assurance is as follows:

1. It is a mechanism for continuous monitoring of performance, improving educational facilities and ensuring that quality is maintained.
2. It provides an opportunity for managers of educational institutions for self-evaluation, external evaluations, and institutional evaluation and ensures that the quality and objectives of educational institutions are achieved.
3. It ensures the orderly development of educational institutions in line with the manpower development requirement of the nation.
4. It enhances the accountability of educational institutions and provides a platform for experts to intervene to make effective and sustainable continuous improvement of educational services.
5. Quality assurance helps not only to improve the quality of educational facilities but also to improve the quality of the work, staff and students.
6. Quality assurance helps to identify the needs and resources of the schools,

the weaknesses and strengths and map out plans and strategies for improvement.

7. Quality assurance helps to identify staff needs for professional development and in the process helps to improve the quality of higher education products.

Input-Transformation Box-Output Analysis

Quality assurance in higher education can be examined using the Inputs-Transformation Box-Output perspective. The onus is on the government through the educational policymakers to make clear and precise education objectives and provide the enabling environment that will enhance the strategic attainment of educational policy. Higher education consists of intellectuals with different skills and knowledge working towards the attainment of educational goals. It consists of the inputs which are processed to have outcomes.

INPUTS

Human Resources
Physical Resources
Time Resources
Financial Resources
Information Resources
Effective Leadership
Safe Environment

TRANSFORMATION BOX

Students time used in learning
Assessment methods
Monitoring of students progress
Classroom management

OUTCOMES

Achievement and attainment namely:
Grades
Skills, knowledge and exceptional performance
Change in attitude and behavior
Emotional development etc.

Inhibitors of QA

Paucity of funds.
Corruptions.
Mal administration and incompetent administrators.
Political Incursion in the administration of tertiary education.
Poor implementation of QA policies
inadequate infrastructural facilities etc.

Inhibitors of QA
Examination mal practice
Sexual harassment
Cultism
Incessant student unrest/ Strikes
etc.

Inputs-Transformation Box-Outcomes

The input consists of the human resources which are a pool of intellectuals with different philosophical views of the world and are obliged to work towards the attainment of educational goals. It also includes physical resources like the infrastructures, laboratories, libraries, workshops and other school plant that aid effective teaching and learning. Financial resources, digital information resources, effective leadership and a safe environment are other inputs that if well-articulated into the system will enhance the attainment of academic goals. It is imperative to note that these are some of the facilities that the National Universities Commission uses in the process of accreditations of programmes and establishment of tertiary education. Unfortunately, the paucity of funds has inhibited the attainment of quality in the tertiary education. A cursory look at budgetary allocation to educational sectors in Nigeria is below the UNESCO standard of 26% of an annual budget. The resultant effects are dilapidated infrastructures, workshops with obsolete equipment, classrooms devoid of digital technology and lack of office and student accommodation among others. These challenges in no small measure undermine the integration of quality in tertiary education in Nigeria.

The transformation box is a production factory where the reformation of students takes place. It consists of the time students spend learning, methods of assessment and monitoring. It includes the application of classroom management techniques and all the processes, energy and techniques asserted on the system to ensure that there are positive changes and development in the learner. Unfortunately, various variables negate the effective attainment of quality in the transformation box. Some of these challenges are examination malpractice, sexual harassment, cultism and all other negative behaviour that undermine the integrity of the system. To ensure that quality is maintained it is the responsibility of the institution's internal quality assurance in collaboration with other statuary committees to ensure that the system is not undermined.

The outputs often referred to as the outcomes are the effects of deliberate efforts of the teachers in the reformation of students for the betterment of individuals and society. In outcomes, emphasis is laid on achievement and attainment of educational qualifications through test and examination performances. Other yardsticks used in determining outcomes are skills, knowledge, attitudinal, behaviour, and emotional change the learners exhibit at the end of a given academic period. Fortunately, the determinants of these are individuals and establishments that make use of the graduates from tertiary education institutions. Unfortunately, the universities in Nigeria have not fared well in global ranking. According to Statista.com, there are 170 universities in Nigeria, 79 private, 43 federal and 48 state universities. Inappropriately, only two universities made one thousand spots in the 2024 universities ranking by Time Higher Education, and they are Covenant University, Ogun State and the University of Ibadan, Oyo State. (Suleiman, September 28 2023). This abysmal ranking of Nigerian universities is a wake-up call for stakeholders in the educational sector to ensure that there are improvements in the quality of inputs. Once the inputs are right with continuous monitoring of the process the outcomes will be right.

Challenges of Quality Assurance in Higher Education

Education is cost-intensive and higher education requires very high investment of both material and non-material resources. To achieve the goals of national policy on

education there is a need for adequate funding of the educational system. UNESCO has defined what adequate funding means, which is 26% of the annual budgets of a nation. Unfortunately, there are empirical shreds of evidence that the budgetary allocation to higher education is below the UNESCO standard and hardly enough for the maintenance of the machinery of government. Human resources and funds are vital for the effective administration of higher education but shreds of evidence show that funds are inadequate and remain a source of menace in the administration of higher education. (Okemakinde, 2010: Ahaotu & Ogunode, 2021: Wordu, 2023). Poor funding is the crux of the matter where all problems emanate from. Jacob et al (2021), avers that many of the challenges of higher education are a result of poor funding namely infrastructural gap in the educational system, storage of professional teachers, ineffective quality assurance and quality control among others. The authors further assert that poor funding is also responsible for other challenges in other departments and agencies of government resulting from non-monitoring and supervision of educational facilities.

Lack of educational infrastructural facilities

Educational infrastructural facilities are essential amenities that facilitate teaching and learning and they consist of classrooms, digital tools, laboratories, libraries, office accommodation, tables, chairs and all resources that ensure that the learning process is achieved optimally. Educational facilities are those physical resources that aid the teacher in the instructional delivery and the implementation of educational policy. High-quality educational infrastructures not only enhance class attendance but also facilitate completion rate, and improve learning outcomes and learning achievement. (UNESCO 2010: Teixeira,

Amoroso & Gresham, 2017). Despite the importance of educational infrastructure in the process of teaching and learning, there are still deficits in infrastructural facilities undermining the quality of learning outcomes. There is no doubt that the interaction of students with quality infrastructure affects the learning outcomes in any given institution. For quality to be achieved the educational environment must not only be safe but must be inclusive to both the vulnerable and gender sensitive. The recent abduction, kidnapping, cultism, banditry and the general act of criminality impede quality in tertiary education.

Corruptions

Corruption and misappropriation of funds are other impediments to the attainment of quality tertiary education. One of the greatest challenges hindering the effective attainment of quality education is corruption no meaningful development can take place and it is capable of destructing the educational system and the attainment of educational goals. (Ogunodi, 2021: Olowonefa, & Ogunode 2021). Corruption is an epidemic in Nigeria's body politic undermining and hindering development and increasing wastage in the system. The funds that are budgeted for recurrent and capital expenditures are diverted to private use. If the unwholesome practices are not controlled or reduced to the barest minimum it will not kill the educational system but the development of the manpower needed in society.

Politicization of Administrative Heads

Another inhibitor of quality assurance in tertiary education is the politicization of the administration of tertiary institutions and the erosion of institutional autonomy. A situation whereby the visitors of the university appoint their cronies as heads of institutions without due diligence to merit undermines the integrity of the educational system. The tertiary institutions are used as patronage for the boys for supporting their

electioneering campaign and this has put the round peg in a square hole. Again, the statutory functions of the Senate have been taken over by federal government agencies like the Joint Matriculation Board Examination JAMB, and National Universities Commission NUC among others. This has made it difficult for higher institutions to perform their constitutional duties of teaching, certification and research, generation, storage and dissemination of knowledge (Rowell & Orighoferi, 2018). These in no small measure undermine the quality of learning outcomes and by extension the quality of human resources.

Lack of Capacity for Effective Monitoring and Supervision

The NUC do not have enough manpower to effectively perform their statutory functions. For instance, the NUC is a federal government agency saddled with the responsibility of performing the following functions to maintain high-quality standards: maintain minimum academic standards, accreditation, carry capacity and admission quotas, visitation, research and development, publication and research assessment structural infrastructure and utility(Rowell & Orighofen, 2018). Unfortunately, the commission has over one hundred universities both public and private universities and lacks the professional competencies and enough manpower to perform the assigned tasks.

Other inhibitors worthy of note are challenges encountered by individual institutions in the transformation box. These are examination malpractice, cultism, sex-for-marks, plagiarism and other unethical behaviours that undermine the integrity of the learning outcomes.

Conclusion

Quality assurance is a multifaceted concept that has elicited various definitions by various scholars in the past. Initially, it was predominately associated with the business entrepreneur who used it as a yardstick to determine the value associated with a product. With the increase in enrolment and the proliferation of universities with globalization, the pressure is shifted to educational institutions to determine the fitness of learning outcomes to the purpose they tend to achieve. Quality assurance is the continuous monitoring and evaluation of not only the teaching and learning but also the learning resources to ensure that high-quality standard is maintained. Sustainable tertiary education is the process of ensuring that tertiary education does not only provide quality learning to the learners but also ensures that future generation has access to quality and inclusive education. This can be achieved by adopting sustainable practices on institutional campuses and avoiding wastage. The study itemized the various federal agents saddled with the responsibility to ensure quality in higher education. It is enlightening to note that quality assurance helps in maintaining standard and provides an opportunity for educational institutions for peer and self-evaluation. There are several challenges in the attainment of quality assurance and some of them are infrastructural decay, paucity of funds, maladministration and corruption among others.

Suggestion

Considering the inhibitors of tertiary education in the attainment of quality assurance the following suggestions are proffered.

1. There is a need for enactment of law to ensure that all levels of government should budget not less than twenty per cent of their annual budget to education.
2. There is a need to re-bundle the National Universities Commission and relinquish some of the traditional functions back to the University Senate and Governing Council

3. The university should empower internal quality assurance with the necessary professional competency and capability to monitor not only teaching and examination but also the availability and utilization of educational resources.

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POST-COVID-19-LOCKDOWN ADMINISTRATORS' AND TEACHERS' PERSPECTIVES ON THE IMPACT OF ONLINE LEARNING ON STUDENTS' LEARNING OUTCOMES IN RIVERS STATE, NIGERIA.

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Abstract
This study investigated the post-COVID-19-lockdown administrators' and teachers' perspectives on the impact of online learning on students' learning outcomes in public junior secondary schools in Rivers State, Nigeria. The study formulated two objectives, research questions, and hypotheses. The study's research design was a survey. The area of the study was Rivers State. The study's population was 8,614, comprising 267 principals and 8347 teachers in public junior secondary schools in Rivers State. The sample size of 541 participants comprised 160 principals and 381 teachers, ascertained using the Taro Yemen sampling formula. The simple and stratified random sampling techniques were used to select the principals and teachers respectively. The questionnaire was used to collect the required primary data on Post-COVID-19-lockdown Online Learning Questionnaire. The reliability of the instrument was assessed and confirmed, yielding a reliability index of 0.843. The research questions were addressed using mean and standard deviation, and the Z-test was used to test the hypotheses at the 0.05 level of significance. Among other findings, the study revealed that administrators' and teachers' perceptions of the impact of online learning on student learning outcomes in the post-COVID-19 lockdown did not significantly differ. The study concluded that both administrators and teachers agree that online learning has had a noticeable impact on students' learning outcomes during the post-COVID-19 lockdown. The study recommended, among others, that educational institutions should provide comprehensive training and support for both administrators and teachers to effectively implement online learning strategies during similar circumstances as the COVID-19 lockdown.

Keywords: Post-COVID-19, Lockdown, Online, Learning, Learning Outcome.

Introduction
The novel coronavirus that caused the COVID-19 pandemic, a global health crisis, has had significant effects on societies and economies all over the world. According to the findings of Munster et al. (2020), it was determined that COVID-19 was identified as the primary cause of reported instances of swollen lungs among patients who were admitted to hospitals in Wuhan, China, in December of 2019. In March 2020, the World Health Organisation (WHO, 2020) classified the virus as a pandemic due to its swift and widespread transmission. Since that time, governments across the globe have put into effect a range of strategies, including lockdowns, limitations on travel, and guidelines for maintaining social distance, to manage the transmission of the virus and lessen its effects on healthcare systems.

In October of the same year, the Federal Ministry of Education in Nigeria finally allowed schools to reopen after a directive was issued in March 2020 for their closure following the pronouncement of the COVID-19 pandemic by the World Health Organisation. According to the directive from the Federal Ministry of Education and

the Federal Government of Nigeria, all educational institutions, universities, and colleges in Nigeria have adhered to the call for employees, including those in the education sector, to cease their work (Federal Ministry of Education of Nigeria, 2020). Due to this development, educational institutions across Nigeria, spanning from primary to tertiary levels, were mandated to adopt the e-learning education method, whenever feasible.

Online learning adoption by institutions of learning in Nigeria and many parts of the world was a necessary response to the unprecedented challenges posed by the pandemic. It did not only provided a temporary solution to the closure of physical classrooms, but also highlighted the potential of technology in transforming education for the future. Rajhans et al. (2020) confirmed a noticeable increase in the adoption of online learning in academic institutions worldwide due to the impact of the pandemic. However, Lawal (2020) revealed that many institutions in Nigeria, private and public struggled to implement online learning effectively due to various factors, such as limited access to internet connectivity and inadequate infrastructure. However, for the few that adopted online learning, it opened up new opportunities for students to engage in self-paced learning, collaborate with peers from different locations, and access a wide range of educational resources.

Due to the substantial gains recorded in terms of students' learning outcomes during the lockdown, many institutions, even in the post-COVID-19 lockdown period, have continued to incorporate online learning into their curricula. Aristovnik et al. (2023) defined the post-COVID-19 lockdown period as a period characterised by a hybrid learning approach, where students have the option to attend classes in person or participate remotely through online platforms. During the lockdown, some institutions, including primary, secondary, and tertiary levels, engaged their students in remote learning through online platforms and virtual classrooms. This allowed students to continue their education from the safety of their homes and ensured minimal disruption to their academic progress.

This shift has not only expanded access to education for students in remote areas but has also provided a more personalised and interactive learning experience. These benefits have been reported to have a significant impact on students' learning outcomes, but not in the Nigerian context (Nguyen, 2016; Novianti et al., 2021; Yahiaoui, 2022). To bridge the gap in knowledge in the Nigerian context, this study investigated the post-COVID-19 lockdown administrators' and teachers' perspectives on the impact of online learning on students' learning outcomes in public junior secondary schools in Rivers State covering the period of 2020-2023

Statement of the Problem
The COVID-19 pandemic, which abruptly halted academic activities, had several ramifications for students' education. According to UNESCO data, the peak in school closures occurred in early April 2020, affecting approximately 1.6 billion students across 194 countries (UNESCO, 2020). Years after the initial disruptions, it appears that educational institutions—primary, secondary, and tertiary—are still battling to close the digital divide. Due to limited resources and infrastructure, many students continue to face barriers to quality education. This not only impedes their academic progress but also perpetuates the country's social and economic inequalities. Despite its limitations, one could argue that for the short period that online learning was in place, it did provide some level of educational continuity for students.

In public secondary schools in Nigeria, the principals are the administrator, while the teachers are the main implementers of educational policies, by way of teaching and guiding students. However, it remains to be seen how administrators and teachers in public schools perceive the effectiveness and long-term impact of online learning. Some may see it as a temporary solution during times of crisis, while others may see potential in incorporating online learning as a supplemental tool even after the pandemic has passed. Online learning's success and acceptance will most likely be determined by factors such as accessibility, technological infrastructure, and the ability to provide personalised support to students in virtual environments. This study investigated the perspectives of post-COVID-19 lockdown administrators and teachers on the impact of online learning on students' learning outcomes in public junior secondary schools in Rivers State.

Aim and Objectives of the Study

The study aimed to investigate the post-COVID-19-lockdown administrators' and teachers' perspectives on the impact of online learning on students' learning outcomes in public junior secondary schools in Rivers State. The specific objectives of the study include to:

1. Examine how administrators and teachers perceive the impact of online learning on student learning outcomes in the post-COVID-19 lockdown.
2. Ascertain how online learning can be improved to enhance student learning outcomes in similar circumstances as the COVID-19 lockdown, as reported by administrators and teachers.

Research Questions

1. How do administrators and teachers perceive the impact of online learning on student learning outcomes in the post-COVID-19 lockdown?
2. How can online learning be improved to enhance student learning outcomes in similar circumstances as the COVID-19 lockdown, as reported by administrators and teachers?

Hypotheses

1. Administrators' and teachers' perception of the impact of online learning on student learning outcomes in the post-COVID-19 lockdown does not significantly differ.
2. There is no significant difference in how online learning can be improved to enhance student learning outcomes in similar circumstances as the COVID-19 lockdown, as reported by administrators and teachers.

Literature Review
COVID-19 Lockdown and Online Learning

COVID-19, due to its highly contagious nature, led to widespread lockdowns across the globe. Governments implemented lockdown measures to stop the virus's spread and safeguard the public's health. Jribi et al. (2020) explained that the lockdown was a global strategy implemented by various countries around the world to limit the spread of Covid-19. Lockdowns were a common strategy that many nations adopted, even though different countries responded to the pandemic in different ways. Globally, the shutdown kept 1.37 billion students from attending classes (UNESCO, 2020).

In Nigeria, schools and universities were formally closed beginning March 20, 2020, to contain the spread of the COVID-19 pandemic (Lawal, 2020). As a result of the lockdown, institutions devised alternative methods to continue education, leading to

the rise of online learning. According to Burns (2020), what happened during the lockdowns was simply "putting contents online" and hoping students would learn on their own, which should not be a medium- or long-term strategy. Saghafi et al. (2014) and UNESCO (2020) explained that even though there is a clamour for online learning, it does not entirely replace the presence of teachers, pedagogical relationships, and activities that go on in the face-to-face environment, but highlighted the importance of technology in education and paved the way for innovative teaching methods that ought to continue even after the pandemic subsides.

Online learning and students' learning outcomes

Online learning, according to Ebohon et al. (2021), decreases practical skills; therefore, there is still a need to blend it with face-to-face teaching. Aldowah et al. (2019) described the impact of online learning on students' learning outcomes as mixed. While some studies have shown positive effects on academic performance and engagement, others have found challenges in terms of motivation and social interaction (Basilaia & Kvavadze, 2020; Khan & Abdou, 2021).

According to Sandybayev (2020), the learning outcome is defined as the knowledge, skills, and attitudes that students acquire as a result of their educational experiences. It encompasses both the content knowledge and the transferable skills that students develop throughout their learning journey. Almekhlafy (2020) explained that students' learning outcomes include their academic performance, academic achievements, and their ability to apply what they have learned in real-world situations. Mahyoob (2020) also highlighted that learning outcomes encompass the enhancement of analytical thinking capabilities, proficiency

in resolving complex issues, and mastery of persuasive communication aptitude.

Review of Related Studies

A. Impact of online learning on student learning outcomes

In their study, Aristovnik et al. (2023) employed bibliometric analysis to examine the influence of the COVID-19 pandemic on the realm of online learning within the context of higher education. The bibliometric analysis relies on a dataset of 8,303 Scopus papers that were published during the period from January 2020 to March 2022. This timeframe coincided with a series of recurring lockdowns that caused significant disruptions to the educational systems of numerous countries. The results suggest that the outbreak of the COVID-19 virus prompted the creation of various emergency methods for remote education, including e-learning, distance learning, and virtual learning.

Yahiaoui et al. (2022) used mixed methods to examine how e-learning systems motivate and improve students during COVID-19. Data analysis used mixed methods. The study was a survey of 398 students using questionnaires. The study found that e-learning systems significantly affect student motivation (attention, relevance, confidence, and satisfaction) and outcomes (knowledge, skills, and attitudes). The findings of Yahiaoui and colleagues are relevant to this study because they also investigated the impact of e-learning systems on student motivation and outcomes.

B. Online learning and improvement in student learning outcomes

In their study, Ozfidan et al. (2021) examined the various elements that

impact student contentment with online instruction and the efficacy of learning outcomes. Data was collected using an internet-based survey. Python with Scikit-Learn was utilised for data analysis, where regression functions and data classification were implemented. The research outcomes outline the criteria for successful distance learning amidst the COVID-19 crisis.

Research Methods

A survey research design was utilised in a study carried out in Rivers State, focusing on public junior secondary schools. The study's population consisted of 8,614, comprising 267 principals and 8347 teachers in public junior secondary schools in Rivers State (Rivers State Universal Basic Education Board, 2022). The sample size consisted of 541 participants, comprised of 160 principals and 381 teachers, which were ascertained using the Taro Yemen sampling formula. The technique of simple random sampling was employed to choose principals, whereas the technique of stratified simple random sampling was utilised to select teachers from various public junior secondary schools throughout Rivers State.

The data collection process involved gathering information from participants regarding their views on the influence of online education on the academic performance of students in public junior secondary schools located in Rivers State through the Post-COVID-19-lockdown Online Learning Questionnaire (POLQ). The tool consisted of a 20-question scale using a 4-point Likert scale, with a criterion mean of 2.5. The instrument's reliability was assessed using the split-half method, yielding a reliability coefficient of $r = 0.843$. Among the 541 questionnaires distributed, a total of 521 were completed correctly and utilised for subsequent analysis. These 521 questionnaires consisted of responses from 367 teachers and 154 principals. The research questions were answered using the mean score and standard deviation, and the hypotheses were tested at a significance level of 0.05 using the Z-test.

Data Presentation

Research Question 1: How do administrators and teachers perceive the impact of online learning on student learning outcomes in the post-COVID-19 lockdown?

Table 1: Mean and standard deviation of how administrators and teachers perceive the impact of online learning on student learning outcomes in the post-COVID-19 lockdown

S/N	Items	Principals (n=154)			Teachers (n=367)		
		$\bar{x}$	SD	Remark	$\bar{x}$	SD	Remark
.1	Using online learning has improved students' understanding of the subject matter	3.14	0.63	Agree	3.00	0.66	Agree
.2	The use of online learning increased students' engagement and participation in class discussions	2.85	0.88	Agree	2.96	0.68	Agree
.3	The use of online learning enhanced students' ability to collaborate with peers on assignments	3.00	0.89	Agree	2.90	0.77	Agree
.4	The use of online learning provided flexibility in terms of accessing course materials and lectures	3.46	0.67	Agree	3.12	0.53	Agree
.5	The use of online learning improved students' digital literacy skills	3.21	0.85	Agree	3.01	0.89	Agree
.6	The use of online learning has improved students' academic performance	2.30	1.08	Agree	2.94	0.85	Agree
.7	The use of online learning increased students' self-motivation and self-discipline	3.03	0.99	Agree	2.87	0.90	Agree
.8	The use of online learning has improved students' academic achievements	3.49	0.50	Agree	3.02	0.88	Agree
.9	The use of online learning facilitated the development of critical thinking skills	2.91	0.79	Agree	3.27	0.73	Agree
.10	The use of online learning enhanced the development of problem-solving abilities	3.22	0.62	Agree	3.71	0.50	Agree
	Grand Mean	**3.06**			**3.08**		

Criterion Mean = 2.5, Mean: 1.0-2.49 = Disagreed, 2.5-4.00= Agreed.

Table 1 shows how administrators and teachers perceive the impact of online learning on student learning outcomes in the post-COVID-19 lockdown. For the principals, the result showed that the majority of the principals agreed with items 1–10, having mean scores that are equal to or greater than the mean criterion (2.50), while few of the principals disagreed with some items. Similarly, of the teachers, most of them agreed with items 1–10, having mean scores that were equal to or greater than the mean criterion (2.50), while few of the teachers disagreed with some items, indicating that they perceived online learning to have a positive impact on student learning outcomes. The grand mean scores of 3.06 for principals and 3.08 for

teachers indicate that both principals and teachers generally believe that online learning has a positive impact on student learning outcomes. This consistency in perception across both groups strengthens the notion that online learning is widely recognized as beneficial for student learning outcomes.

Research Question 2: How can online learning be improved to enhance student learning outcomes in similar circumstances as the COVID-19 lockdown, as reported by administrators and teachers?

Table 2: Mean and standard deviation of how online learning can be improved to enhance student learning outcomes in similar circumstances as the COVID-19 lockdown, as reported by administrators and teachers

S/N	Items	Principals (n=154)			Teachers (n=367)		
		$\bar{x}$	SD	Remark	$\bar{x}$	SD	Remark
.11	Incorporating interactive and engaging multimedia content, such as videos, simulations, and virtual reality experiences	3.14	0.63	Agree	3.19	0.52	Agree
.12	Providing clear and structured online learning modules with well-defined learning objectives and step-by-step instructions can also contribute to improved student outcomes	2.85	0.88	Agree	2.99	0.71	Agree
.13	Providing regular and timely feedback to students, allowing them to track their progress and make necessary adjustments	2.86	0.94	Agree	3.64	0.66	Agree
.14	Utilising collaborative online platforms and tools that facilitate group work and discussions can also enhance student engagement and foster a sense of community	3.37	0.70	Agree	3.73	0.50	Agree
.15	Implementing adaptive learning technologies that personalise the learning experience based on individual student needs can further improve outcomes.	2.84	0.75	Agree	3.56	0.71	Agree
.16	Offering additional resources and supplementary materials, such as online libraries or academic databases, can provide students with a wealth of information and support their learning journey.	3.01	0.64	Agree	3.60	0.66	Agree
.17	Incorporating multimedia elements, such as videos or interactive simulations, can help cater to different learning styles and make the content more engaging for students.	2.92	0.70	Agree	3.15	0.55	Agree
.18	Online learning can be improved to enhance student learning outcomes by providing regular feedback and assessments to track progress and identify areas for improvement	3.00	0.54	Agree	3.13	0.62	Agree
.19	Incorporating collaborative activities and discussion forums can foster a sense of community and encourage peer-to-peer learning, further enhancing student engagement and understanding	3.25	0.74	Agree	3.57	0.60	Agree
.20	Integrating real-world applications and problem-solving tasks to help students connect theoretical concepts to practical situations, promoting deeper understanding and retention of the material.	3.30	0.58	Agree	3.36	0.62	Agree
	Grand Mean	**3.05**			**3.39**		

Criterion Mean = 2.5, Mean: 1.0-2.49 = Disagreed, 2.5-4.00= Agreed.

Table 2 shows how online learning can be improved to enhance student learning outcomes in similar circumstances as the COVID-19 lockdown, as reported by administrators and teachers. For the principals, the result showed that the majority of the principals agreed with items 11–20, having mean scores that are equal to or greater than the mean criterion (2.50), while few of the principals disagreed with some items. Similarly, of the teachers, most of them agreed with items 11–20, having mean scores that are equal to or greater than the mean criterion (2.50), while few of the teachers disagreed with some items, indicating that the teachers also recognised the potential benefits of implementing these strategies in online learning. The grand mean of 3.05 for principals and 3.39 for teachers suggests that both principals and teachers generally believe that implementing strategies in online learning can lead to improved student learning outcomes, but the teachers had a slightly more positive perception compared to the principals.

Hypothesis 1: Administrators' and teachers" perception of the impact of online learning on student learning outcomes in the post-COVID-19 lockdown does not significantly differ.

Table 3: Summary of Z-test on the difference in administrators' and teachers' perception of the impact of online learning on student learning outcomes in the post-COVID-19 lockdown

Participant	n	$\bar{x}$	SD	df	Z_{cal}	Z_{tab}	Sig.	Decision
Principals	154	30.61	3.96	519	0.50	1.96	0.61	Retain: H_{O1}
Teachers	367	30.80	4.01					

Table 3 indicates that $Z_{cal} = 0.50$, df = 519, and $Z_{tab} = 1.96$. Therefore, since $Z_{cal} < Z_{tab}$ and P > 0.05,

Administrators' and teachers" perception of the impact of online learning on student learning outcomes in the post-COVID-19 lockdown does not significantly differ. Therefore, the null hypothesis is upheld at a significance level of 0.05.

Hypothesis 2: There is no significant difference in how online learning can be improved to enhance student learning outcomes in similar circumstances as the COVID-19 lockdown, as reported by administrators and teachers.

Table 4: Summary of Z-test on the difference in how online learning can be improved to enhance student learning outcomes in similar circumstances as the COVID-19 lockdown, as reported by administrators and teachers

Participant	n	$\bar{x}$	SD	df	Z_{cal}	Z_{tab}	Sig.	Decision
Principals	154	30.53	4.00	519	9.86	1.96	0.00	Reject: H_{O2}
Teachers	367	33.92	3.39					

Table 4 indicates that $Z_{cal} = 9.86$, df = 519, and $Z_{tab} = 1.96$. Therefore, since $Z_{cal} > Z_{tab}$ and P < 0.05, there is a significant difference in how online learning can be improved to enhance student learning outcomes in similar circumstances as the COVID-19 lockdown, as reported by administrators and teachers. Therefore, null hypothesis two is not accepted at the significance level of 0.05.

Discussion of Findings

The result of research question one revealed that both principals and teachers generally believe that online learning has a positive impact on student learning outcomes. This consistency in perception across both groups highlights the consensus among educators that online learning is an effective tool for enhancing student learning outcomes in this 21st-century digital age. The test of hypothesis one revealed that administrators and teachers" perceptions of the impact of online learning on student learning outcomes in the post-COVID-19 lockdown did not significantly differ. The findings are consistent with the result of Aristovnik et al. (2023) conducted a study that highlighted the impact of the COVID-19 pandemic on the adoption of various emergency remote learning methods. These approaches, including e-learning, distance learning, and virtual learning, were implemented to minimise direct interaction between educators and learners. Yahiaoui et al. (2022) also revealed that e-learning systems significantly affect student motivation (attention, relevance, confidence, and satisfaction) and outcomes (knowledge, skills, and attitudes).

The result of research question two revealed that both principals and teachers generally believe that implementing strategies in online learning can lead to improved student learning outcomes, but the teachers had a slightly more positive perception compared to the principals. This positive perception indicates that educators are aware of the potential benefits and value of utilizing these strategies during challenging circumstances like the COVID-19 lockdown. The test of hypothesis two revealed that there is a significant difference in how online learning can be improved to enhance student learning outcomes in similar circumstances as the COVID-19 lockdown, as reported by administrators and teachers. The findings are corroborated by Ozfidan et al. (2021) who revealed eight criteria that contributed to the effectiveness of online learning during the COVID-19 pandemic. The criteria encompass encouraging students to succeed, proficiently conveying information, addressing students' individual needs, offering a wide array of content, presenting a well-structured course layout and ample resources, delivering informative feedback, and fostering engaging conversations.

Conclusion

The study investigates the post-COVID-19-lockdown administrators' and teachers' perspectives on the impact of online learning on students' learning outcomes in public junior secondary schools in Rivers State. The study concludes that both administrators and teachers agree that online learning has had a noticeable impact on students' learning outcomes during the post-COVID-19 lockdown. However, they also acknowledge the need for improvements in online learning methods to further enhance student learning outcomes in similar circumstances. This can be achieved through various means, such as providing more interactive and engaging online content, incorporating effective assessment strategies, and offering adequate support and resources to both students and teachers.

Recommendations

1. Educational institutions should provide comprehensive training and support for both administrators and teachers to effectively implement online learning strategies during similar circumstances as the COVID-19 lockdown.
2. Collaborative efforts between administrators and teachers should be encouraged by the Rivers State government to develop innovative approaches and resources that can enhance student engagement and motivation in online learning environments.

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THE IMPACT OF NETWORKING AND COMMUNICATIONS TECHNOLOGIES AND INTERNET PENETRATION IN THE IMPLEMENTATION OF CASHLESS POLICY IN NIGERIA

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Abstract
The Central Bank of Nigeria (CBN) has introduced a cashless policy since 2006, which was officially launched in Lagos on January 1, 2012, and expanded to other states by the end of the year, enabling transactions online until 2023, when Nigeria Launch. When the new naira banknote was launched, the currency only caught the eye due to excess cash flow in the system. It exposes a lot on the technical side of the transaction. This work, also talks a lot about technology in terms of network coverage, technology, literacy and Internet availability and penetration which are fundamental tools to implement a cashless policy. This article defines the different types of networks, their intended use, and the usability issues they encounter. The conclusions derived from this work will provide insights into the potential challenges to the successful implementation of cashless policy, and deliver recommendations for improving the challenges and enhance effective provision of communication and networking infrastructures in Nigeria to support the shift to a cashless economy.

Keywords: Electronic banking, Network Technologies, cashless policy, and Network Coverage

Introduction

A cashless economy is one in which a given society is regulated to have a minimum required amount of cash in circulation and the rest of the money is obtained through the use of direct debits, mobile payments, electronic transfers of funds, online banking, multi-function ATM (ATM), point-of-sale (POS) terminals, etc. (Ezuwore-Obodoekwe, Eyisi, Emengini, & Chukwubuzo 2014). In short, cashless economy involves the pervasive application of various computer technologies in the financial system (Oluwabiyi 2015.). The system makes room for goods and services that individuals can purchase without exchanging what is known as electronic cash for anything tangible. The word currency still exists, but it is more in the form of electronic processes than before.

In today's banking environment, the more technology-driven a bank is, the larger its customer base of will be. This is because we are in a generation where five (5) year olds know how to use a computer and surf the web. It has even evolved into daily buying and selling, for example: Amazon, Jumia, Alibaba e.t.c have created a platform where shoppers around the world can order the stock of their choice and receive it within days. All buying and selling transactions that take place have a common link to facilitate smooth transactions in these outlets. Regular bonds are the services of banks acting as clearing and settlement agents for all such transactions. The world today is known as a global village due to electronic clearing and settlement by banks around the world.

Therefore, the importance of banks cannot be overstated as they are important engines of economic growth (Godswill, Ailemen, Osabohien, Chisom and Pascal, 2018).

Advances in technology are driving rapid changes in today's business environment. Today, most businesses conduct their business through electronic commerce (e-commerce). E-commerce is doing business on the Internet, and it is also being adopted by the banking industry. The banking sector has undergone profound changes. The activities of banks have shifted from the manual way of providing services to electronic banking. In the past, every transaction had to be done at the counter in the bank lobby and customers had to queue for a long time to deposit or withdraw money. But after the launch of online banking in China in 2003, service delivery improved and competition among banks intensified dramatically. Most of the developed countries like UK, Norway, Denmark, Sweden and many more have embraced a modern cashless country driven by online banking unlike the lagging Nigeria. This is due to the unavailability of network providers in some places like rural areas. Against this background, this study aims to investigate the cyber technical issues affecting transparent transactions in cashless policies, the various networks used in Nigeria and the issues related to them. The second part is a review of the literature covering conceptual, theoretical and empirical investigations. We take an explanatory approach in each of our explanations, while some parts focus on cashless implementation of the explained information gathered. We end our investigation with recommendations and conclusions.

Conceptual framework
The conceptual framework of this work can be simple summarized with the diagram below:
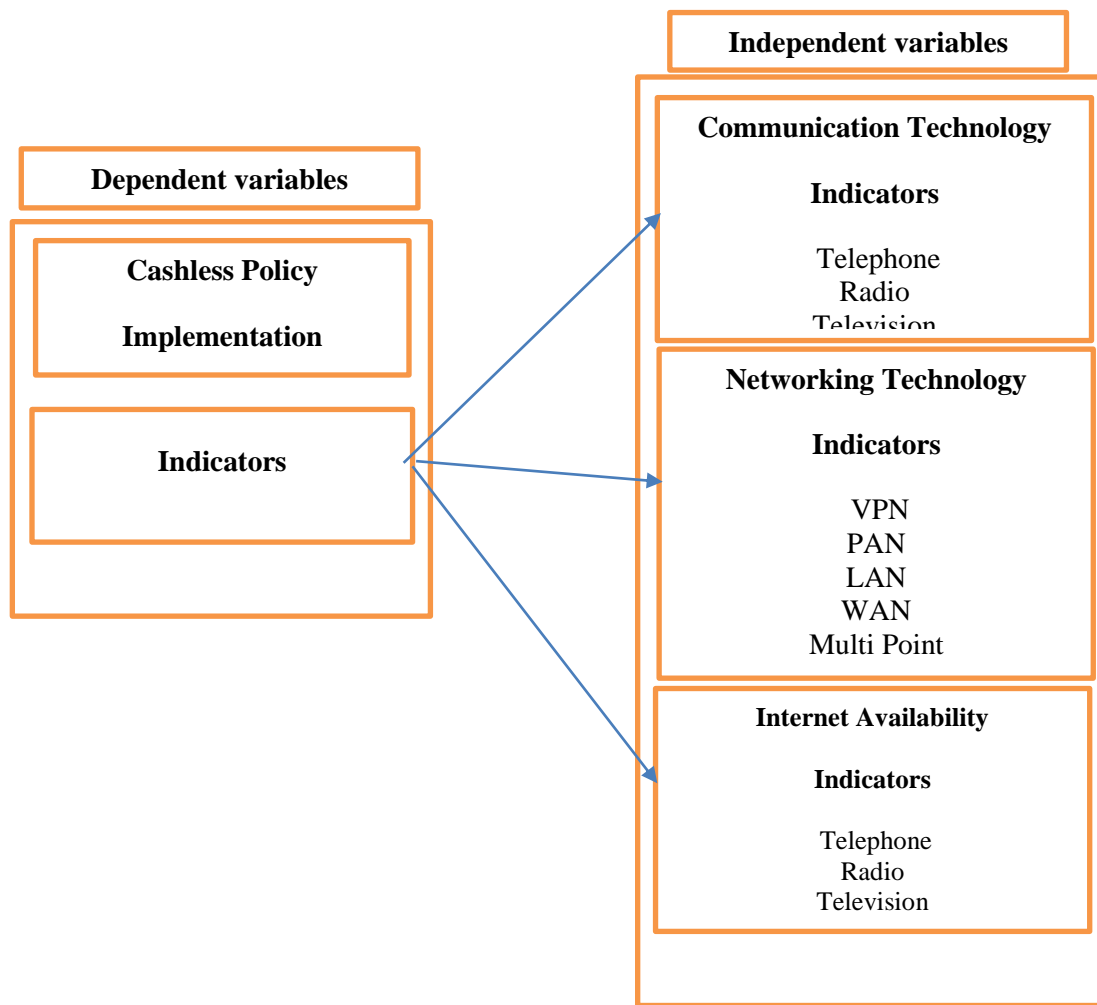
Fig 1: Conceptual framework explained

  1. **Cashless Policy**

Cashless policy is simple a policy that tends to discourage the use of huge raw cash for transactions but it encourages the use of bank transfer, ATM card, POS, and other financial instruments for transferring cash in transactions. For effective

  2. **Communication Technologies**

Communication technology refers to all the tools used to send, receive and process information. In today's fast-paced environment, efficiency and convenience are the keys to the success of communication technologies. Each communication technology device affects the way information is distributed and

continues to improve the communication experience.

Types of communication technologies

Technology has reshaped the way people communicate. What started as a simple device has become a communication channel connecting the world? There are four main types of communication technologies that facilitate messaging: telephone, radio, television, and the Internet.

Telephone

The telephone has revolutionized verbal communication. People can talk to each other anywhere in the world, strengthen interpersonal relationships and eliminate

long-distance communication worries. Talking to people across the country is as easy as talking to people on the street.

As technology advances, equipment changes from a "telephone" to a "mobile phone". Equipment that used to be heavy can now easily fit in your pocket. Modern phones are not only portable; they are also very functional.

With the advancement of the telephone, it introduced new forms of visual and written communication. Today, electronic versions of text messages and photos are often sent via mobile phones, increasing the potential volume of information shared via mobile phones. The phone introduced a whole new way to speak, write and communicate visually, and exciting new features continue to change the game of communications technology.

Radio
About two decades after the invention of the telephone, radio communication came into play. Another innovation in the field of oral communication was that radio was used to reach large audiences instead of just one person at a time at other end of the phone. The ability of the radio to reach large audiences at low cost continues to inspire many communicators to take full advantage of the tool. Information providers, such as advertisers and news media, spend a lot of time using radio technology to communicate with their large audiences. Radio technology has changed the way information is delivered to large audiences and continues to improve mass communication.

Television
Television is another way to reach your audience, but with a new advantage: visual communication. Some information is difficult to describe in words. Television offers viewers the best of both worlds: information and images. This advantage led

television to replace radio as the primary tool for mass communication.

Today there are thousands of television channels broadcasting information on almost every subject: history, sports, current affairs, science, fiction, etc. Whether for entertainment or hard facts, people constantly turn to television for information.

Internet
The Internet eliminates the need for communicators to have separate equipment for each type of communication technology. With the Internet, you can do it all in one place. As the queen of interactions, the Internet has managed to collect all types of communication technologies and house them in one place. It offers the widest variety of information and communication resources known to man.

The tools available on the internet make any type of communication effortless. Both verbal and non-verbal communication can be achieved using video conferencing software. Written messages can be sent by e-mail. Electronic versions of images can be sent or received from any Internet-enabled device. The Client Communication Software is another example of one of these tools. While other gadgets help streamline communication between businesses and consumers, some tools can often be considered hybrids, combining different types of communication. Live chat is a rare hybrid tool that combines all types of communication (verbal, non-verbal, written and rich media) via audio and video conferencing software, instant messaging and file sharing capabilities. customers can place orders, ask questions or solve problems via live chat, all on one customer communication platform. This gives them access to companies and allows them to contact an agent if they have a question. Connecting has never been easier with live

chat software. WhatsApp is a good example of real-time chat communication technology. This versatile application not only allows you to share instant messages, images and videos, but also to make video and voice calls. With WhatsApp Business Edition, you can also automatically send messages and instantly reply and communicate with your customers. Communication technology makes the bond between people stronger than ever. But to ensure the proper functioning of these networks, all the interactive devices used must also be connected. This is called information and communication technologies.

3. Networking Technologies

Web technologies involve the use of data systems to manage and deliver digital resources over computer networks. Many industries use computer hardware and system software that maintain networks, so it takes experts to manage it.

Data exchange techniques between large and small messages. The technology can be used by educational institutions and businesses. A network technician knows how to install, configure, and troubleshoot network technologies that can be used to send digital data such as audio, data, and video files.

Using the network, users can send messages, files via email or other channels as per the requirements of the organization.

Expanding networks primarily involves assessing organizational and information needs of the business and estimating the costs of hardware, training, installation, security, and account management. Once the network is installed, the technician takes care of the operation of the network by providing technical support to the employees of the organization in the event of a problem.

Types of Network Technologies
The classification of network technologies can be made based on transmission and scale. By using this technology, data transmission and exchange can be performed.
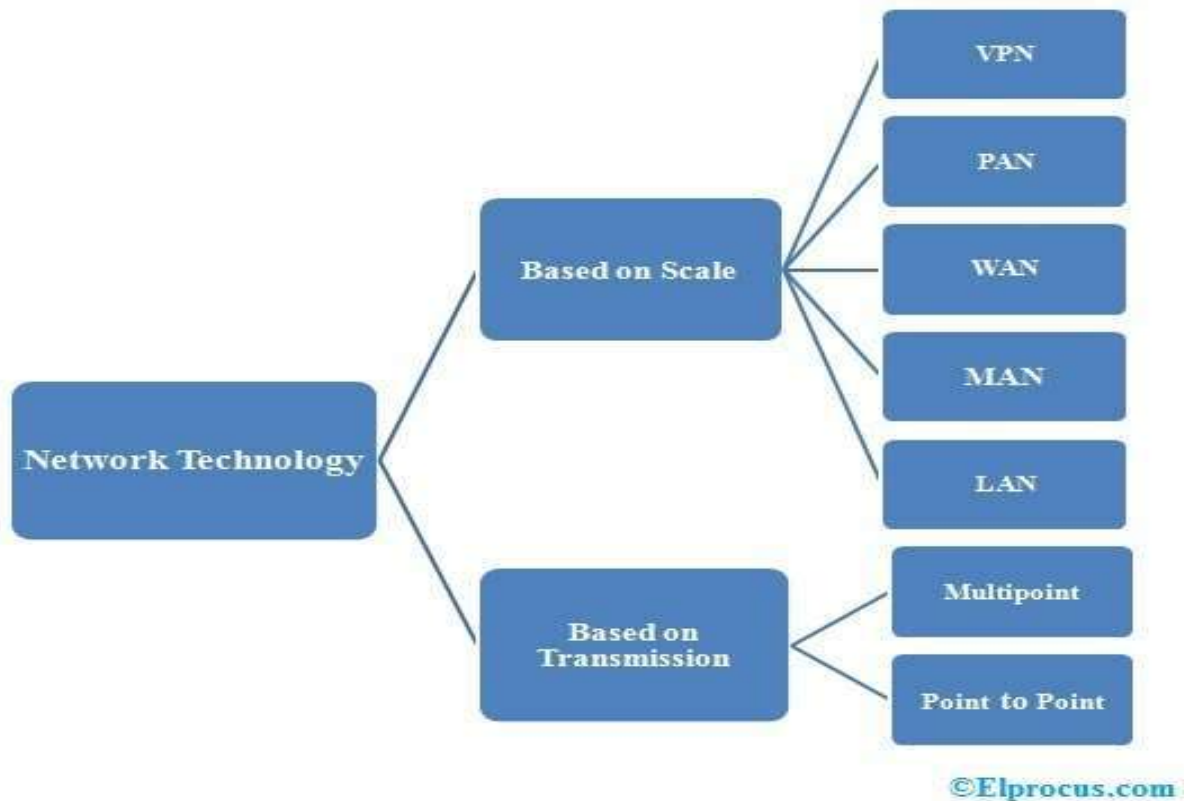
Fig 2 Types-of-Network-Technology

Network Technology Based on Transmission
The network technology based on transmission can be done using the two concepts like point-to-point and multipoint

Point to Point
In point to point, when sender & receiver (nodes) are connected directly, then the data transmission can be done with the help of a guided medium, used for the wired network and unguided medium, used for the wireless network. The following image shows the point to point network technology.

Multi-point
In multi-point, several nodes are connected directly with the help of a common medium in a linear manner. The following image shows the multi-point network technology This kind of transmission mainly works on any of these two connections like time-sharing otherwise spatially shared. In the first connection, every node is accessible with a separate time of slot to converse, whereas, in the second connection, the communication between the nodes can be done simultaneously at a time

Network Technology Based on Scale
The network technology based on the scale can be done using concepts like LAN, MAN, WAN, PAN, and VPN.

LAN (Local Area Network)

An alternate name of LAN is IEEE 802 network and this network uses devices like computers, laptops, and mobiles that are connected in a small range which ranges from 100m to 10km. The properties of this network mainly depend on its users, speed, range, as well as error rate.

The main elements of LAN mainly include the following.

- Peripheral devices like printers, scanners, etc.
- A HUB or the middle of a network can be accountable for attracting the signals. It is smart enough for transmitting the data packets from the sender to the receiver.
- Cables like twisted pair, optical fiber, and coaxial cables are used as backbone cables due to their high bandwidth capacity.
- Nodes/PC/computer/Host/server/workstation
- Network interface card- NIC

MAN (Metropolitan Area Network)

A network where numerous LANs are united jointly through a networking device is known as Bridge, and it forms a MAN (metropolitan area network). The following image shows the MAN technology in computer networks.

WAN (Wide Area Network)

A network where numerous WANs are united jointly through a networking device is known as route, and it forms a WAN (wide area network). The following image shows the WAN technology in computer networks.

There are two types of WANs namely public WAN and private WAN.

- **Public WAN:** This kind of WAN is handled through government divisions.
- **Private WAN:** This kind of WAN is expanded by the departments of the US Military, Defence wing known as ARPANET.

WAN Elements

- The elements of WAN are bridge, router, and gateway
- The bridge is a device, used to connect related otherwise different LANs.
- The router is a device, sued to connect related otherwise different networks.
- Gateway is one kind of device, used to connect networks by using various types of architectures. For instance, by using this gateway, communication between a mobile device containing 4G connection & landline device containing 2G connection

PAN (Personal Area Network)

A PAN (Personal Area Network) is a computer network that enables communication between computer devices in close proximity to individuals. These networks can be wired like USB or FireWire, or wireless like IR, Ultra Wideband, and ZigBee. The range of this network is typically a few meters. The best examples mainly include wireless keyboards, mobile phone headsets, printers, barcode scanners, wireless mice, and game consoles. This network is mainly used for personal purposes.

VPN (Virtual Private Network)

Virtually enables a VPN (Virtual Private Network) on a public network for communication and data transfer from sender to recipient. This network creates a secure encrypted link over a less secure network such as the public Internet. The network uses tunneling protocols to encrypt and decrypt data at the sending and receiving ends. Benefits of the network technology include the following points.

- It is very flexible

- It improves communication and accessibility of information.
- It allows easy sharing of resources.
- Files can be easily shared.
- Cost reduction
- Storage capacity will be increased. Disadvantages of Disadvantages of network technology are as follows.
- He lacks independence and robustness.
- It creates security issues
- It allows viruses and malware.
- He needs an efficient operator.

Proprietary setting required.

Internet Availability and Penetration
This is defined as the ability to send packets from the customer environment located in a closet or suite in the space to a public Internet outlet.

Coverage refers, together with telephone and Internet, to the area covered by a service provider when it provides Internet or telephone. If the coverage area is large enough, the provider can cover all services in the area. It doesn't have to be something you have or don't have, but it can be something really bad or something really good.

In general, it can be said that Internet and telephone coverage is steadily improving. This is the result of public investment, but also depends on private players and their development of services that meet customer needs. The increase in coverage has had a huge impact on jobs and more.
- When coverage is good, you can perform most tasks that previously required a municipal office. In other words, improving coverage is a way to expand Sweden's influence. When it comes to more advanced services, it must have good coverage everywhere in large buildings. Quality of coverage depends on your location.

- Optimum indoor coverage requires signal-boosting equipment, such as repeaters.
- Different service providers have varying degrees of good coverage in certain areas
- Check maps showing coverage
- Mobile coverage and Internet coverage are not always the same
- There are many things you can do yourself to improve your coverage Scope
- Coverage improvements transforming society and our opportunities

4. Cashless Policy
As explained by major banks, cashless policies aim to expand financial inclusion as well as armed robbery, kidnapping, terrorist financing, prepaid fees and to reduce fraud, corruption, ransom payments, extortion and other crimes.

There are 900,000 POS terminals across the country, 14,000 ATMs and 1.4 million agents across the country promoting a cashless policy. Considering the development of electronic transactions in recent years, it is equally impressive that Nigerians have embraced CBN's cashless policy.

From 48 billion naira in POS transactions in 2012, today we have 6 trillion naira. Similarly, e-transfers increased from 3 trillion naira in 2012 to 300 trillion naira in October 2022, an increase of 7,000%. According to the Nigeria Communications Commission, mobile phone penetration in Nigeria has reached 152 million, further complementing the cashless policy.

5. Commercial Banks
A commercial bank is a financial institution engaged in all activities related to deposits and withdrawals from the public, providing investment loans and other similar activities. These banks are for-profit institutions that operate solely for profit.

The two main characteristics of commercial banks are lending and borrowing. Banks receive deposits and donate the money to various projects to earn interest (profits). The rate at which a bank offers depositors is called the lending rate, and the rate at which the bank lends funds is called the lending rate.

Functions of **commercial banks:**
The functions of commercial banks are **divided** into two main **parts.**

(a) **Main Functions**
Collection of deposits: Banks accept deposits in the form of savings, demand and term deposits. Surplus balances collected from businesses and individuals are lent to the specific needs of commercial transactions.

Provision of Loans and Advances: Another important function of this bank is to provide loans and advances to entrepreneurs and businessmen and collect interest. For each bank, this is the main source of profit. In this process, the bank keeps a small deposit as a reserve and provides (loans) the remaining amount to the borrower in the form of demand loan, overdraft, cash credit, loan short term, etc.

Credit Cash: When customers receive credits or loans, they do not receive cash. First, a bank account is opened for the client and the money is transferred to this account. This process allows banks to create money.

(b) **Minor function**
Bill of exchange discount: This is a written agreement confirming the amount to be paid for goods purchased at a specific time in the future. The amount can also be settled before the quotation time through the discount method of commercial banks.
Overdraft Facility: This is a down payment made to a customer by maintaining a current account overdrawn within a given limit. Buying and selling securities: Banks give you the opportunity to buy and sell securities.

Lockers: Banks provide lockers for customers to keep valuables or documents safe. The bank charges a minimum annual fee for this service.

Payment and Collection of Letters of Credit: This uses different instruments such as promissory notes, checks and money orders.

Types of commercial banks: There are three different types of commercial banks.

Private Bank -: This is a type of commercial bank where individuals and businesses hold the majority of capital. All private banks are registered as limited liability companies. Banks like Housing Development Finance Corporation (HDFC) Bank, Industrial Credit and Investment Corporation of India (ICICI) Bank, Yes Bank, etc.

Public Bank –: This is a nationalized bank in which the government has a significant stake. For example, Bank of Baroda, State Bank of India (SBI), Dena Bank, Corporate Bank and Punjab National Bank.

Foreign banks - These banks are established abroad and have branches in other countries. Such as American Express Bank, HSBC Bank, Standard Chartered Bank, Citibank and so on. Examples of Commercial Banks Here are some examples of commercial banks in India:
1. State Bank of India (SBI)
2. Housing Development Finance Corporation (HDFC) Bank
3. Industrial Credit and Investment Corporation of India (ICICI) Bank
4. Dena Bank
5. Corporate Bank

This is the commercial bank with a detailed explanation of the functions of commercial banks. For more on these concepts, stay tuned to BYJU'S.

When talk about cashless policy, the question at hand supposed to be how does this policy work. Also how does all this above explanation connect to achieve cashless policy? Let look at the below illustrations.

4. Cashless Policy Implementation
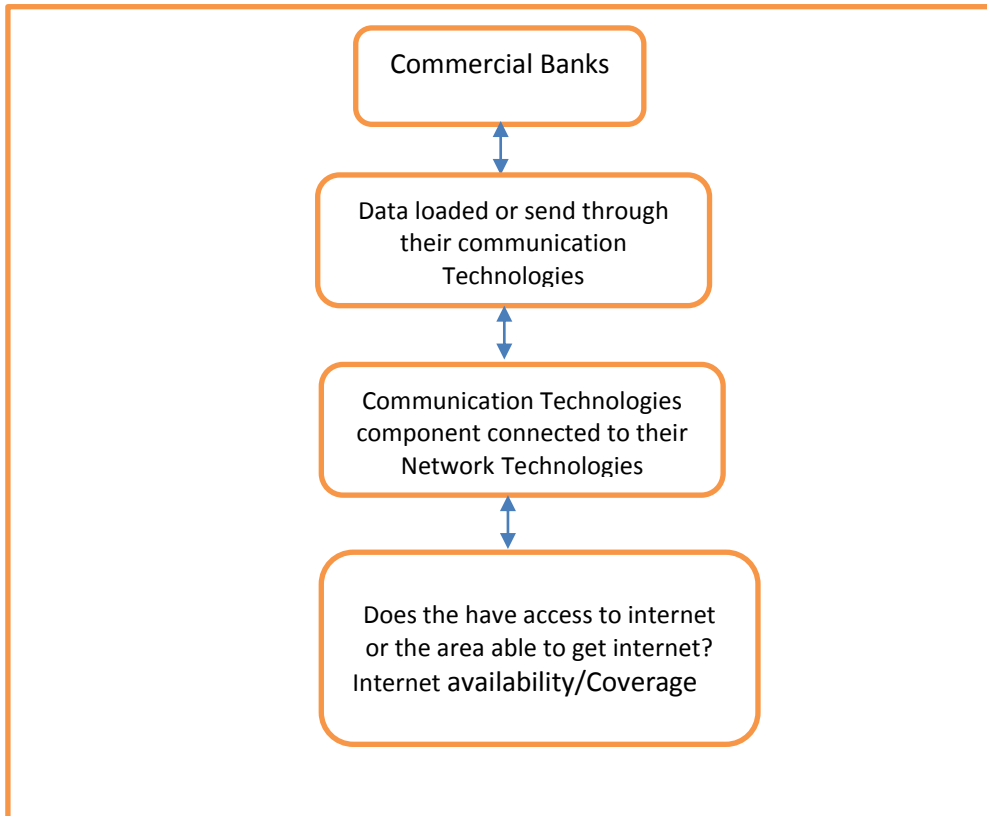
The information flow above might be from customer to bank his bank or being communicated from bank to bank respectively. Let us illustrate with fig 3 how customers communicate to their banks during cashless era.
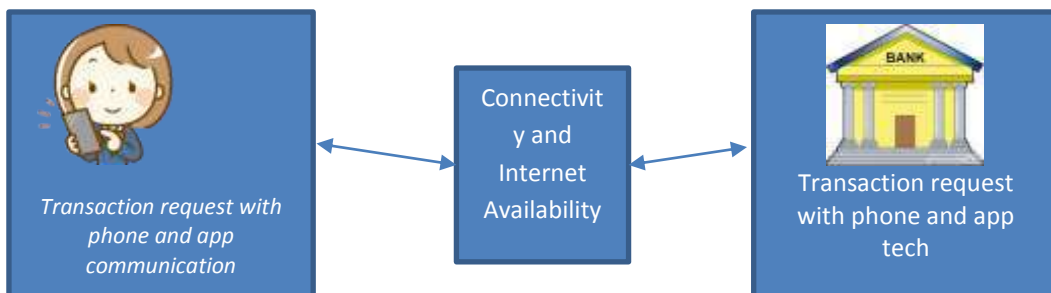
Fig 4: Communication Flow

The information above can be explaining as follows:

Customer make request through any communication technologies (Phone, bank app, USSD etc) which can only go through if there is availability of network or there is an internet coverage provider that covered the place where the customer reside. The information gets to the bank through the bank communication technologies that processes the request of the customer which might be to debit, check previous transactions etc. if it is the case of previous transactions, the sender might turn to be the receiver of the information. But in the case of debit the bank will communication technologies, in this case is the application software will check if the request of the debit is between or does it involve another bank. If it involves another bank, the sender bank will try to connect to the other bank eg First bank and Union bank transactions. Which the debit request will be done from the customer who request for the transaction to the receiver will be credited. This is while there is a little glitch when it comes to interbank transactions because there is comparison of two bank internet coverage. Because if first bank network or their communication device has problem, the transaction can be through even if the Union bank network or communication device is excellent. But the same bank transaction is more easy than interbank cashless methods. There must be feedback which enable the initiator to know the status if the transaction went through or not and the receiver will also receive notice and also an increment notice that in favor of his/her.

As you can see, without all this technology being put in place cashless policy implementation can't be possible. There is need that both customer operates a phone or sometime computer which serve as a communication technology. The gadget to be use must have a way of communication to outside the phone by a network provider which serves as the network technology and any network choose must be able to cover the particular locality as the given place providing internet services or something equivalent for it for those who uses band USSD.

Recommendation

In my own opinion, I will state as follows:

- Government should help in providing Network in Nigeria by price regulation and extending it to various rural areas.
- Improve ability through expertise and enabling technologies to detect and prevent breaches.
- Understanding the source of the breaches can help organizations strengthen their cyber security strategy.
- Complexity is recognized as a barrier to effective network security strategy. Organizations should assess their current procedures and technologies to understand how best to streamline their approach and have an end-to-end (holistic) approach to network security

Conclusions

This study has finally concluded that cashless policy is very important to the Nigerian economy and therefore, Network coverage in various communities and the platforms for achieving this policy must be promoted. This platform consists of automated teller machines, point of sale machines, web banking and mobile banking. Moreso, while Nigeria has made significant progress in the development of communication and networking technologies, and internet availability and coverage, there are still gaps that need to be addressed to ensure the effective implementation of a cashless policy by commercial banks; hence the need for this study. The recommendations made in this study should help commercial banks in

solving the various challenges associated with cashless policy implementation in Nigeria

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HUMAN CAPITAL DEVELOPMENT AND FINANCIAL PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA.

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Abstract

The study determined the relationship between human capital development and financial performance of deposit money banks in Nigeria, using an ex-post-facto research design. The 22 listed commercial banks in Nigeria are our population. The sample size of this study was two listed commercial banks in Nigeria, obtained using the purposive sampling technique, spanning 2010 to 2022. These 2 banks (Fidelity Bank and UBA) have the required up-to-date information needed by the researcher. Secondary data obtained from the Nigerian exchange group were analysed using multiple regression. The study revealed that a significant relationship exists between human capital development and the financial performance of DMBs in Nigeria. Hence, the researcher concluded that a significant relationship exists between human capital development and financial performance of DMBs in Nigeria. The researcher further suggested that deposit money banks in Nigeria should develop customised financial training programmes that align with their specific needs and objectives. Also, the management should offer competitive compensation packages and benefits to attract and retain top talent in the industry to boost profitability. More so, policymakers should implement skill-based pay scales because this could incentivize employees to acquire additional skills and expertise that directly benefit the bank's operations.

Keywords: Human capital development, training cost, salary financial performance

Introduction

The financial sector acts as a catalyst for achieving sustainable economic growth as well as encourages viable investments, efficient resource allocation and stimulates various trading activities in Nigeria. The efficiency of the banking system determines how well the financial sector is functioning in any given economy. The banking sector fulfils the intermediary role and sustains economic growth. Banks serve as the backbone to the sustainable development and robust nature of the Nigerian financial sector (Boateng, 2019; Samuel, 2018; Tsegazeab, 2019). For the banking system in Nigeria to be branded efficient and effective, it ought to be profitable and serve as the financial intermediary between the poor and the rich individuals. Hence, banks' profitability is a key driver for investors when analysing the performance of management (Magoma, et al., 2022). Thus, investigating the performance of the bank is significant to all interested parties, such as the management of the banks, the central bank of Nigeria, and all individuals and firms who affect or are affected by the performance of these banks (Al Zaidanin, 2020).

Today, one of the core focuses of modern financial institutions around the world is attracting and retaining innovative and robust workforce that will continue to add value to the organisation and help the organisation stay on track towards cost-

effective growth and profitability in the long-run. Strengthening the organisation's human capital might mean changing how work gets done, adjusting where investments are made and how they are managed, and empowering the workforce. Therefore, no organisation can thrive without an efficient and productive workforce. Human capital development refers to the process of enhancing the skills, knowledge, and capabilities of a workforce, while financial performance in the context of deposit money banks typically relates to measures such as profitability, asset quality, liquidity, and efficiency (Eke et al., 2023). A well-developed human capital can positively impact a bank's financial performance. Thus, when employees have the necessary skills and knowledge, they are more likely to make informed decisions, provide better customer service, and manage risks effectively. This can lead to improved asset quality and profitability.

Human capital development can foster innovation within banks. Employees with strong skills can develop new products and services, adapt to changing market conditions, and stay ahead of competitors (Eke et al., 2023). This innovation can contribute to revenue growth and enhanced financial performance. A highly skilled and motivated workforce tends to be more productive. Productivity gains can lead to cost reductions, which can positively affect a bank's profitability and efficiency ratios. Effective risk management is crucial for the financial stability of banks. Human capital development can help banks identify, assess, and manage risks more effectively, reducing the likelihood of significant financial losses. Well-trained and motivated employees are more likely to provide excellent customer service. High levels of customer satisfaction can lead to increased customer loyalty, which can, in turn, boost a bank's financial performance through higher deposits and lower customer acquisition costs. A well-educated workforce can better understand and adhere to complex banking regulations. Sumon and Abu (2019), stated that compliance with regulatory requirements is essential to avoid fines and penalties, which can negatively impact a bank's financial performance. High turnover rates among bank employees can be costly in terms of recruitment, training, and lost knowledge. Human capital development efforts can help reduce turnover rates and associated costs, contributing to better financial performance. A bank with a well-developed human capital strategy may inspire greater confidence among investors, which can lead to higher stock prices and lower funding costs (Elena et al., 2022). Investing in human capital development is often a long-term strategy. While the initial costs may be significant, the long-term benefits in terms of financial performance and sustainability can be substantial.

Arguing the necessity of human capital investment, Mbah et al. (2018) stated that investment in human resources assists personnel to have a solid grasp of their responsibilities or obligations and provides a strategy for competitive advantage in the contemporary business space. However, it's important to note that the relationship between human capital development and financial performance is not always straightforward. Other factors, such as economic conditions, regulatory changes, and market competition, can also significantly influence a bank's financial performance. Additionally, the effectiveness of human capital development initiatives may vary from one bank to another, depending on their specific strategies and implementation.

In this competitive world, training plays an important role in the competent and challenging format of business. Training is the nerve that suffices the need for fluent and smooth functioning of work, which helps in enhancing the quality of work life

of employees and organisational development too (Pabitra & Bijaya, 2020). Development is a process that leads to qualitative as well as quantitative advancements in the organisation, especially at the managerial level. It is less concerned with physical skills and is more concerned with knowledge, values, attitudes, and behaviour in addition to specific skills. Hence, development can be regarded as a continuous process, whereas training has specific areas and objectives. So, every organisation needs to study the role, importance, and advantages of training and its positive impact on development for the growth of the organization. Training implies constructive development in such organisational motives for optimum enhancement of the quality of work life of the employees. Various types of training and development programmes help in improving employee behaviour and attitude towards the job and also uplift their morale (Pabitra & Bijaya, 2020; Sumon & Abu, 2019). Thus, employee training and development programmes are important aspects that need to be studied and focused on, as organisation development and training are complementary to each other.

Employees typically have a contract of employment and receive compensation in the form of wages, salaries, fees, gratuities, piecework pay, or remuneration in kind. An adequate number of skilled staff is critical because overstaffing and understaffing can both contribute to a decrease in productivity (Nzyoka et al., 2019). Expounding on the decrease in productivity, Engetou (2017) explained that overstaffing wastes money and ties up capital while Staff shortages lead to more work and less supervision, which makes it likely that a business won't achieve its goals. However, the author stressed the overarching importance of qualitative personnel and not just numbers in achieving organisational goals or objectives (Khudhair et al., 2020). Banks must ensure

that they have an adequate number of employees to effectively manage risk, compliance, and internal controls. Failure to do so can result in regulatory fines and legal issues, which can negatively affect profitability. The number of employees can impact a bank's ability to generate revenue. For example, a bank with a larger sales and marketing team may be more successful in acquiring new customers and increasing its deposit base, which can lead to higher profits. In some cases, larger banks with more employees may benefit from economies of scale. This means that as they grow, their average cost per employee may decrease, leading to improved profitability. The impact of the number of employees can also be influenced by the competitive landscape in the banking industry (Joe et al., 2020). If competitors have significantly fewer employees but are still profitable, it may prompt a bank to reevaluate its staffing levels.

Statement of the Problem
It is undisputable that the banking sector of Nigeria is one of the most vibrant sectors in the Nigerian economy, with its usual lead on the activity chart at the stock market in terms of volume, especially within the last two decades. Gberevbie (2012), noted that a vital challenge of the Nigerian banking sector is performance, and this has been in existence since inception. He remarked that lack and shortage of competent manpower are among the core challenges that have made it impossible for the banks to execute their mandate, and that is why the sector has witnessed a lot of ups and downs that have made the projected banking sector contributions to the GDP of Nigeria by the IMF in 2007 unachievable. According to Sanusi (2012), the problem of the banking sector in Nigeria is multifaceted and ranges from inconsistent government policies to a bloated work force with low labour per capita output.
Again, the high rate of labour turnover ratio in the Nigerian banking sector over the last

two decades has been adjudged to be the highest in the history of the banking sector in Nigeria. Over 5000 staff members of the entire banking sector lost their jobs within the last ten years alone. This calls into question the impact of human capital on the performance of the banks. It is believed that if these workforces laid off often have been contributing very well to the performance of these banks, they are not expected to be laid off massively within the shortest intervals. However, there are quite a few studies on human capital development and banking sector performance in Nigeria. Some studies have established a shortage and deficit of competent employees in the Nigerian banking industry as among the numerous factors that have contributed to ineffective operational performance for their customers (Pabitra & Bijaya, 2020; Gimba & Anyanwu, 2022; (Magoma et al., 2022; Sanusi, 2012). Hence, there is a need to investigate human capital development and banking sector performance in Nigeria.

Objective of Study

The study investigated the relationship between human capital development and financial performance of deposit money banks in Nigeria. However, the specific objectives of this study were to;
 i. Determine the relationship between employee training cost and profit after tax of deposit money banks in Nigeria.
 ii. Determine the relationship between number of employee and profit after tax of deposit money banks in Nigeria.
iii. Investigate the relationship between employee salary and profit after tax of deposit money banks in Nigeria.

Literature review and Hypotheses Development
Human Capital Theory
The human capital theory was introduced by Gary Becker and Theodore Schultz in 1961. The fundamental postulation of human capital theory stated that the investments on education and training

could add to productivity which has become an increasingly important component of the workforce. Thus, human capital theory rests on the employees' finance of the expected returns on productivity. Gimba and Anyanwu (2022), recognized that human capital theory holds competences, skills, data and skills of the personnel that contribute to the performance. He also stated that companies have an incentive to seek productive human capital and to add to the human capital of their existing employees. Subsequently, Freeman (1976) critiqued the human capital theory by pointing out the difficulty of measuring the future income and the central idea of human capital itself. Freeman stated that not all investments in education guarantee an advance in productivity as judged by employers or the market.

Employee training cost and financial performance of deposit money banks in Nigeria (profit after tax)
Employee training plays a crucial role in improving the overall performance and profitability of deposit money banks. It can lead to increased productivity, customer satisfaction, risk management, innovation, and cost control, all of which contribute to higher profit after tax. Additionally, it helps banks stay competitive, compliant with regulations, and resilient in the face of industry challenges. Accordingly, Obikwelu (2018) revealed that human capital development has a positive relationship with manufacturing output, though statistically significant. Abosede et al. (2018), revealed that human resource management significantly affects banks' non-financial performance. The findings further revealed that reward management and employee performance management both have significant effect on the non-financial performance of banks in Nigeria, while employee resourcing does not have a significant effect on the non-financial performance of banks in Nigeria. Imeokparia and Oyinloye (2020), revealed

that investment in human capital development has a positive and significant impact on bank ROA. Ezekwesili and Ezejiofor (2022), revealed that human capital investment has not positively and significantly affected return on capital employed of listed deposit money banks in Nigeria. On the contrary, Ame et al. (2023), indicated that human capital had little influence on their financial performance. Ezejiofor and Ezekwesili (2022), revealed that human resource investment has no significant effect on both return on equity and earnings of deposit money banks. Based on the majority results of these reviews which reported significant positive relationship, the first alternative hypothesis was stated below;

Ha1: Employee training significantly affect the financial performance ((profit after tax) of deposit money banks in Nigeria.

Number of employee and financial performance of deposit money banks in Nigeria (profit after tax)

The productivity of employees plays a critical role. If a bank has a large workforce but they are not efficiently utilized, it can lead to lower profitability. Banks should focus on training, technology adoption, and performance management to ensure that employees are contributing to the bank's bottom line. A higher number of employees can lead to increased operating costs, including salaries, benefits, and training expenses. If not managed efficiently, this can negatively impact a bank's profitability. Banks need to strike a balance between having an adequate workforce to meet their operational needs and controlling labor costs. Accordingly, Rahman and Akhter (2021), revealed that human capital investment in terms of number of employees were positively connected to bank performance. Ali and Chaudhry (2019), showed that human capital in consideration of adequate number of workforce had a positive effect on all

measures of performance. Also using survey approach, Mbah, et al. (2018), posited that training of staff to acquire knowledge and skill will enhance productivity and market share of the firms. Gimba and Anyanwu (2022), found staff cost, employee compensation to sales and number of staff had insignificant effect on return on investment. Appah and Tebepah (2021), revealed that capital employed efficiency, human capital efficiency, structural capital efficiency, bank size and bank age showed a positive and significant association with tobin-q of sampled deposit money banks in Nigeria. In Bangladesh, Sumon and Abu (2019), found that firm size (Total assets, Number of employees and Number of branches) positively affects firms' profitability. Based on the results of these reviews which reported significant positive relationship, the second alternative hypothesis was stated below;

Ha2: Number of employee significantly affect the financial performance (profit after tax) of deposit money banks in Nigeria.

Employee salaries and financial performance (profit after tax) of deposit money banks in Nigeria

Employee salaries are a significant operating cost for banks. If salaries and benefits are too high compared to the revenue generated, it can negatively impact profitability. Banks need to strike a balance between paying competitive salaries to attract and retain talent and managing costs to ensure profitability. Higher salaries can attract and retain top talent, which can lead to improved employee productivity and customer service. Highly skilled and motivated employees may generate more business, enhance customer relationships, and ultimately contribute positively to the bank's profit after tax. Offering competitive salaries can help banks attract the best employees in the industry. This can be especially important in a highly

competitive banking sector like Nigeria's, where skilled professionals are in demand. Having the right talent can give banks a competitive edge and contribute to higher profits. Inadequate compensation or dissatisfaction with salary structures can lead to low employee morale and higher turnover rates. High turnover can result in increased recruitment and training costs, as well as disruptions in operations, which can negatively affect profitability. Eke et al. (2023), revealed a significant positive relationship between employee salary and financial performance in terms of ROA and ROE of listed manufacturing firms in Nigeria. Ahmed et al. (2016) revealed that employee turnover depending upon factors such as firm stability, pay level, industry, work situation, training and supervision, have a significant impact on organizational effectiveness and these factors are correlated with each other. Al-Amin and Ishita (2019), also found that there is a significant relationship between employee income and organizational effectiveness. Joe et al. (2020), revealed that employee cost has a positive and significant effect on earnings per share of commercial banks in Nigeria. On the contrary, Elena et al. (2022), revealed that staff turnover cost has a negative impact on profit margin and return on assets of Nigerian banks. Based on the majority results of these reviews which reported significant positive relationship, the third alternative hypothesis was stated below;

Ha3: Employee salary has significant effect on profit after tax of deposit money banks in Nigeria.

Gap in literature
The respective literature reviewed disclosed mixed result and the financial indicators they used were more of ROA, ROE, EPS but our study gauged financial performance using profit after tax. The incoherence in their findings maybe as a result of their chosen sample size, statistical tool or even the time series data collected. Our chosen sample size was 2 DMBs. We covered 2010-2022 which is a 22years annual observation of the individual banks. The implication of our study is that training, salary and adequate number of trained staff would ensure timely accomplishment of tasks, competence and error free operations capable of enhancing the financial health of the company.

Methodology
Researcher adopted ex-post-facto research design targeted at regressing the relationship between human capital development cost and financial performance of deposit money banks in Nigeria. This design was chosen because the data analysed already exists. Population refers to the entire group of individuals or items that meet specific criteria and are the subject of a research study (Appah, 2020). Hence, the 22 listed commercial banks in Nigeria is our population. The sample size of this study was 2 listed commercial banks in Nigeria, obtained using purposive sampling technique spanning 2010 to 2022. These 2 banks (Fidelity bank and UBA) have the required up-to-date information needed by the researcher. Secondary data obtained from the Nigerian exchange group were analyzed using multiple regression.

Model Specification
The study models financial performance (PAT) as a function of Training and development.
The model is:
$PAT = f(ET, NOE, ES)$.
The model is stated explicitly as:
$\beta_0 + \beta_1 ET + \beta_2 NOE_{i,t} + \varepsilon_i$
Where;
ET= Employee Training (human capital development)
NOE= Number of Employee (human capital development)
ES= Employee Salary (human capital development)

PAT= Profit after tax (financial performance).

Data analyzed here were the properties of human capital development (traing, number of employees and salary) and financial performance (profit after tax) of DMBs in Nigeria.

Data Analysis

However, the raw data is shown in the appendices.

Table 4.4: **Descriptive Statistics**

	ET	NOE	ES	PAT
Mean	2.747949	3.713528	4.532810	5.044275
Median	2.730782	3.763877	4.605068	5.017547
Maximum	3.225309	3.990650	4.749759	5.337070
Minimum	2.301030	3.447778	4.370513	4.784360
Std. Dev.	0.289832	0.231242	0.125088	0.164632
Skewness	0.032543	0.027588	0.017926	0.041654
Kurtosis	1.941607	1.200225	1.580865	2.181068
Jarque-Bera	0.702769	2.026396	1.259519	0.423494
Probability	0.703713	0.363056	0.532720	0.809170
Sum	41.21924	55.70293	67.99215	75.66412
Sum Sq. Dev.	1.176034	0.748621	0.219057	0.379453
Observations	26	26	26	26

Source: *Eview9 output*

Table 4.1 shows the descriptive statistics on the relationship between human capital development and financial performance of DMBs in Nigeria. The average value for human capital development properties of employee training, number of employees and employee salary were 2.747949 million, 3.713528 workforce, and 4.532810 million respectively; while financial performance (PAT) components of was 5.044275 million. The maximum of the variables include 3.225309 million, 3.990650 workforce, 4.749759 million, and 5.337070 million. A comparative assessment between the mean and the maximum values of the dependent and independent variables of the study shows a significant difference.

Dependent Variable: PAT
Method: Panel Least Squares
Date: 09/13/23   Time: 19:24
Sample (adjusted): 2015 2022
Periods included: 8
Cross-sections included: 2
Total panel (unbalanced) observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.592239	1.120242	-0.528670	0.6075
ET	-0.201983	0.102224	-1.975889	0.0038
NOE	-0.064357	0.213642	-0.301238	0.0019
ES	1.418666	0.374748	3.785649	0.0030

R-squared	0.766931	Mean dependent var	5.044275
Adjusted R-squared	0.703367	S.D. dependent var	0.164632
S.E. of regression	0.089665	Akaike info criterion	-1.762285
Sum squared resid	0.088439	Schwarz criterion	-1.573471
Log likelihood	17.21714	Hannan-Quinn criter.	-1.764296
F-statistic	12.06545	Durbin-Watson stat	0.967331
Prob(F-statistic)	0.000139		

Source: *Eview9 output*

Table 4.2 above shows that the R-squared value for our regression model is 0.766931 with the p-value of 0.000139 > 0.005 level of significance. This suggests that there is a significant positive relationship between human capital development and financial performance of DMBs in Nigeria. This indicates that approximately 77% of the variance in the dependent variable (profit after tax) can be explained by the independent variables included in our model (employee training, number of employees and employee salary). In other words, our model accounts for a substantial portion of the variability in financial performance, suggesting that it is a reasonably good fit for the data.

The table above also showed the Adjusted R-squared value of 0.703367 which indicates that our regression model explains approximately 70% of the variance in the dependent variable. This suggests that our chosen independent variables collectively have a strong influence on the outcome we are studying. The Adjusted R-squared accounts for the complexity of our model by penalizing the inclusion of unnecessary variables, which helps us avoid over-fitting. Therefore, we can be reasonably confident that our model strikes a good balance between explanatory power and simplicity. However, it's important to note that there is still 30% of the variance unexplained by our model, which could be due to unaccounted factors or measurement error.

Test of hypotheses 1, 2, 3
Based on the p-value of 0.0038, 0.0019, and 0.0030 < 0.005 level of threshold, we accepted the alternative hypothesis 1, 2 & 3 and concluded that a significant relationship exists between human capital development and financial performance of DMBs in Nigeria.

Discussion of findings
The data analysed and interpreted shows that employee training is significantly related to financial performance of deposit money banks in Nigeria in terms of profit after tax. This suggests that employee training plays a crucial role in improving the overall performance and profitability of deposit money banks. The implication of this is that well trained staff would ultimately use the same skills and competence obtained to enhance the company's operations. Accordingly, our study agreed with the study of Obikwelu

(2018), who revealed that human capital development has a positive relationship with manufacturing output, though statistically significant. Abosede et al. (2018), revealed that human resource management significantly affects banks' non-financial performance. Their findings further revealed that reward management and employee performance management both have significant effect on the non-financial performance of banks in Nigeria. Imeokparia and Oyinloye (2020), revealed that investment in human capital development has a positive and significant impact on bank ROA. However, on the contrary, Ezekwesili and Ezejiofor (2022), revealed that human capital investment has not positively and significantly affected return on capital employed of listed deposit money banks in Nigeria. Ame et al. (2023), indicated that human capital had little influence on their financial performance. Ezejiofor and Ezekwesili (2022), also revealed that human resource investment has no significant effect on both return on equity and earnings of deposit money banks. This findings maybe as a result of their chosen sample size, statistical tool or even the time series data collected.

Secondly, the data analysed and interpreted shows that number of employee is significantly related to financial performance of deposit money banks in Nigeria in terms profit after tax. This suggests the fact that banks need to strike a balance between having an adequate workforce to meet their operational needs and controlling labor costs. The implication of this is that an adequate number of trained staff would ensure timely accomplishment of tasks, competence and error free operations capable of enhancing the financial health of the company. Accordingly, our result corroborated with the findings of Rahman and Akhter (2021), who revealed that human capital investment in terms of number of employees were positively connected to

bank performance. Ali and Chaudhry (2019), also showed that human capital in consideration of adequate number of workforce had a positive effect on all measures of performance. Also using survey approach, Mbah, et al. (2018), posited that training of staff to acquire knowledge and skill will enhance productivity and market share of the firms. Gimba and Anyanwu (2022), found staff cost, employee compensation to sales and number of staff had insignificant effect on return on investment. Appah and Tebepah (2021), revealed that capital employed efficiency, human capital efficiency, structural capital efficiency, bank size and bank age showed a positive and significant association with tobin-q of sampled deposit money banks in Nigeria. In Bangladesh, Sumon and Abu (2019), found that firm size (Total assets, Number of employees and Number of branches) positively affects firms' profitability.

Lastly, the data analysed and interpreted shows that employee salary is significantly related to financial performance of deposit money banks in Nigeria in terms of profit after tax. This suggests higher salaries can attract and retain top talent, which can lead to improved employee productivity and customer service. Highly skilled and motivated employees may generate more business, enhance customer relationships, and ultimately contribute positively to the bank's profit after tax. The implication of this is that offering competitive salaries can help banks attract the best employees in the industry. This can be especially important in a highly competitive banking sector like Nigeria's, where skilled professionals are in demand. Our findings agreed with the study of Eke et al. (2023), who revealed a significant positive relationship between employee salary and financial performance in terms of ROA and ROE of listed manufacturing firms in Nigeria. Ahmed et al. (2016), also revealed that employee turnover depending upon factors such as

firm stability, pay level, industry, work situation, training and supervision, have a significant impact on organizational effectiveness and these factors are correlated with each other. Al-Amin and Ishita (2019), also found that there is a significant relationship between employee income and organizational effectiveness. Joe et al. (2020), revealed that employee cost has a positive and significant effect on earnings per share of commercial banks in Nigeria. On the contrary, Elena et al. (2022), revealed that staff turnover cost has a negative impact on profit margin and return on assets of Nigerian banks. This particular contrasting finding maybe as a result of their chosen sample size, statistical tool or even the time series data collected as well as the time the study was carried out.

Conclusions and recommendations
The study determined the relationship between human capital development and financial performance of deposit money banks in Nigeria using adopted ex-post-factor research design. The study revealed that a significant relationship exists between human capital development and financial performance of DMBs in Nigeria. Hence, the researcher concluded that a significant relationship exists between human capital development and financial performance of DMBs in Nigeria. The study elucidated that a well-trained staff can improve operational efficiency by reducing errors and inefficiencies. Streamlined processes and reduced operational costs can contribute to higher profit margins. Also, the study opined that human capital development could give banks a competitive advantage in the market. Banks with a highly skilled workforce may be better positioned to win business over their competitors, leading to increased market share and profitability. The study also, added that employee salaries can have a significant impact on the financial performance of deposit money

banks in Nigeria, but their influence is part of a broader set of factors. The researcher further suggested that;

i. *Deposit money banks in Nigeria should develop customized financial training programs that align with their specific needs and objectives. These programs should cover a wide range of topics, including banking regulations, risk management, asset and liability management, and customer relationship management.*

ii. *The management should offer competitive compensation packages and benefits to attract and retain top talent in the industry to boost profitability.*

iii. *Policy makers should implementing skill-based pay scales because this could incentivize employees to acquire additional skills and expertise that directly benefit the bank's operations. For example, banks can offer higher salaries or bonuses to employees who obtain relevant certifications, complete training programs, or acquire skills in areas such as financial analysis, risk management, or digital banking.*

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HUMAN RESOURCE TRAINING AND DEVELOPMENT AS STRATEGY FOR ORGANIZATIONAL PERFORMANCE: A STUDY OF IGNATIUS AJURU UNIVERSITY OF EDUCATION RUMUOLUMENI, PORT HARCOURT RIVERS STATE, 2020-2023.

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Abstract
This paper examines human resource training and development as a method of improving organizational performance in the Ignatius Ajuru University of Education Rumuolumeni, Port Harcourt, Rivers State. in this work. an introductory perspective was captured to show an understanding of what training and development is and its importance. the paper which further examined the different types of training, the benefits of training and retraining of human resource, was guided by three research questions and objectives each. The study adopted Frederick Taylor's Scientific Management Theory as its theoretical framework. survey design method was used to collect the data from staffers of the university and arithmetic mean was used to analyze the data collected. the findings revealed that training improve workers performance and lack of training affect workers performance and also demotivate workers. the paper recommends among others that, staff training should be organized on regular basis to help workers acquire the needed skills to perform their jobs effectively.

Keywords: Human Resource, Human Resource Training, Development and Organizational Development

Introduction
There are many factors of production that contribute to the success of any organization, these factors are best described as resources which appears in the form of capital, equipment and the workers or employees (human resources). All these factors are important to the success of the organization but the most significant factor is the human factor. This is because it is the people that put every other factor to work. For example, the vision of Ignatius Ajuru University of Education Rumuolumeni, Port Harcourt, Rivers State is to be a resource-based institution with a potential for engineering, sustaining and refining through all foreseeable educational future for Rivers State, Nigeria and the international community. To achieve this laudable vision of the University, there must be continuous training and retraining of both the academic and nonacademic staff of the University. The essence of such training programme is to help workers acquire the needed skills and knowledge to enable them discharge their duties effectively.

It is against this backdrop that Drucker (1986) posited that a good organisational structure itself does not guarantee good performance, it is employee training and

development that equip workers with the relevant professional skills that brings about efficient job performance. This position is collaborated by Pye (in Mukoro 2007) when he stated that "when steps are to be taken to improve the quality of employees and overall organisational performance, attention naturally turns to the process of training, education and development of employees. Even the architects of the 1988 Civil Service reforms could be said to have subscribed to Pye's submission as in relation to staff training. For example, Section 4(1) of the 1988 Civil Service reforms, states that for the purpose of improving economy and efficiency in the operation of a ministry and raising the standards of performance by employees of their official duties to the maximum possible level of proficiency, the minister shall establish, operate and maintain programmes or plans for training of employees in or under the ministry by and through government facilities including training institution (Mukoro 2007). No wonder Abubakar (1992) pointed out that staff training is a sine qua non for the attainment of efficiency and effectiveness which are the two major goals/objectives of a good public service.

Human resource training and development concerns itself to the introduction, re-introduction and educating of the human resource that is at the disposal of an organization. Furthermore, Human resource training and development points to the availing of required skill and knowledge and strategies that is needed and applied for the improvement of the human resource and the overall performance of an organization. Critically speaking, Human resource performance on the job in terms of efficiency is tied to the amount of training which the employee receives. Speaking on training in the public Service, like the Ignatius Ajuru University of Education, (Mukoro 2007) posited that human resource training and development has

never been given the needed priority in the Civil Service. It is therefore not out of place to conclude that the somewhat inefficiency that is often perceived in the public service is as a result of inadequate training and retraining of the human resource. It is at the core of this paper is to examine human resource training, development and its impact on organizational performance.

Research Questions
The following research questions were raised to guide the study.
 i. What are the benefits of Staff Training?
 ii. What measures should Ignatius Ajuru University of Education should adopt to enhance workers performance?
iii. What are the effects of lack of Staff Training?

Objectives of the study
The broad objective of this paper is to examine staff training and its impact on workers performance. While the specific objectives are:
 i. To access the benefits of Staff Training.
 ii. To identify measures that are to be adopted to enhance workers performance.
iii. To examine the effect of lack of Staff Training.

Significance of the Study
This issue is significant in both theoretical and practical domains. The paper presents a theoretical basis for human resource training, development and organizational performance. The results of this research will provide data to support the formulation of policies and recommendations for the Ignatius Ajuru University of Education and other organizations in addressing the issues of organizational productivity. The result will be equally advantageous for other scholars who are interested in investigating this issue or comparable areas of inquiry.

The research will provide a technique for understanding and establishing standards and responsibilities within bureaucratic institutions.

Scope of study

This work is basically within the context of human resource training, development and organizational performance: a study of Ignatius Ajuru University of Education Rumuolumeni, Port Harcourt Rivers State, 2020-2023., Specifically, the focus of this paper is on the impact of human resource training, development and organizational performance in Ignatius Ajuru University of Education Rumuolumeni, Port Harcourt Rivers State, between 2020 and 2023

Conceptual clarification
Concept of Human Resource training and development

There are plethora of definitions and explanation to the meaning of human resource training and development. This view are perceptions of scholars and practitioners alike, whom at different times explained the concept of human resource training and development based on their understanding, but such explanations stresses on how the personnel acquire skill and knowledge for productivity. To Kllatt, et al. (1985) Training is a systematic way of altering behavior to prepare an employee for a job or to improve the employee's performance on the present job, and development is preparing an employee for improving the conceptual, decision-making, and interpersonal skills in complex, and in structured situation.

Armstrong (1996) Training is the formal and systematic modification of behavior through learning which occurs as a result of education, instruction, development and planned experience. While Development is improving individual performance in their present roles and preparing them for greater responsibilities in the future.

Human resource training and development is basically the process of acquiring skill and knowledge for productive capacity of the personnel. Kowtowing to the above, Katz and Kahn (1978) referred Training and development to a maintenance subsystem, intended to improve organizational efficiency by increasing routinization and predictability of behavior. Furthermore, human resource training and development is the process of educating the personnel on the required job skill and helping them to acquire the needed skill to accomplish such job task to enhance productivity.

To Kirkpatrick (1993) Training refers to the teaching of specific knowledge and skills required on the individual's present job. The term development refers to the growth of the individual and preparations for higher-level jobs. In collaboration, training is the process of acquiring specific skill and knowledge to accomplish specific job task. It entails acquiring a particular skill and knowledge for a particular job. For example, to acquire a specific skill and knowledge as a welder to join rod and fabricate iron works, to acquire specific knowledge as a motor mechanic to work specific motor engine, to acquire specific skill and knowledge as a carpenter to carry out specific wood work, etc. Training is for specific group of people, and not for all cadre. While development is all about acquiring general skill and knowledge to accomplish general job task. For example, to acquire management skill and knowledge as a manager to manage organisation. Development is more for senior and administrative personnel.

The purpose of Human resource training and development in an organisation is to develop the abilities of the individual and to satisfy the current and future needs of the organisation. Unlike education, which involves equipping employees to expand their capacity to learn and to perform in the

future. A good reference point for staff training and development in the Nigerian Civil Service is the Udoji Report of 1974. The position of this report was that "the new style, result-oriented public service envisaged could not come into being unless the training of all categories of Public Servant was stepped up" (Balogun and Oshionebo 1985).

Imperatively, human resource training and development from the above definitions put forward is the systematic impartation of knowledge, skills attitude on staff of organization to help them perform their work effectively It should be pointed out the essence of training is to improve workers performance and increase the productive capacity of the organization. If human resource training and development is to improve organizational performance, then human resource training and development policies must be adequate to determine who should be trained in what. where, when and how. This because the training could be a waste of time and resources if the area of emphasis in training is not properly isolated.

Generally, both training and development is aimed at increasing productivity. It is a process of upgrading the skill and knowledge of the personnel to meet up the job demand. Job training and development creates platform for the personnel to perform better on the assigned job, and add value to the organisation. Human resource training and development prepares the personnel for both today and future job performance. It makes the personnel to learn the needed skill and knowledge, and prepares such personnel for future challenges arising from the ever-changing economy. Human training and development provide the management of the organisation with the opportunity to resource reposition its personnel with the capacity to fill the vacancy that will arise in future, and choose the best from the lots for future leadership roles in the organisation.

Human resource training and development is important and necessary for every person, both as public and private organisation personnel. As a concept, human resource "training" and "development" could be used jointly as one word, as well as separately, and interchangeably in management. human resource

Objectives of human resource training and development

The core objective of human training and development is to prepare personnel, either as individual or group to acquire the required skill and knowledge for the staff and organizational productivity. Hence, the objectives of human resource training and development are;

1. **To provide initial training and development for new staff.** When staff are recruited into the organization from different works and background, with different degrees and orientation, it becomes imperative, that an initial training and development for the new staff in line with organizational goal enunciated, as such training and development creates new orientation for the new staff on the job ethics, attitudes, organizational targets, and moral to achieve the organsational goal. This is achieved through job orientation programme for the new staff. It is common in the banking industry, oil and gas companies, etc.

2. **To prepare the personnel with necessary skill and knowledge in the organisation**. Notably, training and development provides the platform for the staff to acquire necessary skill and knowledge to carry out the organisational task for today, and to meet future demands of the organization in terms of changes in technology and market economy.

3. **To achieve group goals**. Training and development enable the various departments of the organization to have the required number of staff with the capacity to carry out the responsibilities of the department and achieve the organizational goal.

4. **To achieve individual goals.** Training and development prepare the individual to acquire the required skill and knowledge to achieve their desired goal, either as individual or group

5. **To prepare and equip the senior and management staff.** Training and development equip the senior and management staff of the organization with contemporary management and leadership skill and knowledge to administer the affairs of the organization. Also, to identify the programme gap of the staff in the organisaton

The Importance of Human Resource Training Development and In an Organisation

Wilson (2023) identifies 10 importance of human resource training development and in an organisation. They are as follwos:

i. **Increasing productivity and performance.** Training and development provide the basis for workers to acquire the needed skill and knowledge, and when adequately applied in the production process, it enhances the staff productivity and overall performance of the organization, leading to increase in the organisation profit and goal achievement.

ii. **Development of human skill and knowledge.** Training and development create the opportunity for organizational personnel to acquire new skill and knowledge for both their individual and organizational advantage. Such skill and knowledge is also used beyound the organizational development, as it becomes intellectual property of the trained and developed individual.

iii. **Optimum utilization of the personnel.** Training and development prepare the personnel for the opportunity to render the best services in the organization, thereby making them more useful to the organization.

iv. **Improving quality of output.** Trained and developed workers are basic resources of the organization, as they have the potential to improve the quality of output, by rendering better and qualitative services to the organization.

v. **Improving workplace health and safety.** Training and development prepare the staff on how to operate new technical equipment properly without much challenge, thereby reducing industrial accident. It also equips the staff with consciousness on workplace health, and how to apply necessary health tips for their good.

vi. **Human resource training and development enhances leadership and management skill.** The training and development of personnel enhances their leadership and management skill and knowledge on one hand, and on the other hand enlightens the subordinates on the need for their loyalty to their superior. This improves superior- subordinate relations in the organization.

vii. **Human resource training and development leads to staff motivation.** Training and development make the staff to be happy and more

comfortably disposed to carry out their duties accordingly. The comfortable disposition leads to their more commitment to the job, showing that the staff are motivated by the training and development they acquired.

viii. **Training and development enhance industrial peace.** Staff are trained and developed on what to do at the right time, particularly on their duties to the organisation on one hand, and the management is educated their responsibilities to the staff on the other hand. This makes both the staff and management to keep to their terms of bargain and mutual respect for each other, thereby leading to industrial peace in the organization.

ix. **Human resource training and development enhances organizational culture**. *It* creates the consciousness on workers and the management to protect the organizational behaviour and culture as to maintain the organizational repute globally.

x. **Effective collaboration**. Training and development provide consciousness among staff and inculcates the team spirit in them, leading to effective collaboration among the staff (p.127-128).

Differences Between Human Resource Training and Development

i. Human resource training implies learning basic and specific skill and knowledge to perform specific job. While Human Resource development implies learning general and wider skill and knowledge to perform general and wider job.

ii. Human resource training aims at increasing job skill and shaping the attitude of the knowledge. While Human resource development aims at personnel.

iii. Human resource training is job centered in nature while Human resource development is career centered in nature.

iv. Human resource training is interested in maintaining current job performance and personnel productivity. While Human resource development is concerned with developing executive capacity for today and future personnel productivity and performance.

v. Human resource training has a short-term focus and perspective whereas Human resource development has a long-term focus and perspective

vi. Human resource training is mostly for non-management personnel whereas Human resource development is designed for management personnel.

vii. Human resource training improves job productivity and performance Human resource development improves the overall growth and development of the personnel for sustainable productivity and performance.

Reasons for Human Resource Training and Development in Organisation
There are several reasons that raises a pointer that human resource training and development is needed in an organization. These reasons are associated with activities within an organization.

i. Low productivity is a clear indication that the operational staff need to be trained and developed to enhance their productive capacity.

ii. Staff insubordination. Human resource training and development is required at the point when organization notice that there is constant staff insubordination and unwillingness to carry out their duties. The training and development is to re-orientate them on the need for compliance to the organizational regulations.

iii. The high occurrence of factory accident shows that either the workers

doesn't how to operate the equipment or that the equipment is not compatible for the purpose. Either of the above, it indicates the workers need to be trained on how to operate the equipment to avoid further accident.

iv. Negative attitude such as absence from duty, irregular attendance to duty, regular quarrel and antagonism to others, constant complain, etc. These attitudes show that such workers need reorientation and education on the job ethics and value, and the need for their compliance to the organizational culture and behavior.

v. Job dissatisfaction. This is a clear prove that the workers need to the trained and developed adequately on the job skill and knowledge to enable them understand the job and develop job satisfaction, leading to job motivation.

Methods of Human Resource Training and Development

According to Amah (in Wilson 2023) training methods refers to the means by which information, ideas, skills, attitudes, and feelings are communicated to the learners or trainees. It determines to a large extent a trainers' success. The training and development methods involve the best and suitable methods for both the trainers and trainees to participate thus. The methods are clearly divided into two types, namely on-the-job training and development; and off-the- job training and development.

A. On-The-Job Training and Development

It is the process of allowing the existing staff to perform certain jobs under the direct supervision of their superior, who teaches the subordinate staff the specific operational methods of the job. It takes place in a normal workplace/office under a direct contact between the superior and subordinate. The learner learns by using the same tool and facilities used by the teacher, and the teacher corrects the learner where necessary. Such constant practice makes the learner learn the job. It is the most effective training and development method for vocational work in an organization.

Characteristics Of On-The-Job Training and Development

i. It is faster in nature and more effective

ii. It involves direct contact of the trainer and trainee on the specific job.

iii. It is carried out on ad-hoc capacity with no formal procedure, but on routine basis

iv. During the training and development, no time limit or define objective, rather the trainee is determined to learn as long as the trainer is willing to train him/her.

v. No formal qualification is membership of the organization qualifies the traine to learn.

vi. The trainer is either selected or appointed to train the trainee, rather the trainer is appointed on the basis of the technical knowledge and outstanding specific experience of the trainer.

vii. It is normally carried out within the office of the organization by the personnel of the same organization. Significantly, both the trainee and trainer are members of the same organization.

Method of On-The-Job Training and Development
Skill for specific job

This method is applied to provide training and development for specific job in the organization, such as electrical, mechanical, plumbing, welding, carpentry, driving, etc.

Coaching technique

This is training and development through personal instruction, guidance, demonstration, and is considered as a corrective method for poor performing personnel in an organization. It is used to correct the mistakes of the subordinates, and through the correction, the trainee learns and improves his or performance.

Job rotation technique

This involves training and development through rotating job from one staff to another on regular basis. On the other hand, the trainee is rotated on periodic basis from one job schedule to another, and in the process, the trainee acquires skill and knowledge. It provides different and wider knowledge to leaner, as the leaner rotate from one job schedule and trainer to the other.

Apprenticeship technique

This involves placing the trainee under a direct supervision of the trainer or supervisor for a longer period of time based on the job content and required skill. Wages and allowance are paid to the trainees within the period of apprenticeship, but less than the value of the superior/supervisor. Trainees are giving staff identification card and they enjoy membership of the organization. Apprenticeship is applicable to only professional and technical trades such as mechanic, tailoring, carpentry, welder, electrician, etc. The trainee is free after a period of time, and acquisition of the needed skill.

Vestibule training technique

This method of training and development is more applied in a workshop, laboratory, and classroom with more emphasis on how to practically acquire certain skill and knowledge of the job. It is more practical in nature and gives the learner the opportunity

of learning fast and accurately based on the teaching of the teacher.

Job instruction technique

It is a training and development based on workplace safety. It is as a result of job hazard analysis that experts develop job instruction techniques to train and develop staff on modalities to enhance workplace safety. Job instruction technique is use to train and develop the newly recruited staff with the health and safety necessities in the organization, including work attitude and need for efficiency in workplace. It is more of an orientation organized by the older staff for the new staff.

Demonstration and example technique

This technique involves training and development through physical display on how something works or how to do something. In this case, the trainer shows the trainee how to perform specific task or do the task of the job through demonstration and show of example. And the trainee learns by demonstrating same and carrying out his/her own example on the job task. It is accompanied with lecture notes, modules, and extensive discussion prepared by the trainer for the trainee to understand. However, demonstration and example training and development technique is costlier and raises financial challenge to the organization, in such areas as cost of training facilitators, cost of maintaining both the trainer and trainee, cost of travelling and accommodating the trainer and trainee, cost of paying of the trainer and trainee, etc., in the organization.

B. Off-The-Job Methods Training and Development

Off-the-job training and development method is direct opposite of the on-the-job method. It involves training and development whereby the trainer is not previously known to the trainee and does not work on the same organization. But the major factor is that it creates opportunity

for the acquisition of new skill and knowledge. Various techniques are used to actualize the method, they include the following:

Lecture technique

Lecture technique is usually carried out in a lecture hall or classroom where both the trainer and trainee come together for the purpose of teaching and learning. It is a simple and fast technique of imparting skill and knowledge to the trainee, particularly when they are large in number within limited number of trainers. It involves teaching and learning theoretical and practical strategies of solving organizational and individual problems. It is conducted by training specialist, with formal and specific skill on the subject matter. It reduces cost per trainee, since number of trainees can be trained at a time by few trainers. It is usually carried out by training institutions such as the universities, polytechnic, colleges, secondary and primary schools, etc.

Seminar technique

This technique is more of combining several techniques, such as lecture, group discussion, conferences, and demonstration, where skill and knowledge is acquired through exchange of ideas and notions by the participants. Group members are involved as the organizers and can use many group members for the seminar activities. Although, it is time consuming in the planning process, and relatively financial costly.

Conference technique

It is training and development technique where a large group considers solving a specific problem through acquiring knowledge on a particular job, and they come together with a particular theme for discussion and learning. The group adopts a guided approach and discussion format for the training and development. Although, in the process groups emerge with different opinions and perceptions on the matter, finally arrives at decision, as solution to the identified problem. In the process, skill and knowledge is acquired as the way forward.

Workshop/laboratory technique

In this technique, training and development is carried out through experience and interaction on the subject matter. It is more practical in most cases, as the trainer exposes the trainees to the new skill and knowledge through experiment on the job. It has more scientific and observation to make in order to achieve the This training and particular fact and required knowledge. development brings people together to learn a behavior pattern, and ends up creating a change in individuals and groups attitude. Experiment is the cardinal point of acquiring skill and knowledge. A good example of workshop/laboratory technique is internship for medical personnel.

Challenges of Human Resource Training and Development in an Organization

Challenges are those factors affecting negatively, the conduct of human resource training and development programmes in an organization. In the process of executing human resource training and development programmes, organisations including both private and public face certain challenges, and when not managed leads to hindrances in human resource training and development programmes in the organization. Wilson (2023) identified the following challenges and solutions.

Bureaucratic challenge

Globally, large organisations operate on bureaucratic principles, such as structure administrative system, hierarchical structure, acceptable set of rules, etc. These principles define and regulate the operations of the organization and makes it stereo-type in nature. Its operations create delay in the activities of the organization, including delay in making and

implementing human resource policies, approving and releasing funds for staff training and development programmes, mobilizing staff for training and development as at when due, etc. This creates bottle-neck for effective human resource training and development. As a way forward, managers should give priority attention to human resource training and development programmes and facilitate its prompt approval and implementation.

Organisational politics

In this context, organizational politics is explained as the prevailing interest of the managers over the general goal of the organization. Managers manipulate the interest of others, as to achieve their personal interest and sometime deny the subordinates their legitimate entitlements in order to satisfy themselves. In some cases, managers alter human resource training and development programmes and list of staff to participate in such programmes to favour their relatives against the actual anticipated participants, leading to inclusion of the wrong caliber and cadre of personnel as participants, leaving the right participants out of it. As a way forward, managers should nominate and sponsor participants to training and development on merit status, competence, and office demand.

Government policies and laws

Government of various states have laws and policies regulating labour relations and human resource management activities. In Nigeria, such laws and policies are grouped as the civil and public service rules of Nigeria, regulating retirement age of workers, recruitment eligibility and procedures, pension age and administration, maternity and annual leave, promotion criteria, disciplinary procedures, payment of compensations, etc. Also, government policy such as restriction on foreign training and development. Such regulations possess challenge to human resource training and development.

Poor funding

Most organisations find it difficult to fund human resource training and development programme on account of inadequate funds. These inadequate financial resources affect negatively, the human resource training and development programmes of the organization, leading to inadequate participation of the staff in such importsnt training and development programme. Inadequate teaching personnel. In most cases, the staff are willing and able to learn (undertake training and development programme), but the available teachers were either inadequate or incompetent to carry out effective teaching, thereby denying the staff opportunity for training and development.

Emotional challenge

This challenge arises due to perceived stress, ill fillings, and poor psychological filling either on the part of the trainer or trainee during training and development programmes, and affects the willingness of both the trainees and trainers to participate appropriately in the training and development programmes.

Unwillingness of the trainees

Sometimes the trainers are willing and able to conduct training and development programmes for the concerned staff, but some of the affected staff are not interested to participate, thereby avoiding training and development programme, even when such staff have been paid their training allowances and other logistics made available. This is common is public and civil services in Nigeria. This affects human resource training and development plans of the organization.

Venue of the training and development programme

This is all about the location where the training and development programme is holding. In most cases, the venue implies the classroom, hall, and reception arena.

When the venue is not equipped with the required facilities such as electronic gadgets, tables, chairs, ventilation, board, etc., it becomes difficult for both the trainees and trainers to participate in the programme. Also, insecurity in the venue distorts training and development, as well as distance, and inaccessibility to the venue. All these hinders training and development programmes in organization.

Socio-cultural challenge

In most cases, staff of organisations are influenced by their socio-cultural background and relations, as well as their belief system. This affects their interest to participate in certain training and development programme. In Nigeria, the Muslim avoid participating in training and development programme during Salla celebrations, as well as the Christians during Easter and Christmas periods. Even the African traditional worshipers avoid training and development activities on certain traditional days of the week.

Physical environment

This involves the weather, topography, and time and season of the year. During raining season, training and development programmes in a swampy area becomes difficult due to inaccessibility to the venue. During dry and hot season, asthmatic patients avoid going out for any prigramme in a dusty area, including training and development. In Nigeria, people avoid travelling to riverine areas for any programme, including training and development, particularly those who are not from the riverine areas. It is often difficult to convince training and development participants to participate in training and development due to the location and terrain.

Effects of Lack of Human Resource Training and Development in an Organization

There are several negative effects associated with lack of staff training in the workplace. Some of these negative effects include:

i. Unhappy Employee and High Rate of Staff Turnover: Employees are interested in performing their jobs well in order to advance the organisation, feel a sense of pride for the job well done and advance to higher positions when they are happy. When there is no staff training, workers are unhappy which affects their morale and can result to high rate of employee turnover The Hawthorne studies and many other research on staff productivity discovered that employees who are satisfied with their job will have higher job performance, and thus supreme job retention than those who are not happy with their jobs

ii. Low Rate of Production: The rate of production and performance is low when employees don't have good knowledge about their jobs. You cannot give what you don't have. Unskilled employees could spend considerable time seeking help to perform their job or they could perform task to their understanding which can detrimental to the organization. This could led to errors and work needing to be repeated or correct. The result of all this is that it leads to low rate of production and performance.

iii. Unsafe Work Environment: Occupational safety and health administrators states that untrained workers are more susceptible to injuries than trained workers. This occurs when workers lack the knowledge and skill required to use equipment and supplies safely. The problem could be fatal in work environments that contain heavy-duty

machinery and hazardous materials. It is not enough to have established procedures and protocols for activities that involve potential safety risk. Workers must receive adequate training on the procedure and how and when to use them in order to avoid fatal accident

3. Theoretical framework

This paper is anchored on Frederick Taylor Scientific Management Theory Taylor introduced the scientific study of work method in order to improve workers' efficiency in the organization. The concept of work efficiency was first put forward by Frederick Winslow Taylor in his 1911 publication, "the principles of scientific management. Taylor pioneered a method now known as "time-and-motion" study, for determining the best way to reduce time and effort in order to improve work efficiency. This according Taylor can be achieved through systematic training and retraining of the workers. He insisted that it is the duty of management to give each workers the formal training and specific instructions on how to perform every piece of work with the standardized tools and materials (Wei & Taormina 2011, Supru 2013). It is worthy to mention that workers performance is the driving force of every organization which can only be achieved through continuous training of the workforce. The relevance of Taylor's theory to this paper is that it makes management know that human resource training and development is the responsibility of the management and not the workers. This is because when workers are well trained it increases the productive capacity of the organization.

4. Method of the study

Survey design was employed in this study to elicit information from staff of Ignatius Ajuru University of Education Rumuolumeni, Port Harcourt, Rivers State on human resource traning and development and organizational performance. The primary source of data was collected through questionnaire and interview while the secondary source includes textbooks and journal articles.

The population of study is 987 staff of the Ignatius Ajuru University of Education Rumuolumeni, Port Harcourt, Rivers State. The sample size of 285 was derived using Taro Yemen's formulae; they were randomly selected using simple random sampling technique.

Well-structured questionnaire developed by the researcher was used as instrument for data collection. The questionnaire was subjected to face validity via lecturers in the department of Accountancy. A pilot study was carried out with 10 staff of the University to establish the reliability of the data collection instrument in order to ensure consistency of the instrument two hundred and eighty-five questionnaire was distributed out of which 269 was retrieved. Also, personal interview was conducted with some staff of the Polytechnic to corroborate the data collected from the questionnaire.

The arithmetic mean is used to analyze the data collected from the respondents. A criterion mean of 2.5 was used in taking decision

Table 1 Sample size

S/N	Category	SAMPLE SIZE
1	Teaching	130
2	Non-Teaching	155
3	Total	285

Source: office of the Registrar,IAUE 2022

5. Data presentation and Analysis
Research Question 1: what are the benefits of staff training**?**

S/N	Item statement	SA (4)	A (3)	SD (2)	D (1)	TOTAL	XW
1	Staff training improve performance and productivity workers	191	67	17	10	285	
							3.4
	Weight of response	(764)	(201)	(34)	(10)	1009	
2	Staff training increases organizational productivity	188	80	10	7	285	
	Weight of response						3.7
		(752)	(240)	(20)	(7)	1019	
3	Staff training leads to improve job performance.	174	76	20	15	285	
	Weight of response						3.1
		696	228	40	15	979	
4	Staff training prepares workers for higher responsibility	183	67	20	15	285	
							3.3
	Weight of response	732	201	40	15	988	

Source: Field Survey 2023

TW-Total Weight

XW-Mean of Weighted Scores

Figures in Bracket ( ) are weighted scores

TW-Total Weight

XW-Mean of Weighted Scores.

Figures in Bracket () are weighted scores

Criterion Mean= $\frac{SA(4)+A(3)+D(2)+SD(1)}{4}$

= $\frac{4+3+2+1}{4} = \frac{10}{4} = 2.5$

Weighted Mean = $\sum \frac{XW}{N}$

= $\frac{3.3+3.7+3.1+3.3}{4} = \frac{13.4}{4} = 3.3$

Decision rule

We accept if the mean of weighted mean is greater than (>) criterion mean and reject if criterion mean is greater than () mean of weighted means. Criterion mean (x) = 2.5, mean (x) of weighted mean-3.3

Since the mean x of the weighted mean 3.3 is greater than (>) the criterion mean of 2.5, the response is positive. It therefore it means that the item statement above in table 2.1 are the benefits of human resource training and training in Ignatius Ajuru University of Education Rumuolumeni, Port Harcourt, Rivers State.

Research question two (2) what measures should your management adopt to enhance workers performance?

Table 2.2 Breakdown of response from Item 5-8

S/N	Item statement	SA (4)	A (3)	SD (2)	D (1)	TOTAL	XW
1	Regular staff training programmes should be organized by the management.	181	75	18	11	285	
							3.3
	Weight of response	(724)	(225)	(36)	(11)	996	
2	Staff should be giving study leave with full pay to upgrade themselves academically.	193	61	20	11	285	
							3.4
	Weight of response	(772)	(183)	(20)	(11)	1006	
3	Management should sponsor staff to attend conferences and workshops organized by professional bodies.	183	70	18	14	285	
							3.3
	Weight of response	(732)	(210)	(36)	(14)	992	
4	Staff training should cut across all categories of staff.	180	72	20	13	285	
							3.3
	Weight of response	(720)	(216)	(40)	(13)	989	

Source: Field Survey 2023

Decision rule

We accept if mean of weighted mean is greater than (>) criterion mean and reject if criterion mean is greater than () mean of weighted means. Criterion mean (x) = 2.5, mean (x) of weighted mean 3.1

Since the mean x of the weighted mean 3.1 is greater than (>) the criterion mean 2.5, the response from the respondents is positive. In other words, the item statement above in table 2.2 are the measures the management of Ignatius Ajuru University of Education Rumuolumeni, Port Harcourt, Rivers State should adopt to enhance workers performance.

Research question three (3) what are the effects of lack of staff training?

Table 2.3 Breakdown of response from Item 9-12

S/N	Item statement	SA (4)	A (3)	SD (2)	D (1)	TOTAL	XW
1	It leads to poor work performance.	170	80	20	15	285	
							3.1
	Weight of response	(680)	(240)	(40)	(15)	975	
2	It demotivates workers.	180	85	12	8	285	
							3.3
	Weight of response	(720)	(255)	(24)	(8)	1007	
3	It affects the overall productivity of the organization.	191	77	12	5	285	
							3.4
	Weight of response	(764)	(231)	(24)	(5)	1024	
4	It leads to unproductive workers.	181	75	12	17	285	
							3.3
	Weight of response	(724)	(225)	(24)	(11)	990	

Source: Field Survey 2023

Decision rule

We accept if mean of weighted mean is greater than (2) criterion mean and reject if criterion mean is greater than () mean of weighted mean: Criterion mean (x)-2.5, mean (x) of weighted mean 3.2

Since the mean x of the weighted mean 3.2 is greater than () the criterion mean 2.5. the response from the respondents is positive. This means that, the item statement above in table 2.3 are the effects of lack of staff training in Ignatius Ajuru University of Education Rumuolumeni, Port Harcourt, Rivers State.

Findings

The findings from the study revealed a lot of benefits associated with human resource training and development in an organization. Among such benefits are improved workers and oranizational performance/productivity. human resource training prepares workers for higher responsibility and increases the overall productivity of the organization. The above findings are in tandem with Drucker (1986), when he stated that a good organizational structure itself does not guarantee good performance, it is the human resource training and development that equip workers with the relevant professional skills that brings about efficient job performance. The findings also revealed that regular staff training programmes should be organized by organizations, organizations should sponsor their worker to attend conferences and workshops among others.

Conclusion

Staff training is an important tool for the organization to revamp the performance of all the personnel for organizational growth and success. It is beneficial to both the organization and the workers. An employee will become more efficient and productive if he/she is giving the right training. Organizations both public and private can enhance the quality of the current employees by providing comprehensive training and retraining programme. Training is essential not only to increase

productivity but also to motivate and inspire workers by letting them know how important their jobs are and giving them all the information, they need to perform those job.

Recommendations

The following recommendations are made from the findings.

i. Organizations should organized staff training regularly to help workers acquire the required skill and knowledge that will enhance their job performance.

ii. Organizations should make it as a matter of policy to sponsor worker to attend international and local conferences, workshops and seminars organized by reputable professional and non-professional bodies.

iii. Staff training should cut across every cadre or category of staff in the organization.

iv. Organizations should grant study leave with full pay to staff intending to forward their education to help them upgrade themselves academically.

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EMPLOYEE COMPENSATION AND PRODUCTIVITY IN AGIP OIL COMPANY, PORT HARCOURT RIVERS STATE

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Abstract

This paper examined the effect of human resource employee compensation and productivity in Agip Oil Company, Port Harcourt Rivers State. The objective was to determine the effect of employee compensation on the productivity of Agip Company in Port Harcourt. The design for the study is survey. The population of the study consists of three hundred and one (301) employees of Agip Oil Company, Port Harcourt, which comprises the following: 120 are management staff, while the remaining 181 were the production and distribution workers. The management staff consists of the board of directors, managers, accountants, supervisor and quality control experts. A sample is a portion or fraction of the population from which data concerning a study was actually collected. In this research, the population of the study as stated as three hundred and one (301) from which one hundred and seventy two respondents were conveniently selected. These one hundred and seventy two (172) respondents were arrived at using the Taro Yamane formula. For a systematic and sequential collection of data, two major available sources of data were extensively used for the study. The sources are the primary source, which is the first hand data collection through the use of questionnaire. The second source of data is on the works done by other researchers in Text-books, reputable journals. The design of the questionnaire is in the four points likert scale format, in which respondents were required to answer. This paper is aimed at analysing the extent Employee Compensation contributes very profitably to the growth (Productivity) of Agip Oil Company Port Harcourt. The result showed that employee compensation has significant effect on productivity in Agip Oil Company, Port Harcourt. It was recommended that the management should review the remunerations rates and payment structure so as to accommodate the needs of the changing economic dynamics and escalating cost of living.

Keywords: Human capital, Employee compensation and Productivity.

Introduction

Employee compensation is the remuneration received for services rendered by employees in organization. Productivity is the measure of employee's efficiency in realizing organizational performance objectives. Proper planning has to be done to achieve overall objectives. Proper planning has to be done to achieve overall objectives. Planning provides a direction, reduces uncertainty and minimizes waste. No activity can be done without planning. Human resource planning has to do with the determining human resource requirements, selection and socialization. Human resource planning is also called manpower planning, employment plans, and personnel plan. According to Terry and Michael (2010), "human resource planning includes the estimation of how many qualified people are necessary to carry out the assigned activities, and what, if anything, must be done to ensure that personnel supply equals personnel demand at the appropriate point in the future. Human resource planning is the strategy for the acquisition, utilization, improvement, and preservation of an enterprise's human

resources. it relates to establishing job specifications or the quantitative requirement of jobs determining the number of personnel required and developing source of manpower (Stainer, 2012). But like human resource management it has attracted criticisms from some quarters. The first criticism was on its interpretation, by Hansen and Brooks (2004) who claimed that human resource planning could be problematic particularly if an international perspective is taken because its interpretation and roles tend to vary from one country to another. Another criticism which is more acceptable is that of Jones and Mann (2002) who commented that there was a strong insistence that human resource planning is not the same as training. Other debates include its role in promoting performance or learning. The debate maintained that it was difficult to make a clear statement about what should be included in human resource planning. Despite these criticisms, the professionals still went ahead to give human resource planning a place in human resource management. Wilson (2000) stated that Human Resource is diverse in its activities of which Human Resource Planning is one of such parts that ensures the adequate development of employees within an organization. Hence, while defining human resource planning, Armstrong (2009) defined human resource planning as a part of human resource management concerned with the provision of learning, development and training opportunities in order to improve individual, team and organizational performance. Armstrong went further to say that the overall aim of human resource planning is to see that the organization has the quality of people it needs to attain the goals of improved performance and growth. Chalosky (2002) defines human resource planning as the study and practice of increasing the learning capacity of individuals, groups, collectives, and organizations through the planning and application of learning-base

interventions for the purpose of optimizing human and organizational growth and effectiveness. Gomez et al (2005) defines it as essentially a strategic process which is concerned with meeting both business and individual needs. The present is on the effect of employee compensation on productivity in Agip oil company, Port Harcourt.

Statement of the Problems
There are perceived complaints of poor salaries wages and benefits by some staff. Complaints of variation of real benefits against expected benefits by employees. In every organization human resources manager is responsible for the coordinating and controlling of employees so as to develop the organizations' performance. In today's market, the effective use of human resources in order to reach the objectives of the company is very important. Hence, for the sake of this research the area of human resource management that is of focus is the practice of planning by the human resource department (Eniola & Elizabeth, 2013). Human resource planning is a process that identifies current and future human resources needs for an organization to achieve its goals. Human resource planning should serve as a link between human resource management and the overall strategic plan of an organization. One of the problems confronting management in any organization is the effective human resources planning. This study identified the following as problems of human resource planning; inadequate right number of people to carry out the essential duties in the firm. They lack sufficient employees in the organization for production and render delivery of services as demanded by the customers in terms of service delivery, industrial production, capacity utilization and drilling operations which affects the performance of the firm negatively. Shortfall of human resource needs delays the production process and reduces the profit of the organization. Shortfall of

human resource needs in oil firms might result to poor completion of task and assignment, extra workload, increase in fatigue, high stress intensity, and decrease in the firm's ability to meet set goals (Flippo, 1984). Gould (1984) holds that in order to gain competitive advantage over the competitors, different advantageous ways are found out using strategic role in making a company competitive. Human resource planning if not systematically carried out cannot bring to equilibrium demand and supply of manpower in organizations (Armstrong, 2006). Oil and gas firms are unable to meet their human resource needs. By having the right number of human resources at a specific time to carry out organizational services, it will help the organization to increase in their performance and productivity which in turns helps to achieve the strategic objectives and goals of the organization very easily. This therefore has created a knowledge gap that needs to be filled hence the reason for conducting this research. It was in view of this purpose that the study investigated human resource employee compensation and productivity.

Purpose of the Study
The objective of this research is to determine the effect of employee compensation on productivity in Agip Oil Company, Port Harcourt

Research Question
To what extent does employee compensation affect productivity in Agip Oil Company, Port Harcourt?

Research Hypothesis
Ho: There is no significant effect of employee compensation on productivity in Agip Oil Company, Port Harcourt

Scope of the Study
Geographical Location: Port Harcourt, Agip Oil Company Limited

Unit of Analysis: Management & Employees.

Significance of the Study
The study will be significant to the following categories of people:
Students: This will serve as a guide and reference material to students who intend to carry out a research, read or write more on this topic.
Future Researchers: Those who will make or carry out a research in future will find it useful in meeting their goals

Variables of Compensation;
1. Bonuses
2. Commissions
3. Profit sharing
4. Equity based on incentives.

Parts of an employee's, compensation;
1. Salary
2. Health insurance
3. Life insurance
4. Stock option
5. Paid time off

Theories of Compensation
1. Reinforcement and Expectancy Theory,
2. Equity
3. Agency

Operational Definition of Terms
Attitude: Is a way of thinking, feeling, belief, or opinion of approval or disapproval towards something.

Behaviour: is an action or reaction that occurs in response to an event or internal stimuli (i.e., thought).

Employee Compensation: describes the cash rewards paid to employees in exchange for the services they provide.

Employee Performance: is the ability of an individual being able to deliver and

exert effective implementation of assigned duties and tasks.

Human Resource Planning: is a process that identifies current and future human resources needs for an organization to achieve its goals.

Productivity: is commonly defined as a ratio between the output volume and the volume of inputs.

1. Variables of Compensation; Bonuses, Commissions, Profit Sharing or Equity based on fluctuates.

2. Parts of Employee's Compensation; salary, health insurance, life insurance, stock option, paid time off.

Review of Related Literature
Human Resource Planning

Human resource planning is one of the strategic management practices, which has received great attention in the last two decades (Budhwar, 2000). Concept of human resource planning provides a direction, reduces uncertainty and minimizes waste. No activity can be done without planning. Human resource planning has to do with the determining human resource requirements, selection and socialization. Human resource planning is also called manpower planning, employment plans, and personnel plan. According to Terry and Michael (2010), "Human resource planning includes the estimation of how many qualified people are necessary to carry out the assigned activities, and what, if anything must be done to ensure that personnel supply equals personnel demand at the appropriate point in the future. Human resource planning is the strategy for the acquisition, utilization, improvement, and preservation of an enterprise's human resources. it relates to establishing job specifications or the quantitative requirement of jobs determining the number of personnel required and developing source of

manpower (Stainer, 2012). But like human resource management it has attracted criticism from some quarters. The first criticism was on its interpretation, by Hanasen and Brooks (2004) who claimed that human resource planning could be problematic particularly if an international perspective is taken because its interpretation and roles tend to vary from one country to another.

Performance Evaluation as a Dimension of Human Resources Planning

Human resource purists point out the numerous distinctions between performance appraisal and performance evaluation, but in practice, these two are used interchangeably because both refer to a process by which an employer reviews how well an employee performs and determines the rewards. In strict terms, however, an evaluation generally preceded an appraisal (Ogunjimi, 2015). Performance evaluation is the formal determination of an individual's job related actions and their outcomes within a particular position (Business, 2015). While performance appraisal is a structured and formal interaction between a subordinate and supervisor, that usually take the form of a periodic interview, in which the work performance of the subordinate is examined and discussed for improvement and skills development (Alvi, Surani & Hirani, 2013). Performance evaluations are designed to identify accomplishments, performance issues and constraints in implementation of project which enables decision making on which activities can continue, be modified or be enhanced. (USAID/PPL, 2011). Thus, performance evaluation is significant in helping an organization achieve its objectives (Alvi, Surani & Hirani, 2013). Generally, there are two problems of P.E which cause complications. One of the problems is that the process can have detrimental effects on the organization if it is not utilized appropriately. The other problem is that it can be ineffective if the

P.E system does not correspond with the organizational culture and system (Schraeder & Portis, 2007).

Attitude and Behaviour

In most organization, attitude and behaviour of employees and even managers can influence both employee and organizational performance (Akbar, 2013). Managers' in organizations have the ability to influence the behaviour and attitude of employees in a positive way that enhances their ability to good work performance (Vlachos, 2009). Equally, Reynolds (2014) notes that managers' attitudes and behaviour can also affect and influence employees in a negative manner, and thus, impact employees performance negatively. Macey (2014) argues that there exists a positive relationship between employees' attitude and behaviour and organizational performance. Human resources practices necessitates and provides the foundation upon which employee exercise their attitudes and behaviours. For if it is an organizational culture for employees to come to work late and leave early, this negatively affects employee performance. However, in the same scenario, if organizational human resource practices on employee reporting times, lunch breaks, closing times and unit of production are clearly stipulated, this influences employees performance positively. A study conducted by Clothier and Spriegel (2012) on impact of attitude and behaviour on employee performance indicated a positive relationship. Attitude influences how an employee reacts in a team. Whether he/she is going to be a team player or not. Additionally, employees' behaviour can compound a team performance if the employee has or exhibits behaviour that is disruptive to other employees' performance. In this regard, human resource practices become handy in navigating employees' to acceptable behaviours and attitude. For instance, Macey (2014) argues that human resource

policies and procedures help in structuring employees behaviour, attitudes, the dos' and don'ts'. In organizations where these human resources practices are well documented and structured, employee behaviour and attitudes are usually contained to behaviours and attitudes that advance organizational performance objectives (Clothier & Spriegel, 2012). Macey (2014) notes that it is the responsibility of human resource managers within organizations. It is important that human resource managers understand how to balance the needs or organizational performance, and the impact and influence of human resource practices on employee performance. One of the ways human resource managers can use human resource practices to influence employee attitudes and behaviours is by trying them to their performance evaluation. This means that employees evaluation score is not only based on actual work performance, but how their attitude and behaviour influenced other employees positively and negatively, and the resultant impact on other employees work and behaviour (Mayhew, 2015). Therefore, human resource practices can enhance or deter individual employees' behaviour or attitudes through prescribed measures as spelt in operations manuals and employees hand books (Tanvee, 2011).

Productivity

Productivity refers to a measure of employees' efficiency in realizing organizational performance objectives (Guest, 2011). Human resource practices exert enormous influence on the nature of job structures, performance objectives, and rewards, which in turn determines employees' productivity. Casey (1995) established that productivity is affected positively by HRM practices. In his paper, he explained that firms considered the adoption of new work practices to improve productivity. Further, this paper provided empirical evidence to support the conclusion that the adoption of a coherent

system, new work practices, including work teams, flexible job assignments, employment security, training in multiple jobs, and extensive reliance on incentive pay, produces substantially higher levels of productivity than those that do more 'traditional' approaches involving narrow job definitions, strict work rules, and hourly pay with close supervision. In contrast, adopting individual work practice innovations in isolation had no effect on productivity. A study conducted by Wang et al., (2010) in China revealed the existence of a significant relationship between human resource practices in organizations and employee work productivity. The most prominent issues that had the highest ranking as significantly contributing to employee productivity included team works, r(`0.872), followed by job rotation practice r(0.842) and finally flexible job assignments, r(0.810). These findings indicate that a significant relationship exists between human resource practices and employee work productivity. Therefore, as earlier suggested by Guest (2011), since there is a growing body of evidence supporting the existence of a significant relationship between human resource practices and productivity, it is important that organization invest adequate resources in competitive human resource practices that will not only advance productivity, but motivate employees as well.

Theoretical Review
Theories of Compensation
There are three theories of compensation namely;
1. Reinforcement and Expectancy Theory,
2. Equity Theory and
3. Agency theory.

Equity Theory:
Equity theory is a theory of motivation that suggests that employee motivation at work is driven largely by their sense of fairness.

Employees create a mental ledger of the inputs and outcomes of their job and then use this ledger to compare the ratio of their inputs and outputs to others. According to this theory, there should be equity or the uniformity in the pay structure of an employee's remuneration. If the employee feels he is not being paid fairly for the amount of work he does in a day will result in lower productivity, increased turnover and high absenteeism. The remuneration system should comply with three types of equity:

i. Internal *Equity:* The employee perceives the fairness in different pay for different jobs based on the nature of work involved, i.e. he must feel that pay differentials among the jobs are fair.

ii. External *Equity:* The employee should feel the fairness in what they are being paid is in line with what other players in the same industry are paying to their employees for the same kind of job.

iii. *Individual Equity:* The employee perceives the pay differentials among the individuals who are performing the same kind of a job and within the same organization. Usually, an individual with more experience gets high remuneration as compared to the fresher irrespective of the nature of a job.

Research Methodology
The design for the study is quasi experimental (or survey). It is essentially descriptive because the aim is for the experimental designs to constitute a class of empirical studies with human beings that lack two of the usual features of experimentation: they rarely occur inside a laboratory, and they never involve the random assignment of units to the treatments being contracted. The population of the study consists of three hundred and one (301) employees of Agip Oil Company, Port Harcourt which comprises the following: 120 are management staff, while the remaining 181 were the production and distribution

workers. The management staff consists of the board of directors, managers, accountants, supervisor and quality control experts. A sample is a portion or fraction of the population from which data concerning a study was actually collected. In this research, the population of the study as stated as three hundred and one (301) from which one hundred and seventy two respondents were conveniently selected. These one hundred and seventy two (172) respondents was arrived at using the Taro Yamane formula. For a systematic and sequential collection of data, two major available sources of data was extensively used for the study. The sources are the primary source, which is the first hand data collection through the use of questionnaire. The design of the questionnaire is in the likert scale format, in which respondents were required to answer in the manner below`

1. To a great extent
2. To a moderate extent
3. To a considerable extent
4. To a low extent

The secondary source of data consists of work done by other researchers and authors in textbooks and reputable journals. Validity refers to the extent to which an instrument measures what it is expected to measure. To achieve this, the instrument used in the research was reviewed by experts to ensure the relevance of the questions and their relatedness to the topic. Reliability of instrument refers to the consistency with which an instrument measures what is designed to measure. The reliability of the instrument was ascertained using the test-retest technique. The questionnaire was first distributed to professionals management students who work in Agip Oil Company in Port Harcourt before administering the questionnaire on the study sample. The reliability coefficient using Pearson product Moment Correlation (PPMC) was 0.82 which means that the instrument is reliable.

The research instrument used for this study was the questionnaire. The questionnaires were administered personally to the respondents. A total of one hundred and seventy two copies of the questionnaire were administered. A total of one hundred and fifty-five (155) were retrieved. Data analysis technique explains the method used in analyzing the data collected for this study. Data collected from the questionnaires were based on the research questions and hypotheses that were formulated. The method of data analysis employed was the histogram used to present the responses to the research questions and chi-square (i), to test the hypothesis which is a significant test technique that uses data from observed frequencies. The four (4) point likert scale was also used to express the degree of responses and scoring to questions.

The chi-square formula is given as:

$$X^2 = \sum \frac{(fo-fe)^2}{fe}$$

Where X^2 = chi-square
fo = observed frequency
fe = expected frequency
$\sum$ = summation

The study used 0.05 or 95% level of significance.

In interpreting the result, when the calculated value of X^2 is greater than the critical value, the relationship is said to be significant and thus reject the null hypothesis. If on the other hand, the calculated value x^2 is less than the table value, then accept the null hypothesis and reject the alternative. In the other way round, if the calculation value of x^2 in greater than the critical value, we reject the null hypothesis and accept the alternate of the reverse in the case.

Data Presentation, Analysis and Interpretation of Results
Data Presentation
A total of one hundred and seventy-two (172) questionnaires were distributed to the

selected members of staff of the Agip Oil company. Out of the 172 questionnaires distributed, one hundred and sixty (160) questionnaires were retrieved which represent 100% response rate.

Table 1: Questionnaire Distribution and Retrieval

S/N	Respondents Institution	No. of Questionnaire Administered	No. of Questionnaire Retrieved	% of Questionnaire Retrieved
1.	Operational manager	100	90	73%
2.	Staffs	72	70	27%
	Total	**172**	**160**	**100**

Research Question: To what extent does employee compensation affect productivity in Agip Oil Company, Port Harcourt?

Table 2: Employee Compensation affects Profitability
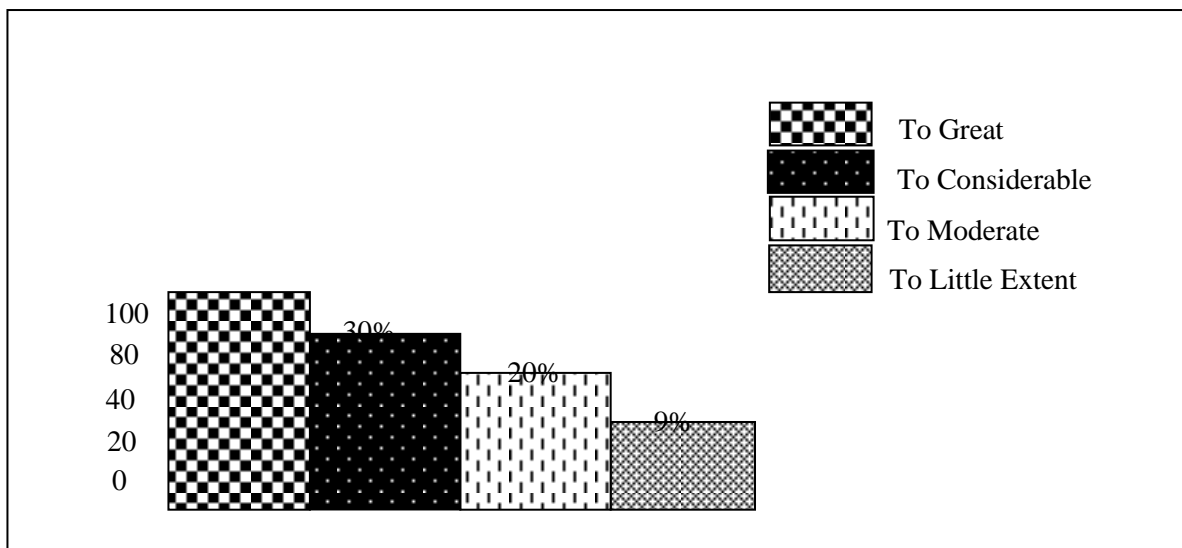
Source: Survey Data, 2023

Figure 2 above shows that 41% indicated employee compensation affect productivity in Agip Oil Company, Port Harcourt, to a great extent, 30% of the respondents say it is to a considerable extent, 20% of the respondents say it is to a moderate extent while 9% of respondents are of the opinion that it is to a little extent.

Test of Hypothesis
The testing hypotheses of this research work followed these steps:

Hypothesis One
Ho: There is no significant effect of employee compensation on productivity in Agip Oil Company, Port Harcourt

Table 2: Observed Frequency for Hypothesis Two

Option	Senior Officer	Junior Officer	Total
To a great extent	10	76	86
To a considerable extent	19	23	42
To a moderate extent	8	18	26
To little extent	1	5	6
Total	**38**	**122**	**160**

Source: Survey Data, 2023

Calculation of expected frequency using the formula

$$\frac{Total\ rows\ x\ total\ columns}{grand\ total}$$

R_1	=	38 x 86 ÷ 160	=	20.436
		122 x 86 ÷ 160	=	65.58
R_2	=	38 x 42 ÷ 160	=	9.975
		122 x 42 ÷ 160	=	32.03
R_3	=	38 x 26 ÷ 160	=	6.18
		122 x 32 ÷ 160	=	19.83
R_4	=	38 x 26 ÷ 160	=	1.43
		122 x 6 ÷ 160	=	4.58
Fe	=	18.339 or 18.239		

Table 3: Calculation of Chi-square for Hypothesis Two

Fo	Fe	Fo – fe	$(fo - fe)^2$	$\dfrac{(fo - fe)^2}{fe}$
10	20.425	- 10.425	108.681	5.321
19	9.975	9.025	81.451	8.166
8	6.175	1.825	3.331	0.539
1	1.425	- 0.425	0.181	0.128
76	65.575	10.425	88.831	1.334
23	32.025	9.025	81.451	2.543
18	19.825	- 1.825	3.331	0.168
5	4.575	0.425	0.181	0.04
			X^2	**18.239**

Source: Survey Data, 2021

Df	=	(C - 1)(R - 1)
	=	(2 - 1)(4 - 1)
	=	1 x 3 = 3

At 0.05 significant level of df = 3
Critical value = 7.82

Decision Rule

Since the calculated chi-square value which is $X^2 = 18.24$ is greater than (>) the critical value which is 7.82, the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, we conclude that employee compensation has significant effect on productivity in Agip Oil Company, Port Harcourt.

Findings

The results of findings are summarized below;

i. Employee compensation contributes very profitability to growth Agip Oil Company, Port Harcourt.

ii. Promotion has a considerable impact on the commitment of employee performance of Agip Oil Company, Port Harcourt.

Summary and Conclusion

Planning is essential for productivity and organizational effectiveness and efficiency because it acquires best human resources, focuses on corporate goal, utilizes human resources, develops human resources, reduces uncertainty and labour cost, regularizes production, maintains good industrial relation, keeps records, and controls human resources. Human resource planning must be linked with the organizational strategic plan as this is the only way to make manpower planning effective since it aims at not just ensuring that people are in the right place, at the right time and in the right number, but that they are also ready to adopt appropriately to different activities for future manpower needs. It is therefore never late for changes in the modus operandi of the organization hence a never ending process which utilizes matching human resources to its demand and supply for effectiveness and efficiency in achieving the overall organization goals. This is in lieu of the fact that the major goal of human resource management is productivity as all the functions and activities of human resource management

are directed towards achieving high productivity (Oguonu, 2007) which improves when managers emphasize quality over quality, break down barriers and empower their employees. Contemporarily, managers, chief executives and heads are advised to use reward systems, employee involvement, teamwork and excellent interpersonal relationship to secure high productivity in their various organizations. How be it, it is the ability of an organization to align her human resource management policies and practices with the overall organizational goals that the needed productivity can be assured. Consequently, the paper showed the extent employee compensation affect productivity in Agip Oil Company, Port Harcourt.

Findings

The results of findings are summarized below:

i. Employee compensation contributes very profitably to the growth Agip Oil Company, Port Harcourt.

ii. Promotion has a considerable impact on the commitment of employee performance of Agip Oil Company, Port Harcourt.

Recommendations

1. The management should review the remunerations rates and payment structure so as to accommodate the needs of the changing economic dynamics and escalating cost of living.

2. The management should review their appraising performance methods so as to encourage and motivate their staff; this will in turn increase their productivity.

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HUMAN RESOURCE SUCCESSION PLANNING AND ORGANIZATIONAL GROWTH; A THEORETICAL APPRAISAL

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Abstract

This paper investigated the effect of Human Resource Succession Planning on organizational growth; a theoretical appraisal. Planning is a process for identifying and developing internal people with the potential to fill key business leadership positions in the company. Succession planning increases the availability of experienced and capable employees that are prepared to assume these roles as they become available. Throughout succession planning characteristics, human resource management programmes such as recruitment, training and development, performance management, talent management and reward management, are considered very important. Both strategic Human Resource Management (HRM) programmed and succession planning share development as a means to an end but approach it from different directions: while HRM programmes tends to be bottom up (from individual to organization); succession planning tends to be top down. Effective succession concerns itself with building a series of feeder groups up and down the entire leadership pipeline or progression. In contrast, replacement planning is focused narrowly on identifying specific back-up candidates for given senior management positions It was concluded that Human Resource Succession Planning has positive effect on organizational growth. It was recommended among many others that the Chief Executive Officer (CEO) should hold the line management accountable for developing future leaders and simultaneously model the process him or herself.

Introduction

The organization's survival is based on its ability to bring on board and sustain high quality workforce over a period of time. Many organizations are currently facing mounting pressures to ensure their sustainability, flexibility, and responsiveness to the increasing uncertainty and limitations in the economic world. Ultimately, increased turbulence in the employment environment, characterized by organizational restructuring, funding uncertainties, and increasing program complexities have substantial effects on the ways organizations respond to workforce replacement (Caudron, 1999). At a global level, succession planning in the recent past has received more attention not only as a concern for the management of human resources, but also as institutional strategic management component for ensuring performance and growth. In one of the recent surveys by Rothwell (2010), top corporate companies revealed that the main reasons for having succession planning programmes are attributed to the challenge to maintain a pool of potential successors. Nigeria is realizing a robust growth in the number of non-governmental organization in the private sector. According to the NGO Coordination Board (2009), the sector has been growing at an average rate of 400 organizations per year since 2001. The originality of this study, therefore, drawn from the lack of evidence based studies that directly examine the experience and practices of succession planning among the local NGOs in Nigeria. In Nigeria succession planning is gaining prominence and is being noticed in many fronts. Not for profit organization that includes non-governmental organization are also not left

out in the quest for succession planning as legislated in the NGO, Act 2013.

Definition of Succession Planning

Succession planning is a type of planning where organizations identify internal employees as potential candidates for filling future vacancies that may arise within the organization and start training them well ahead of time to perform those roles. According to Luhn (1996), succession planning is a process whereby an organization ensures that employees are recruited and developed to fill each key role within the company. Through your succession planning process, you recruit superior employees, develop their knowledge, skills, and abilities, and prepare them for advancement or promotion into ever more challenging roles. Actively pursuing succession planning ensures that employees are constantly developed to fill needed role. As your organization expands, loses key employees, provides promotional opportunities, and increases sales, your succession planning guarantees that you have employees on hand ready and waiting to fill new roles. Robinson (2004); states that proactive succession planning leaves your organization well prepared for expansion, the loss of a key employee, filling a new, needed job, employee promotions, and organizational redesign for opportunities. Successful succession planning builds bench strength.

Importance of Succession Planning

Every organization will have some form of job vacancy arising in future due to attrition or people retiring from their jobs. However, it is important for organizations to continue to function smoothly irrespective of losing such key employees performing key roles. When organizations have a succession plan, it makes it easier for them to handle any unforeseen attrition and prevents the organization from being greatly impacted by such attrition (Noe, John, Barry and Patrick, 2006). Many organizations perform

this type of talent management planning for senior management positions so that losing a key leader would not disable the organizations' regular functions. However, succession planning would be more effective if it is performed at all levels in the organization instead of focusing only on the top management.

Theoretical Framework

There are different theories on organizational succession planning, each identifying own paradigm and concept. Some of these theories include Trait Theory, Path-Goal Theory, Game Theory and Leadership Model Theory.

(A) Trait Leadership Theory

Trait leadership theory suggests that all leaders are born with or display certain key personality characteristics. Certain characteristics are particularly suited to leadership. People who make good leaders have a sufficient combination of these character traits. Most of the time the traits are considered to be naturally part of a person's personality. Hence, leadership trait theory tends to assume that people are born as leaders or not as leaders. However, according to Shead (2007), the idea that leadership traits are inborn and unchangeable appears to be incorrect. He posits that it is true that many of our dispositions and tendencies are influenced by our personalities, but most people will acknowledge that it is possible for someone to change their character traits for the worse. Someone typically known for being honest can learn to be deceitful. Stogdill (1974) identified the following traits and skills as critical to leaders.

Benefits of Succession Planning

According to Noe (1999), the benefits of succession planning are:

i. It serves as contingency planning and keeps the organization well prepared for any sudden activities that may

happen and reduce the impact of losing key employees to a great extent.

ii. By insisting on succession planning, managers get to identify various skill-sets among the team members and their strengths come to light.

iii. Also, employees who are identified as successors based on the skill-sets they possess can be groomed well to handle the relevant positions, and any skill-set that is lacking in the employee can be developed by providing appropriate training and opportunities.

iv. Employees will have a well-defined road map of their career and it serves as a motivation factor for them to perform even better.

v. Employees will understand that their organization has future plans for them, will tend to stay with the organization for longer time.

vi. Internal employees already have a good understanding of the organization and its goals. Thus, it saves a considerable amount of time and cost for the organization in hiring and inducting new candidates for these positions.

vii. Overall, it creates a very positive atmosphere within the organization and leaves employees feeling extremely satisfied in terms of career progress and highly motivated.

Steps in Succession Planning

There are several steps in effective succession planning: human resources planning, assessing needs, developing managers, and developing replacement charts and identifying career paths. These according to Gomez-Mejia, David and Robert (2004) are as follows:

1. Human Resources Planning

Engaging in human resources planning by forecasting the organization's needs for employees at upper levels is the first step in succession planning. Some staffing needs can be anticipated, such as a known upcoming retirement or transfer. However, Robert and Steel (1993), state that staffing needs are often less predictable-organizational members may leave for other companies, retire unexpectedly, or even die, resulting in a need to hire from outside or promote from within. The organization should do its best to have staff available to move up in the organization even when unexpected circumstances arise. Thus, accurate and timely forecasting is critical.

2. Assessing needs and developing Replacement Charts

The second major step for succession planning is to define and measure individual qualifications needed for each targeted position. Such qualifications should be based on information from a recent job analysis. Once these qualifications are defined, Rosemary & Batt (2002), employees must be evaluated on these qualifications to identify those with a high potential for promotion. This may involve assessing both the abilities and the career interests of employees. If a lower-level manager has excellent abilities but little interest in advancement within the organization, the development efforts aimed at promotion will be a poor investment. To determine the level of abilities of employees within the organization, many of the same selection tools that are used for assessing external candidates can be used, such as general mental ability tests, personality tests, and assessment centers. However, when selecting internally, the company has an advantage in that it has much more data on internal candidates, such as records of an employee's career progress, experience, past performance, and self-reported interests regarding future career steps.

3. Developing Managers

The third step of succession planning, which is actually ongoing throughout the process is the development of the managers

who are identified as having promotion potential. In order to prepare these lower-level managers for higher positions, they need to engage in development activities to improve their skills. Some of these activities may include:

iv. Job rotation through key executive positions: By working in different executive positions throughout the organization, the manager gains insight into the overall strategic workings of the company. Additionally, the performance of this manager at the executive level can be assessed before further promotions are awarded.

v. Overseas assignments: Many multinational companies now include an overseas assignment as a way for managers to both learn more about the company and to test their potential for advancement within the company. Managers who are successful at leading an overseas branch of the company are assumed to be prepared to take an executive position in the home country.

vi. Education: Formal courses may improve managers' abilities to understand the financial and operational aspects of business management. Many companies will pay for managers to pursue degrees such as Masters in Business Administration (MBAs), which are expected to provide managers with knowledge that they could not otherwise gain from the company's own training and development programs.

Performance-related training and development for current and future roles: Specific training and development provided by the company may be required for managers to excel in their current positions and to give them skills that they need in higher level positions.

Developing replacement charts and identifying career paths: In the final step of succession planning, the organization identifies a career path for each high-potential candidate those who have the interest and ability to move upward in the organization. A career path is the typical set of positions that an employee might hold in the course of his or her career. In succession planning, it is a road map of positions and experiences designed to prepare the individual for an upper-level management position. Along with career paths, the organization should develop replacement charts, which indicate the availability of candidates and their readiness to step into the various management positions. These charts are depicted as organizational charts in which possible candidates to replacement others are listed in rank order for each management position. These rank orders are based on the candidates' potential scores, which are derived on the basis of their past performance, experience, and other relevant qualifications. The charts indicate who is currently ready for promotion and who needs further grooming to be prepared for an upper-level position.

Problems with Succession Planning
Succession planning is typically useful to the organization in its human resource planning, and when done properly, can be beneficial to organizational performance. However, there are potential problems associated with the use of succession planning: the crowned prince syndrome, that talent drain, and difficulties associated with managing large amounts of human resources information.

Crowned Prince Syndrome
The first potential problem in succession planning is the crowned prince syndrome, which occurs when upper management only consider for advancement, those employees who have become visible to them. In other words, Rosemary & Batt (2002), rather than looking at a wider array of individual employees and their

capabilities, upper management focuses only on one person the "Crowned Prince". This person is often one who has been involved in high-profile projects, has a powerful and prominent mentor, or has networked well with organizational leaders. There are often employees throughout the organization who are capable of and interested in promotion who may be overlooked because of the more visible and obvious "Crowned Prince", who is likely to be promoted even if these other employees are available. Not only are performance problems a potential outcome of this syndrome, but also the motivation of current employees may suffer if they feel that their high performance has been overlooked. This may result in turnover of high quality employees who have been overlooked for promotion.

Talent Drain
The talent drain is the second potential problem that may occur in succession planning. Because upper management must identify only a small group of managers to receive training and development for promotion, those managers who are not assigned to development activities may feel overlooked and therefore leave the organization. This turnover may reduce the number of talented managers that the organization has at the lower and middle levels of the hierarchy. Exacerbating this problem is that these talented managers may work for a competing firm or start their own business, thus creating increased competition for their former company.

Managing Human Resource Information
The final problem that can occur in succession planning is the concern with managing large amounts of human resources information. Because succession planning requires retention of a great deal of information, it is typically best to store and manage it on a computer. Attempting to maintain such records by hand may prove daunting. Even on the computer,

identifying and evaluating many years' worth of information about employees' performance and experiences may be difficult. Add to that the challenges of comparing distinct records of performance to judge promotion capability, and this information overload is likely to increase the difficulty of successful succession planning. Succession planning, which is identifying and preparing managers for future promotions within the organization is one element of successful human resource planning. Unfortunately, many organizations do a poor job of succession planning. Even when it is done properly, succession planning has some potential problems that can harm employee motivation and the company's bottom line. Effective succession planning, however, is likely to improve overall firm performance and to ward and motivate employees within the organization.

Effect of Succession Planning on Organizational Growth
The concept of organizational performance is based on the idea that an organization is a voluntary association of productive assets that include human, physical, and capital resources for the purpose of achieving shared objectives (Barney, 2002). Given that human capital in the organization is an integral resource contributing to effective performance. It is therefore imperative to assess performance based on strategic alignment of available human resources of the organization. In this perspective, Rothwell (2001), described succession planning's main objectives as; to improve job filling for key positions through broader candidate search, active development of longer-term successors through ensuring their careers progress, and making sure that they get the range of work experiences they need for the future to encourage a culture of progression. Succession planning is in the realm of leadership development, strategic management and human resource management. Path-goal theory and its

contribution on the development of the concept of leadership is considered to be of relative importance. Huddleston (1999), in his analysis had concluded that current systems for developing future leaders have been characterized by efforts to address leadership capacity across board. The path-goal theory of leadership as developed was to reconcile prior findings and anomalies resulting from empirical investigations of leadership styles. It concerns relationships between formally appointed superiors and subordinates in their day-to-day functioning within any organization structure. However, research indicates that the initial version of the theory asserted that the motivational function of the leader consists of increasing personal payoffs to subordinates for attainment of work-goals.

(Nink and Fogg, 2006) describes it as a dynamic and ongoing process of systematically identifying, assessing, and developing leadership talent within the organization career development pipeline. This depicts assessing, developing and recognizing key contributors to meet future organizational strategic and operational needs as fundamental organization function. However, Schmalzried and Fallon (2007), described succession planning as a proactive attempt by the leaders of the organization to ensure that leadership is continuous, different positions are filled from within for any departures that may occur. To achieve outstanding results using succession planning, an organization such as an Non-Governmental Organizations (NGOs) ought to develop an effective and highly focused strategy centered on organizational future superiority. Organization performance measurement is considered a multifaceted concept that occurs at different sectoral levels for industry, corporate and business sectional unit. However, there is a necessity to target specific factors which contribute to the performance in a manner that matches context of the organizations with sector

factors that can sustain performance over the long term (McGahan, 2004). According to department of Public Information (2007), the above mentioned takes into consideration organization in the private sector which are not for profit that include Non-Governmental Organizations (NGOs) which are generally not for profit, voluntary citizens' groups that are organized on a local, national, or international level to address issues in support of the public good. It is also important to note that Non-Governmental Organizations (NGOs) are the recipients of billions of dollars invested in social transformation. This provides a basic for taking into consideration NGOs' performance as a necessary factor to be considered fundamentally to address the question of upwards accountability to the stakeholders such as donors, international aid organizations or foreign governments supporting developing countries, or other with power over them, and downwards accountability to those affected by them that include the stakeholders or direct beneficiaries who are dependent on these organizations (Bendell, 2006). Accountability, transparency, and effectiveness have been crucial for the stakeholders that NGOs serve as direct beneficiaries, donors who fund their programmes, and host local governments in the recent past.

Conclusion

Succession planning is a process for identifying and developing internal people with the potential to fill key business leadership positions in the company. Succession planning increases the availability of experienced and capable employees that are prepared to assume these roles as they become available. Taken narrowly, "replacement planning" for key roles is the heart of succession planning. Effective succession or talent-pool management concerns itself with building a series of feeder groups up and down the entire leadership pipeline or progression. In

contrast, replacement planning is focused narrowly on identifying specific back-up candidates for given senior management positions. Both strategic Human Resource Management (HRM) programmed and succession planning share development as a means to an end but approach it from different directions: HRM programmes tends to be bottom up (from individual to organization); succession planning tends to be top down.

Recommendations

Chief Executive Officer (CEO) should hold the line management accountable for developing future leaders and simultaneously model the process him or herself.

Chief Executive Officer (CEO) should allocate sufficient resources & management attention to sustain the program.

To successfully implement the process of succession planning on an organization, plans for implementation will need to be disseminated to all program executives within the organization.

There should be regular reviews to evaluate the succession planning results.

A needs driven assessment should done in which positions in need of a succession plan were identified.

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NON-RENEWABLE ENERGY CONSUMPTION AND ECONOMIC GROWTH IN NIGERIA

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Abstract
Non-renewable energy consumption facilitates the production of output but it is also a major source of carbon emission, leading to a dilemma in policy priority between economic growth and pollution reduction. The study therefore investigates the role of non-renewable energy consumption on economic growth in Nigeria spanning from 1980 –2019 with annual time series data. Using autoregressive distributed lag (ARDL) econometric technique, the author explore non-stationarity tests, descriptive statistics, correlation matrix, co-integration, error correction model and ARDL short run and long-run forms and bounds tests. The findings of this study reveal evidence of a negative significant relationship between non-renewable energy consumption and economic growth in Nigeria. This implies that non-renewable energy consumption does not have a significant effect on economic growth in Nigeria. Therefore, this buttressed the fact that increase in the consumption of non-renewable energy resources affect the human's health thereby increasing the rate of sicknesses and death, challenges on environmental atmosphere, challenges on climate change and agricultural productivity. It is therefore recommended that the government should enact policies that will guide the uncontrolled usage of non-renewable energy resources in Nigeria, and also create awareness on renewable and energy efficiency resources.

Keywords: Climate change, change in Temperature, Average Rainfall, Economic Growth, Non-renewable energy consumption.

Introduction
Countries all over the world quest for a stable economic growth and sustained environmental quality which improves the qualities of human lives and wellbeing. This has become a topical issue among various governments, international institutions and other stakeholders that are interested in sustainable development. The economic growth has significantly achieved a positive quality on human lives and wellbeing in the world over the years.

Economic growth is perceived as the quantitative sustained increase in one country's per capita output or income accompanied by expansion in its labour force, consumption, capital and volume of trade (Jhingan, 1997). Economic growth is commonly defined as the rate of increase in a country's gross domestic product (GDP).

GDP measures the market value of all final goods and services produced in a country during a year. The GDP is also defined conceptually, as a measure of the value of national output, national income, and national expenditure on goods and services (Mankiw, 2003). In the course of an economy to achieve a sustained economic growth, a remarkable success emerges with the ultimate prize on the environment. The upsurge increase in human economic activities as a result of the sustained economic growth have surfaced with a cost on the environment which is anchored on the widespread of environmental degradation and climate change that are attributable to carbon dioxide (C02) emissions, ocean acidification, deforestation and increased levels of water and air pollutions (Graff-Zivin, 2018). It is also noted that pollution is one of the core

causes of other environmental issues such as biodiversity and climate change (Uchudi, 2001). A substantial degree of hazardous industrial gas emissions such as chlorofluocarbons, carbon-monoxide, sulphur oxide as well as carbon dioxide became more pronounced in the environment following a significant level of economic growth recorded after the World War II (Ghadar, 2006).

There has been a long-standing debate on the need for a successful integration of economic growth and environmental quality (Adedoyin, et al, 2020; Chem & Taylor, 2019). In this regard, both economic growth and energy consumptions positively react to each other, in which case, as energy consumption increases, the output level also increase (Adedoyin, et al, 2019, Udi, et al. 2020); Khan, et al., 2019), hence, with the emissions from energy consumption, poor environmental quality becomes inevitable, that is, harmful to both the environment and human health. Also, high economic growth rate driven by industrialization, is attributed to increase in green house gas emissions (GHGs) (Pata, 2018; Alola & Yildirim, 2019). It is established that industrialization is highly instrumental for economic growth and generates environmental pollution, CO2 emissions, and environmental degradation in general. Most countries that experienced growth and development in their early stage suffered potential environmental pollution with economic boom (Chem & Taylor, 2019; Alvarado & Toledo, 2017; Usman, et al. 2020), therefore, the higher the drive for economic growth, the higher the environmental pollution (Pata, 2018). Waqih, et al. (2019) stated that the concentration of CO2 was about 280 parts per million (ppm) before the industrial revolution, and has crossed 400 ppm, the highest value ever recorded. It is also noted that CO2 is found to constitute the major part of GHGs emissions to the atmosphere, with a total of 82% (Waqih, 2019, IPCC,

Climate Change, 2014). The renewable and non-renewable energy resources serves as the building block upon which all sectors of modern economies are founded which underpins all the economic activities (Atems & Hotaling, 2018). The importance of energy to growth cannot be overemphasized and the growing damage of the GHGs emissions from the traditional non-renewable energy consumption to the atmosphere calls for a greater attention. On combustion, some forms of energy emit carbon dioxide which net increases amplify the greenhouse effect. All societies require energy services that support the provision of human basic needs such as lighting, cooking, a comfortable living temperature, use of electrical and mechanical appliances, mobility, communication, educational aids and essential health care. Energy is also needed to create goods from natural resources and to provide many of the services that are taken for granted. Energy also fuel productive activities including agriculture, commerce, manufacturing, industry and mining. Energy and poverty reduction are not only closely connected with each other but also with socio-economic development which involves productivity, income growth, education and health (Nnaji, et al, 2010). In the other hand, a lack of access to energy contributes to poverty and deprivation which may lead to a decline in the growth of an economy. A shift to the non-renewable energy sources began in the 18th century as an increasingly industrialized society started to burn fossil fuels to make steam engines invented in 1763 and also to smelt iron, the large increase in the percentage contributions from wood and coal and the rapid increase in oil and natural gas since world war II resulted to increase emission of carbon dioxide (Co2) and fossil fuels to the atmosphere (Hinrichs, 1996). In Nigerian communities, over 70% of its citizens depend on fuel wood as a source of energy, so much so that over 50 million tonnes of

fuel wood is consumed annually (Oyedepo, 2012).

The increase in the use of fossil fuels since the beginning of the industrial age has increased the carbon dioxide concentration in the atmosphere which also increased the earth's temperature has inadvertently resulted to climate change.

In order to maintain a sustainable economy that is capable of providing essential goods and services to the citizens of both developed and developing countries and maintain a supportive global system, requires a major shift in low energy is produced and utilized (Nfah, et al, 2007; Kankam & Boon, 2009). The developed economies control and bring to the barest minimum level, the global environmental problems that arise due to climate change, while the developing countries face more serious, complex and fast-growing environmental problems due to disregard to the environmental protection laws by foreign corporations, business firms and individuals (Robinson, Shaheen & Shaheen, 2007). The developing countries will need to invest in more energy efficient technologies and develop alternative to oil and coal, although, it is obvious that the desire for economic development and population growth will frustrate this effect. Although, energy is pivotal for economic development and social well-being, but the future of climate change amidst sustainable development lies with renewable energy consumption (Wang & Dong, 2019). As a consequence, nations, regions, communities, and institutions are poised to find alternative energy sources (Ozturk & Bilgili, 2015; Saint Akadiri, 2019). Energy sources in general are crucial for alleviating poverty and achieving sustainable human development, while renewable forms of energy are specifically essential tools for achieving the Millennium Development Goals (MDGs) (Wang & Dong, 2019). Shahbaz, et al. (2012) further states that consumption of energy from renewable and traditional non-renewable sources enhances growth of the economy; however, it is preferable for an economy to increase the consumption of renewable energy against the non-renewable as the former mitigates CO_2 emissions.

However, renewable energy technology which releases much lower amounts of carbon dioxide (CO_2) emissions than fossil fuels are growing (Edenhofer, et al, 2010). Renewable energy is generated through natural processes and continuously replaced which include sunlight, geothermal heat, wind, water as well as various forms of biomass (Valodka & Valodkiene, 2015).

Several programmes were introduced in Nigeria to promote economic growth with a minimal consumption of non-renewable energy resources. The environmental protection laws were enacted to guide foreign corporations, business firms and individuals against environmental pollution in Nigeria. Accordingly, the policy makers at different levels of government of a nation enacted policies that could address environmental activities and growth (Graff-Zivin, 2018). The inter-governmental panel on climate change (IPCC) was also enacted to check the continuous rise in the global average surface temperature (IPCC, 2001). The national adaptation strategy and plan of action for climate change in Nigeria (NASPA-CCN) was enacted to mitigate the effect of climate change in Nigeria. The climate change policy response and strategy (CCPRS) was adopted in 2012 to ensure an effective national response to the multifaceted impacts of climate change in Nigeria. The 1997 Kyoto protocol was the giant step taken by the industrialized economies to drastically reduce the emissions of greenhouse gasses (Lee, et al, 2008).

In spite of all these several foreign and domestic policy measures adopted for both developed and developing economies to

combat the effect of environmental degradation as a result of the need for energy source that leads to economic growth and climate change, yet the trace of their negative impacts on both the environment and human beings persists such as different forms of environmental pollutions, carbon dioxide (CO_2) emissions, changes in temperature, global warming, black suites, changes in water level and changes in rainfall. To this end, this study tends to seek for the solution of this global menace that affects the nations all over the world. This study is particularly concerned about the extent to which the impact of non-renewable energy consumption has impacted on the economic growth in Nigeria.

Literature Review

Departing from the endogenous growth theory, which is a new theory that explains the long-run growth rate of an economy on the basis of endogenous factors as against exogenous factors of the new classical growth theory. The Solow-swan neoclassical growth model, which explains the long-run growth rate of output based on two exogenous variables; the rate of population growth and the rate of technological progress and this is independent of the saving rate. As pointed out by Romer, (1990), in models with exogenous technical change and exogenous population growth, it never really matter what the government did. The new growth theory does not simply criticise the neoclassical growth theory. Rather, it extends the latter by introducing endogenous technical progress in growth models. The endogenous growth models have been developed by Arrow (1962), Romer (1990) and Lucas (1988) among other economists.

In this effect, the following empirical literatures have been researched for use in this study. Awodumi and Adewuyi (2020) investigated the role of non-renewable energy in economic growth and carbon emissions among the top oil producing economies in Africa during 1980–2015. After accounting for nonlinearity and structural break in unit root and co-integration analysis, the study adopted non-linear autoregressive distributed lag (NARDL) technique. The study reveals evidence of asymmetric effect of per capita consumption of both petroleum and natural gas consumption on economic growth and carbon emission per capita in all the selected countries except Algeria. In Nigeria, although positive change in the non-renewable energy consumption retards growth, it reduces emission. In addition, the influence of negative change in petroleum and natural gas consumption is similar to those observed for positive change in Egypt and Nigeria.

However, ARDL estimates of Hdom (2019) could not establish any significant influence of fossil fuel electricity consumption on carbon emission in 8 South American countries. Studies also paid considerable attention to the role of aggregate non-renewable (and renewable) energy in economic growth. For instance, Afonso, Marques, and Fuinhas (2017) and Dogan (2016) adopted ARDL technique and its variants to show that non-renewable energy significantly promoted economic growth in Turkey and 28 countries respectively.

For instance, Akadiri, et al, (2019) employed a combination of FMOLS, panel ARDL and causality approaches for 28 EU countries and submitted that total renewable energy promoted economic growth but aggravated carbon emission.

Hanif (2018) and Hanif, Aziz, and Chaudhry, (2019) utilizing total fossil fuel energy consumption, considered the case of East Asia and the Pacific, and 25 developing Asian economies respectively. Based on GMM estimates, they discovered

significant contribution of this energy type to CO2 emission.

Medee, et al, (2018) investigated on the granger causality of energy consumption and economic growth in the organization of Petroleum Exporting Countries: Evidence from Toda-Yamamoto Approach between 1970 and 2014. The variables used are economic growth and non-renewable energy consumption. The method used was augmented granger causality model (AGCM) by Toda-Yamamoto. They found the dorminants of feedback hypotheses among the major oil exporting countries.

Aneja, Banday, Hasnat, and Koçoglu (2017) examines the relationship between energy consumption and economic growth for BRICS countries within a multivariate panel framework for 1990–2012. The Pedroni (1999–2004) panel co-integration test shows a long-run relationship among GDP per capita renewable energy consumption, non-renewable energy consumption, and gross fixed capital formation. Finally, a panel error correction mechanism was conducted which reveals unidirectional causality from economic growth to renewable and non-renewable energy consumption. The results support the conservation hypothesis. In other words, no strong relationship is found between energy consumption and economic growth. These results indicated that economic growth is the significant variable which boosts energy consumption in the BRICS countries. The higher the economic growth, the higher will be the energy consumption.

Belaïd, et al, (2017) and Alola, et al, (2019) demonstrated that the positive effect of energy consumption on environmental pollution remain valid when total energy is decomposed into total renewable and non-renewable energy for the case of 16-EU countries and Algeria respectively.

Boontome, et al, (2017) used ECM Granger Causality technique to demonstrate that consumption of non-renewable energy increased carbon emission but had negligible impact on economic growth of Thailand, while Ito (2017) discovered that fossil fuel consumption increased CO2 emission but retarded economic growth in developed economies, according to GMM and pooled mean group estimates.

Mesbah (2016) examined energy consumption and economic growth in Egypt between 1980 and 2012. Variables used are oil, electricity, natural gas and economic growth. The method used is Toda Yamamoto causality test. The study found neutrality hypothesis.

Adam, et al, (2016) examined energy consumption, political regime and economic growth in Sub-Sahara Africa between 1971 and 2013. The variables employed were energy consumption, energy prize, GDP and degree of openness. The methodology used is the panel vector autoregressive model (PVAM). The result of the study found a feedback hypothesis. The result for SSA is also confirmed for biomass energy in SSA by Ozturk and Bilgili (2015) in a dynamic panel OLS analysis. Similar findings are also reported for emerging economies by Apergis and Payne (2012).

Bloch, et al, (2015) examined the relationship between GDP, oil, coal and renewable energy resources in China between 1977 and 2013. The variables used were GDP, oil, natural gas and electricity. The methodology adopted includes ARDL techniques and vector error correction model. The result of the study showed a feedback hypothesis.

Mohammadi and Parvaresh (2014) investigated the short and long dynamics between energy consumption and economic output in 14 selected oil exporting

economies between 1980 and 2007. The variables used are oil, natural gas and GDP. The method employed is panel estimation technique-dynamic fixed effect, pooled and mean group estimators. The result of the study showed a feedback hypothesis.

Yildrim, et al, (2014) examined the causality between energy consumption and economic growth in selected 11 countries between 1980 and 2011. The variables used are oil, electricity and GDP. The method used was Trivariate model and boot strapped autoregressive causality approach. The result of the study showed a neutrality hypothesis. In Latin America and Sub-Saharan Africa (SSA), Adams, et al, (2018) respectively provided evidence to support the growth effect of non-renewable energy consumption using FMOLS, DOLS and VECM Granger causality.

Nnaji, et al, (2013) investigated the causal relationship among electricity supply, fossil fuel consumption, CO_2 emissions and economic growth in Nigeria for the period 1971-2009 in a multivariate network. The findings indicated that economic growth is associated with increased CO_2 emissions while a positive relationship exists between electricity supply and CO_2 emissions, revealing poor electricity supply in Nigeria.

Adegbemi, et al, (2013) examined the nexus between energy consumption and Nigeria's economic growth between 1975 and 2010. The variables used include coal, oil, gas, economic growth and electricity. The method employed includes co-integration and OLS techniques. The result of the study showed growth hypothesis.

Ubi and Effiom (2013) explored the relationship between electricity supply and economic growth in Nigeria found per capita GDP, lagged electricity supply, technology and capital to be significant variables that influence economic development in the country.

Apergis and Payne (2012) examined the link between renewable, non-renewable energy consumption in selected 80 countries between 1990 and 2007. The variables used are renewable, non-renewable sources and GDP. The method employed is panel error correction model (PECM). The result of the study showed a feedback hypothesis.

Dantama, et al, (2012) investigated the impact of energy consumption on economic growth Nigeria between 1980 and 2010. The variables used include oil, electricity, coal and GDP. The method of study used is the ARDL approach to co-integration analysis.

Shahbaz, et al, (2012) examined the link between renewable, non-renewable energy usage and economic growth in Pakistan between 1972 and 2012. The variables used in the study include renewable, non-renewable resources and GDP. The method employed include autoregressive distributive lag (ARDL) bound test approach. The result of the study showed a feedback hypothesis.

Fuinhas and Margues (2012) examined the nexus between primary energy consumption and economic growth in five European countries between 1965 and 2009. The variables used are oil, electricity, natural gas and GDP. The method employed is the autoregressive distributed lag (ARDL) approach. The result of the study found a feedback hypothesis.

Uzoma, et al, (2012) related with sustainable development in Nigeria using linear regression (ordinary least square) estimation procedure found that existing mix has not significantly influenced sustainable development given electricity generation is inadequate and coal is no longer in use.

Ubi, et al, (2012) carried out an econometric analysis of the determinants of electricity supply in Nigeria using parametric econometric methodology of OLS and their results showed that technology, government funding and the level of power loss to be the statistically significant determinants.

Menyah and Wolde-Rufael (2010) examined the relationship between energy consumption and economic growth in South Africa between 1965 and 2006. The Variables used are energy consumption, pollutant emission and GDP. The method used is autoregressive distributed lag (ARDL). The result of the study showed growth hypothesis.

Jacques (2010) examined the link between energy consumption and economic performance in seven African countries between 1970 and 2007. The variables used are energy consumption and economic growth (GDP). The method employed is bound test approach. The result of the study showed a conservative hypothesis.

Bowden and Payne (2010) studied the USA over the period 1949–2006 and checked the sectorial relationship between renewable and non-renewable energy consumption and economic growth by using Toda-Yamamota causality procedure within the multivariate framework including labor and gross capital formation. The results did not find any relationship between renewable energy consumption and real GDP by taking industrial sector into consideration and supports the neutrality hypothesis, the results shows unidirectional positive relationship between energy consumption and GDP, which indicates the presence of growth hypothesis, whereas causality testing shows bi-directional results from energy consumption to real GDP in commercial and residential sectors which supports feedback hypothesis, and negative relationship between industrial non-renewable energy consumption to GDP, which gives evidence of growth hypothesis.

Methodology
In preference for simplicity over ornate estimation techniques that often make it thorny to identify pure independent effects, this paper establishes one hypothesis - Non-renewable energy consumption has no significant effect on economic growth in Nigeria. The focal contribution of this paper is to investigate the effects of non-renewable energy consumption on economic growth in Nigeria.

For the effect of non-renewable energy consumption on economic growth, this study follows the model specification of Lee and Chang (2008); using the new growth theory which sets real GDP (Y) as a function of real capital stock (KS), physical labour (L) and energy consumption (E):

$$Y = f(KS, L, E) \qquad 3.1$$

This equation can be rewritten using the Cobb Douglas production function as:

$$Y_t = AK^{\alpha_t} L^{\beta_t} E^{\theta_t} \text{ such that } \alpha + \beta + \theta = 1 \qquad 3.2$$

Where, α, β and θ refers to the coefficient elasticities of capital, labour and energy consumption respectively. Expressing the variables in equation (3.1) in per capita terms, we have the following

$$y_t = Ak^{\alpha_t} e^{\theta t} \qquad 3.3$$

In line with the model adopted, this study specifies its model with some modifications using Auto-Regressive Distributed Lag model (ARDLM). This is because both the past and current

values of the dependent and independent variables influence inflow of economic growth in Nigeria. As a result, equation 3.3 is transformed to;.

$$RGDP = f(FFC, ARF, TEMP, C02, FDI) \qquad (3.4)$$

Equation 3.4 was transformed to econometric form as:

$$RGDPt = \beta_0 + \beta_1 FFCt + \beta_2 ARFt + \beta_3 TEMPt + \beta_4 C02t + \beta_5 FDIt + U1t \text{----------} \quad (3.5)$$

Where,

$RGDPt$ = Real gross domestic product (proxy for economic growth)

$FFCt$ = Fossil fuels consumption (proxy for non-renewable energy)

$ARFt$ = Average rainfall (proxy for climate change)

$TEMPt$ = Changes in temperature (proxy for climate change)

$C02t$ = Carbon dioxide emission (proxy for non-renewable energy)

$FDIt$ = Foreign direct investment (control variable)

β_0 = the intercept/ Mean of the equation

β_1 to β_5 = the coefficients of the variables to be estimated

U_{1t} = the stochastic or error term

Introducing the auto-regressive distributed lag model (ARDLM), proposed by Pesaran, Shin, and Smith (2001), equations 3.5 will change to;

$$RGDPt = \beta_0 + \beta_1 RGDP_{t-1} + \beta_2 FFC_t + \beta_3 FFC_{t-1} + \beta_4 ARFt + \beta_5 ARF_{t-1} + \beta_6 TEMP_t + \beta_7 TEMP_{t\text{-}} + \beta_8 C02t + \beta_9 C02_{t-1}$$
$$+ \beta_{10} FDI_t + \beta_{11} FDI_{t-1} + U_{1t} \qquad (3.6)$$

Where,

$RGDP_{t-1}$ = lag value of net Real gross domestic product

FFC_{t-1} = lag value of Fossil Fuel consumption

ARF_{t-1} = lag value of Average rainfall

$TEMP_{t-1}$ = lag value of Changes in temperature

$CO2_{t-1}$ = lag value of Carbon dioxide emissions

FDI_{t-1} = lag value of Foreign direct investment

- **A priori Expectation**.

Our a priori expectation of the signs of the coefficients is given as;

$\beta_1 > 0, \beta_2 < 0, \beta_3 < 0, \beta_4 < 0, \beta_5 < 0, \beta_6 < 0, \beta_7 < 0, \beta_8 < 0, \beta_9 < 0, \beta_{10} > 0$ and $\beta_{11} > 0$

Data for this study are annual time series obtained from Statistical Bulletin published by the Central Bank of Nigeria and World Development Indicator published by the World Bank. The study period covers 1980 – 2019. E-Views 10.00 version Econometric software was used for empirical estimation of the model.

Findings and Discussions

This section presents the result of the summary of the descriptive statistics of the six quantitative variables used in the study.

Table 1. Summary of Descriptive Statistics

	RGDP	C02	FDI	FFC	TEMP	ARF
Mean	34391.60	85651.68	50644.47	4.762000	27.17955	93.88066
Median	23210.58	84780.00	43014.11	3.950000	27.19825	94.41738
Maximum	71387.83	130786.0	148220.9	8.420000	27.83214	111.7758
Minimum	13779.26	42441.86	-26162.27	1.727000	26.46332	72.97435
Std. Dev.	20065.72	19135.93	41520.39	2.137010	0.334194	8.477975
Skewness	0.713074	0.445445	0.540696	0.596491	-0.060578	-0.484175
Kurtosis	1.939971	3.122572	2.433750	2.022808	2.496544	3.069788
Jarque-Bera	5.262596	1.347845	2.483415	3.963520	0.446911	1.570955
Probability	0.071985	0.509705	0.288891	0.137826	0.799751	0.455902
Sum	1375664.	3426067.	2025779.	190.4800	1087.182	3755.226
Sum Sq. Dev.	1.57E+10	1.43E+10	6.72E+10	178.1056	4.355729	2803.167
Observations	40	40	40	40	40	40

Source: Author's computation from e-views 10.0 version

From the table above, carbon dioxide (C02) emission has the highest mean value (85,651.7) followed by foreign direct investment (FDI) with (50,644.47), RGDP, ARF, TEMP and fossil fuel consumption (FFC) with the least mean value (4.762000). The median also followed the same sequence with C02 as the highest value of 84,780 and FFC with 3.950000 as the least value. The highest in the maximum is RGDP with 71,387.83 and the least value of 8.420000 by FFC. Also, the highest in the minimum is the C02 with the value of 42,441.86 while the least value -26,162.27 by FDI. In terms of the standard deviation, FDI is the most volatile with the value 41,520.39 while TEMP is the least volatile variable with the value 0.334194.

The Jarque-Bera statistics show that all the series follow the normal distribution. The skewness of all the variables in the study is normal except ARF and TEMP whose values are negative slightly differs from the mean. Kurtosis is also within the normal range. The probability also shows that only RGDP was significant at 10% level, while the rest variables are not significantly related.

Table 2. Correlation Matrix of the variables and their analysis

VARIABLES	RGDP	C02	FDI	FFC	TEMP	ARF
RGDP	1.000000	0.875978	0.400047	0.968585	0.605289	0.073554
C02	0.875978	1.000000	0.253627	0.853720	0.451140	0.171998
FDI	0.400047	0.253627	1.000000	0.431166	0.298851	0.056103
FFC	0.968585	0.853720	0.431166	1.000000	0.596878	0.096569
TEMP	0.605289	0.451140	0.298851	0.596878	1.000000	-0.007599
ARF	0.073554	0.171998	0.056103	0.096569	-0.007599	1.000000

SOURCE: Author's computation from e-views 10.00 version.

The correlation matrix for the variables is reported in Table 2 above in order to examine the correlation that exists among variables. The results show that there is a positive relationship between Real gross domestic product (RGDP), carbon dioxide (C02), foreign direct investment (FDI), fossil fuel consumption (FFC) and a negative relationship with temperature (TEMP) and average rainfall (ARF). However, real gross domestic product (RGDP) is positively correlated with C02 at 88%, with FDI at 23%, with FFC at 85%, TEMP at 45% and ARF at 7.3%; while C02 is positively correlated with real gross domestic product at 88%, with FDI at 23%, with FFC at 85%, TEMP at 45% and ARF at 17%; Also, FDI is positively correlated with real gross domestic

product at 40%, C02 at 25%, FFC at 43%, TEMP at 30% and ARF at 6%; However, FFC is positively correlated with real gross domestic product at 97%, C02 at 85%, FDI at 30%, TEMP at 60% and ARF at 9%; While TEMP is positively correlated with real gross

domestic product at 61%, C02 at 45%, FDI at 30%, FFC at 60% and negatively correlated with ARF at 0%. Finally, ARF is positively correlated with RGDP at 7%, C02 at 17%, FDI with 5%, FFC at 9% and negatively correlated with TEMP at 0%.

Table 3: Augmented Dickey Fuller (ADF) and Ng – Perron Unit Root/Stationarity tests

ADF TEST	TEST	STATISTIC	NG- PERRON	TEST	STATISTIC
VARIABLES	LEVELS	1ST DIFF.	LEVELS	1ST DIFF	DECISION
RGDP		-5.8998***		-8.33123**	1(1)
FFC		-4.9673***		-18.3573***	1(1)
ARF	-5.2951***		-18.2257***		1(0)
TEMP	-3.8781**		-3.2059**		1(0)
C02		-8.5613***		-17.1983***	1(1)
FDI		-8.2173***		-18.6369***	1(1)

SOURCE: Author's computation from e-views 10.0 version

Note: ***, ** as well as * signifies significance of the coefficients on 1%, 5% and 10% respectively.

Table 3 presents the result of the ADF and NG – Perron unit root tests. In regression results, non-stationarity time series data poses some challenge and may yield spurious results. It is essential to ascertain the properties of the variables before analyzing the relationship among them. Thus, for sensitivity of analysis, the study employs both Augmented Dickey Fuller (ADF) and Philips Perron (Ng. Perron) tests to determine the stationarity or otherwise of the variables. It is

found that of all the six quantitative variables captured by the study, only ARF, and TEMP are stationary in level, that is, they are integrated of order zero 1(0) in ADF unit root test, and also ARF and TEMP are stationary at levels 1(0) in NG – Perron unit root tests. However, other series including RGDP, CO2, FFC, and FDI are non-stationary at levels, but are stationary only at first differences 1(1) in both series of unit root tests. Therefore, the order of stationarity is mixed and this made ARDL an appropriate modeling technique for this study.

Table 4. ARDL BOUND TEST CO-INTEGRATION RESULT

F – Statistics	8.489955	
Percentage Critical Levels	Critical Value for Bond Test	
Significance	1(0) Bound	1(1) Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Source: Author's Computation Using E-views 10.00 version

Table 4 illustrates the outcome of the bound test. It shows that co-integration exists among the variables since F – Statistics value of 8.489955 is higher than the theoretical, Critical value for upper bound 1(1), this

signifies co-integration. Hence, a long term association exists, it becomes necessary to evaluate both the short and long-run estimation of the model using ARDL approach.

Table 5: Short and Long-Run Estimation Results base on ARDL Model.

VARIABLES	COEFFICIENTS	STD. ERROR	t- STATISTIC	PROB.
Short Run Coefficients				
DLOG(FFC)	0.491076	0.155857	3.150808	0.0071
DLOG(ARF)	-3.608474	2.240722	-1.610406	0.1296
DLOG(TEMP)	4.960790	1.832587	2.70660	0.0170
D(C02)	-0.020257	0.018120	-1.117902	0.2824
D(FDI)	-0.002135	0.005039	-0.423692	0.6782
ECM(-1)	-0.033347	0.007406	-4.502816	0.0005
Long Run Coefficients				
VARIABLES	COEFFICIENTS	STD. ERROR	t-STATISTIC	PROB.
LOG(FFC)	25879.87	42462.61	0.609474	0.5520
LOG(ARF)	-1271.334	2723.189	-0.466855	0.6478
LOG(TEMP)	-5132590.	11495073	-0.446503	0.6621
LOG(C02)	-0.355065	1.478832	-0.240098	0.8137
LOG(FDI)	-0.433294	0.972458	-0.445565	0.6627
C	-566134.0	125880.3	-4.497401	0.0005

N/B: R^2 = 0.842841; Adjusted R^2 = 0.710681; F-Statistic = 6.373371; D. Watson Stat. = 2.054736

Source: Author's Computation using E-Views 10.00 version

Thus, to ascertain the existence of long-run connotation among the variables, F-statistics must be higher than upper bound co-integration (UBC) as affirmed by Pesaran, Shin and Smith (2001). Furthermore, the adjustment for the variables to long-run is affirmed by the negative and significant value of error correction term.

The short run result reveals the R-Squared value of 84 percent, indicating that the model is well fitted, and an adjusted R-Squared value of 71 percent. This means that the variables in the model accounted for 71 percent of the variations in economic growth, while the remaining 29 percent is driven exogenously by variables in the error term. Furthermore, the Durbin-Watson statistic value of 2.054736 indicated that the residual has no first order auto-correlation. The error correction term appeared with the normal sign (-) and it is statistically significant at 5 percent. This negative coefficient indicates an adjustment of about 3 percent from actual adjustment in the previous year. Therefore, the past disequilibrium will be corrected at the speed of 3 percent annually.

On the other hand, the parameter of interest - Non-Renewable Energy Consumption and Economic Growth – measured by Fossil fuels consumption (FFC), Carbon dioxide (C02), Average Rainfall (ARF)/Change in Temperature (TEMP) and Real Gross Domestic Product (RGDP) respectively in the study. FFC is positive and significant while TEMP is also positive and significantly related with economic growth in the short run. The short run effects of the non-renewable energy consumption and climate change positively and significantly affected the economic growth in the short run. Carbon dioxide and average rainfall are negative and insignificant to the economic growth in the short run which is consistent in the theoretical expectation and confirm the temporal nature of the non-renewable energy consumption on economic growth in the short run.

In the long run, fossil fuel consumption has a positive and insignificant relationship with the economic growth. The average rainfall, change in temperature, carbon dioxide and foreign direct investment are all negatively and insignificantly related to the economic growth in the long run. This assertion is consistent with the a priori theoretical expectation and has arisen due

to its negative impact in the growth of the economy. The expected theoretical exposition is that, when the non-renewable energy consumption is high, the level of the economic growth will reduce as economic activities will collapse as well as the health condition of the humans.

Conclusion and Recommendation
The study focuses on the impact of non-renewable energy consumption on economic growth in Nigeria. The autoregressive distributed lag estimation was employed based on time series spanning 1980 – 2019. The variables used for the study are as follows; Real gross domestic product (RGDP), carbon dioxide (CO_2) emissions, fossil fuels consumption (FFC), average rainfall (ARF), change in temperature (TEMP) and foreign direct investment (FDI). Several pre-tests were conducted such as normality tests, unit root tests and error correction tests to ascertain the appropriate estimation technique that would suite the analysis of the study. As a result of the mixed results of the unit root tests at levels 1(0) and 1st differences 1(1), the autoregressive distributed lag (ARDL) was selected as the suitable econometric technique for the study. From the result presented in Table 5, the variables such as carbon dioxide (C02) – the non-renewable energy resources is negative and insignificant to the economic growth within the period under study in the short run, while change in temperature (TEMP) is positive and significant to economic growth in the short run. This implies that non-renewable energy consumption does not have a significant impact on economic growth in Nigeria.

Therefore, this buttressed the fact that increase in the consumption of non-renewable energy resource affects the human's health thereby increasing the rate of death and sicknesses, challenges on environmental atmosphere, challenges on climate change and agricultural productivity. In line with the policy implication of the findings, policy attention should be geared towards recommending the government to enact policies that will guide the uncontrolled usage of the non-renewable energy resources in Nigeria, and also the government should create awareness on renewable energy and energy efficiency. It is therefore imperative for policymakers in oil producing economies (in Africa) to explore avenues to invest in, and promote, carbon-reducing technology in production processes in their quest for economic growth if they must continue to increase the consumption of their abundant resources-petroleum and natural gas.

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ADMINISTRATION OF STUDENTS' PERSONNEL SERVICES AND STUDENTS ACADEMIC PERFORMANCE IN RIVERS STATE UNIVERSITY

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Abstract
The study investigated Administration of students' personnel services and students Academic performance in Rivers State University. Two research questions and two hypotheses were formulated to guide the study. The study adopted expo facto design. The population of the study comprised all the 4728 level 200 students of Rivers State University. The sample size of 428 respondents were selected for the study. The instrument entitled Administration of Student personnel Services Questionnaire (ASPRSQ) and Students Academic Performance Questionnaire (SCPQ) were used for data collections. The instrument is divided into two parts A and B. Part A is the personal data section while part B is the core items section. The response option used in the instrument in cluster one are Strongly Agree (SA), Agree (A), Strongly Disagree (SD) and Disagree (D). The data of the study was collected by personal hand delivery of the instrument to the respondents. Research assistants were trained and used for the data collection. The reliability of the instruments were established using Crownbach's Alpha and Pearson's Product moment correlation coefficient (r). The reliability coefficient of the instrument stood at 0.78 and 0.78 respectively. Mean, standard deviation and the coefficient of the Pearson's product moment correlation analysis was used to test the null hypotheses at 0.05 level of significance. The study revealed that there is a significant relationship between hostel accommodation service, library services and student academic performance in Rivers State University. It was concluded that Students Personnel services relates significantly to students academic performance. The study therefore recommends that the state government should build modern Hostel accommodation and equip the library with current and relevant text books and other learning facilities for effective Administration of Student Personnel Service.

Keywords: Administration, students, personnel, services and academic performance

Introduction
Tertiary institutions in Nigeria plays a vital role in national development as regards to training and development of high level man-power. In most causes the expectation of the society are hardly seen and this is as a result of absence of adequate and effective administration of students' personnel services thereby creating unconducive environment for effective learning which results in poor academic performance of students. Students' personnel services such as accommodation, library, transportation, medical, security and counseling services are very important to student academic performance Akilaiya (2013) Opined Personal Services as an adapt to later for a view of rendering help to them so as to enable them to build a solid futuristic foundation while maximizing their educational pursuit and at the same time promoting their personal and institutional prestige within and outside the educational community.

Student personnel services can be defined as all the non academic services rendered to the student at the school community outside the formal classroom instruction which includes library services, medical service, accommodation services, transport services, security services, guidance and counseling services.

Accommodation refers to a convenient rooms or building in which students can live. The provision of accommodation services in universities encourage the students to take advantage of learning outside the classroom as well as providing comfort and safety to the students for better learning. Accommodation in university does not only house the students but also house library materials, medical materials, guidance and counseling materials, security personnel equipments.

Accommodation has to do with privacy, and space, accommodation service constitutes one of the important of students 'personnel services that enhance the achievement of educational goals and objectives. Okon (2016) defined Accommodation is a building in which boarding and lodge are provided in university premises for security reasons and to enable students feel the impact of the university environment on their learning activities. Jionueme (2014) sees hostel accommodation as where student live, stay, eat and interact with other students in the university community. It is not enough to provide accommodation for the students, but the hostel accommodation must be well managed with basic necessary facilities and services that will aid the electricity supply, water supply canteen services, security services, laundry, private bathrooms and internet facilities. Okilete (2015) asserts that the provision of hostel accommodation with the best of facilities will enhance student academic achievement and will make them live in comfort and feel at home

to study and will also make them to live in the university community than living out of the university community. Apart from providing comfort for students, hostel accommodation also provide safety from sun, rain, heat and cold which has positive impact on the student's academic performance, and the activities of studious and serious minded students can motivate serious students to read. Omeje (2016) observed that human behavior is fundamentally related to attributes of physical environment. In order words the environment determine the type of behavior or activities that can occur in it and most of the time, determines in a more positive way a particular behavior of an individual. In this regard, the physical environment of the university including the condition of the hostel can affect or impact the students' behavior either positive or negative. Students need living space to be comfortable. Lack of space among student can result to psychological problem Ozioko (2017) indicated that the propensity of oppression is high among students when they are overcrowded. This is because aggressive behavior is related to how and where we live is commended and poorly equipped hostels and lecture rooms make teaching and learning difficult which can in return affects students academic performance.

Sometimes in the university, students forfeit academic activities for a long period in search of accommodation as a result of lack of inadequate accommodation in universities. In addition to this, there exist frustration, friction, antagonism and open confrontation even among roommates as a result of over usage of wardrobe corners and other facilities in the hostels. Onyegiri (2014) maintained that inadequate hostel facilities have forced many students to live off campus where they are exposed to all kinds of dangers and treats by armed robbers and rapist due to insecurity.

Students are more secured on campus them off campus. This is because universities maintain a high degree of security on campus and monitor the activities of students. On this notes Higher Institution in rivers state ought to lock their gates early and insist on students obtaining exit permits before they trace home or leave campus. Onyegiri (2014) also stressed the provision of hostel accommodation should be considered as an integral part of total educational enterprise and should not be seen as a mere place to stay but should be equipped to be a home for the students and more hostel should be built to accommodates all students of the university.

Akpan (2020) lamented that the universities students population are rapidly increasing while the infrastructure amenities are in deplorable states. The implication is that house hold facilities in the campus such as toilets, bathroom, water, bed, roof linking, electric point are over used because there are now more people than it was originally planned some electric point socket are not functioning. Dede (2021) also added that the number of students have increased adding stressed on the facilities including bed, toilets, and bathrooms. The congestion in the students hostels has reached an alarm stays to the extends that in some higher institutions. According to Ezenwa (2017) female students have no choice than to wake up as early as 4am to take their bath in the places within the hostel premises due to congestion. Okoh (2013) noted that lack of adequate hostel accommodation in universities has resulted into resale of bed space by students to their frustrated peers exploiting them unnecessarily.

Okebukola (2013) added that in some universities in Nigeria resale a space bed from 30,000 to 90,000. This development becomes very devastating to the students. All these can affect the students emotionally and psychologically thereby leading to poor performance in university. In university today, hostel accommodation do not only appear to be inadequate but some of the existing ones are like trap set to kill students, dilapidated and constitute dangers to both the lives of the students and the university at large. According to Mboto (2014) hostel accommodation are seen with cracked walls, sagging roofs, blown off roofs, and bushy environment. Thus not only pose dangers to students health, but also to the entire university community.

Ogbonnaya (2016) mentioned that situation does not augur well for effective teaching and learning. Library represents the foundation and pillars of students' academic success the library is a building containing collections textbooks, magazines, journals, audio and audio visual materials for free use by both the students and members of the society. The provision of library in the institutions helps the students to release potentials and acquire relevant and contemporary knowledge through research and becomes responsible and self reliant citizens. Akpan (2019) Opined schools library as an organized collections of books, and other responsible materials which are preserved in two rooms for the use of both the students' teacher and the society. School library is the source through which knowledge is inculcated into the lives of the students and it build the student reading habits. Crani and Mohammed (2014) stated that library is a repository of knowledge and the interest of the students must be developed. For any school library to be effective and functional, the university administrators are expected to be very adequate in equipment for the library. In this regard the school library must properly be equipped with contemporary reading such as books, computers, journals with internet connection to promote reading habit comfort. The system will make students to access electronic book and journals at all times.

Mgbodile (2013)States that other facilities necessary to be found in the school are shelve, reading table, chairs, catalogue, cabinet, display stands, circulation disk, film slides, photographs records and tapes.

Oluwaseun (2015) noted that the overall success of the educational programme depends to the accessibilities and provision of qualitative library materials and service rendered. Okemagba (2009) Good quality school library in schools play a significant role in teaching and learning but the resultant effect is obviously in the academic performance of students. Fakunle (2013) added that the application of the right kind of library materials will determine how students will acquire knowledge in other to achieve high level of academic performance. James (2015) posited that effectiveness in teaching and learning process is a product of quality learning materials found in the school academic library.

Statement of the Problem

Over the years there have been observable problems of the students' poor academic performance in higher institution in Rivers State which seems to have been caused by poor administration and provision of students' personals service such as accommodation service and tertiary service. Hostel accommodation services in most tertiary institutions are not adequate. Rooms meant for 3 students are now given to 6-7 students, security in institution in Rivers State University are porous hence, there are causes of rape, robbery, phone snatching. Students trek long distance to classrooms, library and this brings about lateness to class and sleeping in the class as a result of weakness and fatigue, the library in Rivers State University appear to be mere archives of stale archaic and irrelevant materials which have pave way for students' academic failure, mass repetition of courses, low grade and delay

in graduation. It goes to say that something is wrong in the administration of students' personnel services in higher institution. Therefore the problem of this study is to investigate the relationship between students personnel services and students academic performance in higher institution in River State.

Purpose of the study
The purpose of the study is to:
1) Determine the relationship between availability of hostel accommodation services and students academic performance in higher institution in rivers state university.
2) Determine the relationship between provision of library services and students academic performance in tertiary institution in Rivers state university.

Research Question
The following research questions were formulated to guide this study.
1) How does the provision of accommodation services relate to students academic performance in higher institution in Rivers state university.
2) How does the provision of library services relate to students academic performance in higher institution in Rivers state university.

Hypotheses
The following hypotheses were tested in 0.05 level of significance
1) There is no significant relationship between accommodation services and students academic performance in Rivers state university.
2) There is no significant relationship between library services and students academic performance in Rivers State University.

Research method

The study adopted correlational design. Two research questions and hypotheses were raised to guide the study. The population of the study comprised all the 4726 levels 200 students of Rivers State University. The same size of 428 respondents were selected for the study. The instrument entitled Administration of students' personnel services Questionnaire (ASPSQ) and students' academic performance questionnaire (SAPQ) were used for data collections. The instrument is divided into two pans: A and B, Part A is the personal data section while Part B is the core items section. The response options used in the instrument in cluster one are strongly agree (SA) Agree (A) strongly disagree (SD) disagree (D). The data of the study was collected by personal hand delivery of the instrument to the respondents. Research assistants were trained and used for the data collection. The reliability of the instrument were established using Crownback's Alpha and Pearson's products moments correlation coefficient(r). The reliability coefficient of the instrument stood at 0.78 and 0.79 respectively. Mean standard deviation and the coefficient Pearson's product moment correlation coefficient Analysis was used to test the null hypothesis at 0.05 level of significance.

Result

How does the provision of accommodation services relate to students' academic performance?

Table 1

Result of Pearson's product moment correlation (PPMC) of the relationship between hostel accommodation services and students academic performance.

Variables	x	SD	r-call
Hostels Accommodation Services	32.0164	9.63756	.131
Student Academic Performance	39.5375	10.68720	

The result in table I shows that the calculated r-value of .131 is very weak and in a positive direction. This therefore means that there is a weak positive relationship between Hostel accommodation service and students academic performance in Rivers State University. The positive result indicates that, increase in the provision of Hostel accommodation service is associated with increase in students' academic performance in tertiary institutions.

Table 2.

Result. How does the provision of library services to students' academic performance?

Result of Pearson product moment correlation (PMC) of the relationship between library services and students academic performance in Rivers State University

Variables	x	SD	r-call
Library Services	32.0981	9.63987	.145
Student Academic Performance	39.3575	10.68720	

The result in table 2 shows that the calculated r-value of .145 is very weak in nature and in a positive direction. This therefore means that there is a very weak positive relationship between library services and students academic performance in Rivers State University. The positive result indicates that increase in the provision of library services is Associated with an increase in students academic performance.

Table 3 Hypothesis one
There is no significant relationship between Hostel accommodation services and student accommodation performance. Result analysis of Pearson's product moment correlation for the relationship between Hostel accommodation services and students academic performance

Variables		$\sum x$ $\sum y$	$\sum x^2$ $\sum y^2$	$\sum xy$	r-cal
Hostel accommodation Services	x	13705	711747	30548	.131
Student academic performance	Y	16845	539400		

Significance at 0.05 level, N=428, df 426, critical r=0.98

Table 3 reveals that the calculated r-value of .131 is greater than the critical- value of 0.98 at level of significance with 426 degree of freedom. This result is significant, since the cal.r of .131 is greater than 0.98. Therefore, the null hypotheses which states that there is no significant relationship between Hostel accommodation services and student academic performance In Rivers State University is rejected, therefore there is a significant relationship between Hostel accommodation services and students academic performance.

Table 4 Hypothesis two
There is no significant relationship between library services and students academic performance in Rivers State University.

Result Analysis of Pearson's Product Moment Correlation (PMC) for the relationship between library services and student academic performance.

		M=428			
Variables		$\sum\times$ $\sum y$	$\sum\times^2$ $\sum y^2$	$\sum\times y$	r-cal
Library Services	x	13738	545070	44286	.145
Student academic performance	Y	16845	539400		

Significant at 0.05 level N=428 df=426 critical r = 0.98

Table 4, reveals that the calculated r-value of .145 is greater than the critical r-value of 0.98 at 0.05 level of significance with 426 degree of freedom. This result is significant, therefore the null hypothesis between library service and students academic performance in Rivers State University in rejected, Hence, there in a significant relationship between library service and students academic performance.

Discussion of findings:
Based on the study, the following findings were made. The result presented in 1 and 3 reveals that there is a significant relationship between Hostel; accommodation services and student academic performance. This is seen to be true because the school hostel accommodation which the students find themselves can influence their academic performance in school. The result of the study is in agreement with the earlier study of Ejionueme (2014) who conducted a study on the building of Hostels accommodation atmosphere are important school environmental issues that determine health of the school and the extents to which educational objectives are achieved. The result of this study also conforms with the finding of Ezeukwu (2016) who conducted a study on management of students Hostel accommodation in polytechnic in Anambra State and found out among other accommodation problem in school have made students to frequently struggle over bad spaces, rooms, accessories in turn affected students academic performance.

Also in table 2 and 4 The result presented reveals that there is a significant relationship between library service and student academic preference in Rivers State University this result in agreement with the findings of Okumagba (2009) who posted that the school library are meant to provide books for leisure reading as well as providing reference materials and information books where students can consult at point of need which will improve their academic performance.

Conclusion
It was concluded based on the finding of the study that there is a significant relationship between Hostel accommodation service and academic performance. Also there is a significant relationship between library services and students academic performance.

Recommendation
The following recommendation were made based on the findings and conclusion of the study
- Hostel accommodation with food facilities the administration of universities and the government must build campus so as to enable students live comfortable and focus on their academic studies.
- The management of the university should upgrade the library in the university with current contemporary books and ICT facilities for students' usage.

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EMPLOYEE ENGAGEMENT AND MANAGERS JOB SATISFACTION IN COMMERCIAL BANKS IN RIVERS STATE.

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Abstract
This study focused on employee engagement and managers job satisfaction in commercial Banks in Rivers State. The aim was to investigate the relationship between dimensions of employee engagement and measures of manager's job satisfaction. four research questions and four hypotheses guided the study. The target population was 30 branches from 4 selected commercial banks in Rivers State. Also, the study considered Branch Managers, Customer service Managers, Head of operations and secretary (**4**) from the **30** branches which amounted to **120** respondents. The sample size for this study was **92** through Krejcie and Morgan (1970) Table. Therefore 92 copies of questionnaire were distributed and 80 retrieved and used. Reliability of the instrument was obtained using Test-retest method with Cronbach alpha at a 0.70 threshold. The instrument was validated by experts. Data retrieved was analysed through the Spearman Rank Oder Correlation via SPSS, and for the test of bivariate hypotheses at 0.05 levels of significance. The result shows that dimensions of employee engagement correlate with measures of managers job satisfaction. Hence the study concluded that dedication and alignment enhances working condition and fair compensation. Thus, the study recommended that Management of commercial banks should adhere to the two dimensions for the job satisfaction.

Keywords: Employee engagement, dedication, alignment, managers job satisfaction, working condition and fair compensation.

Introduction
Commercial banks in Rivers State see managers job satisfaction as critical factor that play a pivotal role in the success and sustainable growth of organizations across various industries. Commercial banks in Rivers State, Nigeria, understanding and fostering employee engagement while ensuring the job satisfaction of managers are of paramount importance. Managers job satisfaction meaningfully influences organizational outcomes. Satisfied managers tend to exhibit higher levels of commitment, enthusiasm, and better decision-making abilities. Akpan et al. (2017) emphasize the connection between job satisfaction of managers and employee turnover rates through which engagement emerged.

Employee engagement is defined as the emotional commitment, dedication, and active involvement employees have towards their organization's goals and objectives. Obeleagu et al. (2019), which highlight its positive correlation with customer satisfaction and profitability. In Rivers State, where the commercial banking sector faces both local challenges and global market demands, the interplay between employee engagement and managers job satisfaction becomes even more vital. Engaged employees are likely to align their efforts with the bank's objectives, enhancing customer experience and brand perception. This notion is echoed by Bakare (2018), who found a positive association between employee engagement and organizational performance in Nigerian banks. Furthermore, satisfied managers in these banks can act as role models,

cultivating a culture of positivity, effective communication, and collaboration among employees. However, despite the acknowledged importance of employee engagement and managers job satisfaction, challenges might arise. The demanding nature of the banking sector, combined with economic and regulatory pressures, can impact these factors. According to Akinwale et al. (2018) discuss the potential barriers to engagement, such as heavy workloads and limited growth opportunities. Similarly, the ever-evolving landscape of commercial banking can affect managers job satisfaction, as emphasized by Kabir and Ige (2017), who identify challenges related to adapting to technological advancements. In essence employee engagement and managers job satisfaction are intricately woven aspects crucial to the success of commercial banks in Rivers State, Nigeria and the world at large.

Statement of the Problem
Commercial banks operating within Rivers State are having diminishing levels of employee engagement among bank staff and the potential correlation with manager's job satisfaction. With a highly competitive banking sector, the challenge of retaining skilled employees and maintaining their commitment to organizational goals has become increasingly complex. A decline in employee engagement could lead to reduced productivity, increased turnover rates, and a negative impact on customers service quality. Secondly, a potential lack of job satisfaction among managers might trickle down to their teams, affecting their ability to foster a positive work environment. Equally, a disengaged workforce might result in higher stress levels for managers as they struggle to meet targets and maintain team cohesion. Besides, managers play a pivotal role in steering the operational and strategic aspects of these banks, making their job satisfaction a critical factor. Thus, a significant gap exists in the empirical understanding of how employee engagement, encompassing factors such as vigor, dedication and alignments directly affects the job satisfaction levels of managers. Addressing this gap in research by investigating how specific elements of employee engagement contribute to the job satisfaction of managers will not only advance academic understanding but also provide practical insights for human resource practitioners and leaders in the banking sector to formulate strategies that promote a harmonious and productive workplace. Hence the study on employee engagement and managers job satisfaction in commercial Banks in Rivers State

Conceptual Framework
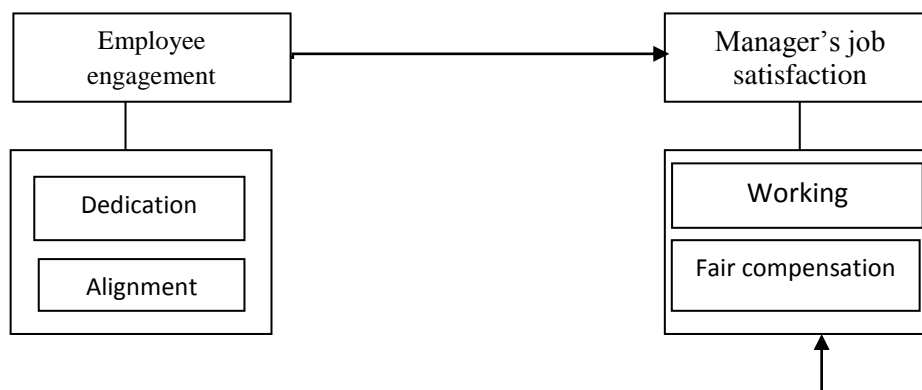
Figure 1.1: Conceptual Framework on the Relationship between employee engagement and manager's job satisfaction.
Source: Researcher's Conceptualization from Review of Related Literature (2023).

Aim and Objectives of the Study

The aim of the study was to investigate the extent of relationship between employee engagement and managers job satisfaction in commercial Banks in Rivers State. More specifically, the study seeks to:

i. Know the relationship between dedication and working condition of managers of commercial Banks in Rivers State.
ii. Know the relationship between dedication and fair compensation of managers of commercial Banks in Rivers State.
iii. Determine the relationship between alignment and working condition of managers of commercial Banks in Rivers State.
iv. Determine the relationship between alignment and fair compensation of managers of commercial Banks in Rivers State.

Research Questions

Based on the specific objectives, our research questions are hereby stated:

i. What is the relationship between dedication and working condition of managers of commercial Banks in Rivers State?
ii. What is the relationship between dedication and fair compensation of managers of commercial Banks in Rivers State?
iii. What is the relationship between alignment and working condition of managers of commercial Banks in Rivers State?
iv. What is the relationship between alignment and fair compensation of managers of commercial Banks in Rivers State?

Research Hypothesis

We proposed the following null hypotheses that guided the study

H_{01}: There is no significant relationship between dedication and working conditions of managers of commercial Banks in Rivers State.

H_{02}: There is no significant relationship between dedication and fair compensation of managers of commercial Banks in Rivers State.

H_{03}: There is no significant relationship between alignment and working conditions of managers of commercial Banks in Rivers State.

H_{04}: There is no significant relationship between alignment and good outcomes of managers of commercial Banks in Rivers State.

Significance of the Study

The significance of studying employee engagement and its impact on managers job satisfaction in commercial banks in Rivers State lies in its potential to enhance organizational performance and employee well-being. Employee engagement, characterized by a deep emotional connection to one's work, has been linked to increased productivity, reduced turnover, and improved customer service in various industries. In the context of commercial banks, where customers satisfaction and financial performance are paramount, understanding how engaged employees contribute to managers satisfaction can provide crucial insights. This study can offer practical recommendations for banks in Rivers State to implement strategies that foster employee engagement, thereby positively influencing managers job satisfaction, leading to a more motivated and efficient workforce and ultimately benefiting the banks' competitive edge in the market.

Furthermore, High levels of employee engagement can lead to better decision-making, risk management, and innovation within banks, all of which are vital for economic growth and stability. Moreover, job satisfaction among managers can result in lower turnover rates among leadership, promoting stability and expertise retention

within the industry. Therefore, a comprehensive understanding of the relationship between employee engagement and managers job satisfaction in commercial banks in Rivers State can inform policy decisions, improve workforce management, and contribute to the overall economic prosperity of the region and the nation. Finally, it adds value to the existing body of knowledge.

Scope of the Study
This study focused on first content scope which is the relationship between employee engagement (vigor, dedication and alignment) and managers job satisfaction (working conditions, relationship with workers and fair compensating).
Geographical scope: this study covered 30 branches from 4 selected commercial banks in Rivers State (Union Bank, Unity Bank, Eco Bank and Key Stone Bank).
The unit of analysis: because of the macro level of the study, we considered branch managers, customer service managers, head of operations and secretaries.

Conceptual Review
Concept of Employee Engagement
David (2005), Employee engagement is the emotional commitment that employees have toward their organization, resulting in discretionary effort and a willingness to go above and beyond their formal job duties. He emphasizes the role of emotions and discretionary behavior in this definition. **Macey and Schneider (2008),** Employee engagement is a combination of an individual's perceptions of their job role, their discretionary effort, and their commitment to the organization. Macey and Schneider's definition incorporates cognitive, behavioral, and affective elements to capture the multi-dimensional nature of engagement. **Levenson (2009),** Employee engagement is a state of psychological fulfillment that arises from the alignment between individual and organizational interests. **Mark (2015),**

Employee engagement is a dynamic relationship between an individual and their work environment, encompassing positive emotions, personal investment, and a sense of belonging. **Seppälä (2016),** Employee engagement is a state of well-being characterized by vigor, dedication, and absorption in one's work, leading to increased job satisfaction and performance. Seppälä underscores the connection between engagement, well-being, and positive work outcomes. **Schiemann (2017),** Employee engagement is a fusion of an individual's commitment to the organization, satisfaction with their job, and willingness to put forth discretionary effort. Schiemann's definition integrates affective, cognitive, and behavioral components to capture the holistic nature of engagement.

Bakker (2021), Employee engagement is a positive, fulfilling, work-related state that involves vigor, dedication, and absorption, resulting in enhanced work performance and well-being. Bakker's definition aligns with the conceptualization of engagement as a multi-faceted construct with positive implications for both individuals and organizations. Macey and Schneider (2008) defined employee engagement as "a psychological state representing the employee's involvement, commitment, and satisfaction with their work. Saks (2006) described employee engagement as "a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption.

Dimensions of Employee Engagement
Dedication
Employee dedication can be viewed as the level of enthusiasm, energy, and commitment an employee brings to their job tasks (Schaufeli et al., 2002). Employee dedication can be synonymous with a strong work ethic, which includes attributes like reliability, commitment, and a willingness to put in extra effort (Lanier & Rigsbee, 2000). This perspective suggests

that dedication is tied to a sense of ownership and investment in one's work and the organization as a whole (Pierce et al., 2001). Employee dedication can be defined as the emotional attachment and loyalty that an employee feels toward their organization (Meyer & Allen, 1991). Meyer and Allen (2004), Employee dedication refers to "the extent to which employees engage in their work with a sense of enthusiasm, pride, and personal fulfillment. Eisenbeiss et al. (2008) define employee dedication as "a positive affective state characterized by the employee's strong emotional attachment to the organization, resulting in a desire to remain a member of it. Riketta (2008), Employee dedication is the commitment and loyalty of an employee to an organization, resulting in a willingness to exert extra effort on behalf of the organization. Meyer and Allen (2004), Employee dedication refers to "the extent to which employees engage in their work with a sense of enthusiasm, pride, and personal fulfillment.

Alignment

Elaine (2004), Employee alignment can be seen as the process of aligning an employee's performance goals and expectations with those of the organization. Lior (2005), Employee alignment can involve ensuring that communication within an organization is consistent and that employees are well-informed about the company's goals and strategies. Jeffrey (2006), Employee alignment may involve aligning human resource practices and policies with the overall strategic direction of the organization. Becker et al. (2009), Employee alignment can refer to the degree to which an employee's behavior and actions are in line with the desired behaviors and culture of the organization. Herold et al. (2008) - Employee alignment can involve ensuring that leadership within an organization is aligned with the organization's values and strategic objectives, as leaders play a crucial role in influencing employee behavior and alignment. Armstrong (2006) discusses employee alignment as the degree to which an employee's tasks and responsibilities are in sync with the organization's objectives and goals.

Schein (2004) explores the idea of employee alignment with the organization's culture, where employees share the values, beliefs, and norms of the organization. Pfeffer (1995) argues that employee alignment involves ensuring that employee' actions and behaviors are consistent with the organization's strategic objectives. Dessler and Biju (2005) mention employee alignment as the process of aligning individual and team performance with organizational goals.

Concept of Managers Job Satisfaction

Many other definitions of managers job satisfaction were given however, Brief and Weiss (2002) expressed that managers job satisfaction as, "a positive (or negative) evaluative judgment one makes about one's job or job situation." A meta-analysis concluded significant relationship between job satisfaction and performance of any individual at the workplace (Judge et al., 2001). However the direction of causality in relationships between both is still an area of study. Job satisfaction has an impact on turnover intentions. Various studies (Price, 1977; Mobley, 1992; Kim, 1998; Lee & Lee, 2003; Choi, 2006) also conclude that highly satisfied employees are unlikely to seek new employment. Job satisfaction is positively related with worker's productivity and negatively related with employee turnover (Silverthorne, 2004; Egan et al., 2004). It also describes that the higher job satisfaction is associated with better productivity, thus the employees with higher satisfaction would be better in terms of productivity (Silverthorne, 2004).

Measures of Managers Job Satisfaction Working Conditions

Working conditions encompass the physical environment in which work is performed, including factors such as temperature, lighting, noise, and ergonomic design (Locke & Latham, 2000). This refers to the environmental factors, such as temperature, noise level, lighting, and ergonomic design that can affect a worker's physical well-being. Working conditions refer to the practices and policies within an organization that affect the well-being of employees, including aspects such as work hours, workload, and job security (Hellgren & Sverke, 2000). Working conditions include the degree of flexibility and control employees have over their work schedules and arrangements (Felstead & Jewson, 2000). Arnold and Evangelia (2007), working conditions as a balance between job demands (stressors) and job resources (supportive factors), impacting employee well-being and performance. Working conditions encompass factors like wages, benefits, and job security, which directly impact an employee's financial well-being and stability (Freeman, 2000). Working conditions involve compliance with labor laws and regulations that dictate how work is organized, the maximum number of work hours, and safety standards (Paul, 2000).

Fair Compensation

Fair compensation means that employees are paid equally for performing the same job or tasks, regardless of gender, race, or other irrelevant factors (Deborah, 2000). Fair compensation should reflect an employee's contribution to the organization, taking into account their skills, experience, and performance (Guest, 2000). Liana et al. (2002), Fair compensation is the idea that wages should be set at a level that allows employees to meet basic needs and maintain a decent standard of living in their geographic area. WorldatWork (2007), Fair compensation encompasses all aspects of rewards, including salary, benefits, recognition, and development opportunities, to create a comprehensive and fair package for employees. Milkovich and Newman (2008), Fair compensation is achieved when an organization's pay rates are competitive with those of other organizations in the same industry and labor market. Tom (2006), Fair compensation is the result of a transparent and fair decision-making process in determining salaries and benefits within an organization. Paula (2000), Fair compensation involves equal pay for jobs that require similar skill, effort, and responsibility, regardless of whether the jobs are traditionally held by men or women. Fair compensation is the legally mandated minimum wage that ensures a basic standard of living for workers, preventing exploitation by employers.

Dedication and managers job satisfaction

Meyer and Allen (2000) found that managers who displayed a high level of dedication to their roles were more likely to report greater job satisfaction. This emotional commitment led to a deeper sense of fulfillment and engagement in their managerial tasks, contributing to overall job satisfaction. This relationship underscored the importance of fostering dedication among managers to enhance their job satisfaction, ultimately benefiting both the individuals and the organizations they served. Rhoades and Eisenberger (2002) argued that when managers perceive that their organization values their contributions and cares about their well-being, they are more likely to develop a strong sense of dedication. They also highlighted the profound and lasting effect of dedication, rooted in perceived organizational support, on managers' job satisfaction, shedding light on the crucial role that organizational policies and practices play in shaping the work experiences of managers.

Alignment and managers job satisfaction

Managers often experience job satisfaction when their team members are motivated,

engaged, and share a common vision for the company. This alignment reduces conflicts, enhances communication, and can lead to improved performance, all of which contribute to a manager's overall job satisfaction. Salanova and Schaufeli (2000) delved into the role of alignment in employee-manager relationships and its subsequent impact on managers job satisfaction. They found that when employees are engaged in their work, fully aligned with their managers expectations, and motivated to contribute to the organization's success, managers experience reduced stress and greater job satisfaction.

Theoretical Review
The following are the three theories that the study anchored on.
Social Exchange Theory (Blau, 1964):
This theory assumes that individuals engage in social exchanges with the expectation of reciprocity. In the workplace, employees may engage more when they perceive that their efforts will be rewarded or reciprocated. Managers can use this theory to understand that recognizing and rewarding employee contributions can lead to higher engagement and, in turn, increase their job satisfaction.

Self-Determination Theory (Deci & Ryan, 1985):
This theory assumes that individuals have innate psychological needs for autonomy, competence, and relatedness. When these needs are satisfied, they become more engaged and motivated. Managers can apply this theory by creating a work environment that supports employees' autonomy, provides opportunities for skill development, and fosters positive relationships, leading to increased employee engagement and, subsequently, job satisfaction.

Empirical Review
David (2020) studied on employee Engagement and Managers' Job Satisfaction in Europe. Aim: To explore the moderating role of leadership styles in the relationship between employee engagement and managers' job satisfaction in European organizations. Methodology: Longitudinal study of 300 managers' across 10 European countries. The study employed structural equation in the modeling to assess the mediating effect of leadership styles. Findings: Identified transformational leadership as a significant moderator, amplifying the positive impact of employee engagement on managers' job satisfaction.

Sarah (2019) studied on employee engagement and managers' Job Satisfaction in Global (Multi-country study). Aim: To compare employee engagement and its impact on managers' job satisfaction across different countries and cultures. Methodology: Cross-cultural survey involving 2,000 managers from five different countries. The study utilized a mixed-methods approach including survey and interviews. Findings: Discovered variations in the relationship between employee engagement and managers' job satisfaction across cultures. In some countries, the link was more pronounced, highlighting the need for context-specific strategies.

Smith (2018) studied employee engagement and Managers' job satisfaction in United States. Aim: To investigate the relationship between employee engagement strategies and managers' job satisfaction in the context of U.S. organizations. Methodology: Cross-sectional survey of 500 managers in various industries. Utilized regression analysis was used to examine the impact of different employee engagement practices on managers' job satisfaction. Findings: Found a statistically significant positive relationship between the implementation of employee engagement strategies and higher levels of managers' job satisfaction. Specifically, recognition and feedback mechanisms were identified as key drivers.

Sarah (2017) studied on employee engagement and Managers' Job Satisfaction Geographical Scope: Asia Aim: To investigate the role of workplace flexibility in enhancing employee engagement and subsequently increasing managers' job satisfaction in Asian organizations. Methodology: Case studies and surveys in Asian companies. Findings: Workplace flexibility positively correlates with employee engagement, which, in turn, has a positive impact on managers' job satisfaction in the Asian context.

Methodology

This study adopted cross sectional research survey design. The target population was 30 branches from 4 selected commercial banks in Rivers State. Also, the study consider Branch Manager, Customer service Manager, Head of operation and secretary (**4**) from the **30** branches which amounted to **120** respondents. The sample size for this study was **92** through Krejcie and Morgan (1970) Table. Structured questionnaire was used after thorough validation. The 5-point Likert scale was adopted in the scaling of the items of the study. The scale was structured as follows: SA = strongly agree, A = agree, MA = moderately agree, D = disagree, SD = strongly disagree. Tests were carried out using the Spearman's rank order correlation coefficient at a 0.05 level of significance based on the adoption of a 95% confidence interval.

Results
Table 1: Distribution of Questionnaire

Questionnaire Administered	92
Properly completed and returned of questionnaire	80
Percentage of returned	86%

Source: Field Desk

The table 1 above shows the total number of questionnaire administered and it happens that the total number administered was small based on the number of respondents involved. Hence, the acceptance of the 80 copies of questionnaire was used.

Below also is the test of the hypotheses stated above with a given summary of Spearman Rank Order Correlation Coefficient Statistical tool used.

Table 2: Test of relationship between dedication and measures of manager's job satisfaction

			Dedication	Working condition	Fair compensation
Spearman's rho	Dedication	Correlation Coefficient	1.000	.652**	.613*
		Sig. (2-tailed)	.	.000	.000
		N	80	80	80
	Working condition	Correlation Coefficient	.652**	1.000	.684**
		Sig. (2-tailed)	.000	.	.000
		N	80	80	80
	Fair compensation	Correlation Coefficient	.613*	.644**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	80	80	80
		Sig. (2-tailed)	.000	.000	.000
		N	80	80	80

**. Correlation is significant at the 0.01 level (2-tailed).
Source: SPSS output version 21.

The above table 2 of Spearman rank order correlation coefficient shows the relationship between dedication and measures of managers' job satisfaction (working condition and fair compensation). Results shows that very strong positive correlation value between dedication and working condition (rho=.652**, n=80, $p <$ 0.01), and also strong positive correlation value reported between dedication and fair compensation (rho=.613*, n=80, p < 0.01). Result from this analysis shows that dedication has greater influences on both working condition and fair compensation of the commercial banks. Based on this result, all null hypotheses are rejected and the alternate hypotheses are accepted.

Table 3: Test of relationship between alignment and measures of Managers' job satisfaction

			Alignment	Working condition	Fair compensation
Spearman's rho	Alignment	Correlation Coefficient	1.000	.602**	.624*
		Sig. (2-tailed)	.	.000	.000
		N	80	80	80
	Working condition	Correlation Coefficient	.602**	1.000	.632**
		Sig. (2-tailed)	.000	.	.000
		N	80	80	80
	Fair compensation	Correlation Coefficient	.624*	.632**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	80	80	80
		Sig. (2-tailed)	.000	.000	.000
		N	80	80	80

**. Correlation is significant at the 0.01 level (2-tailed).
Source: SPSS output version 21.

The above table 3 of Spearman rank order correlation coefficient shows the relationship between alignment and measures of managers' job satisfaction (working condition and fair compensation). Results shows that there is strong positive correlation value between alignment and working condition (rho=.602**, n=80, $p <$ 0.01), and very strong positive correlation value reported between alignment and fair compensation (rho=.624*, n=80, p < 0.01). Result from this analysis shows that alignment has greater influences on working condition and fair compensation of the commercial banks. Based on this result, all null hypotheses are rejected and the alternate hypotheses accepted.

Discussion of findings
Dedication and managers' job satisfaction
The result shows that dedication has strong significance relationship with managers' job satisfaction. When employees exhibit a high level of dedication, managers are more likely to feel a sense of accomplishment and fulfillment in their roles. Managers with dedicated employees tend to have a better interpersonal relationship, which further enhances their overall job satisfaction, as they experience fewer conflicts and enjoy a more harmonious work environment. Employee dedication has a profound impact on the managers' job satisfaction by influencing their sense of accomplishment, trust in their team, and the perception of purpose in their work. This finding agreed with the study of Meyer and Herscovitch (2001), Eisenbeiss et al. (2008), and Luthans et al. (2004).

Employee alignment and managers' job satisfaction
The result shows that alignment has strong significance relationship with managers' job satisfaction. When employees are aligned with their manager's goals and objectives, it leads to a more positive work environment. Managers experience greater job satisfaction when their team members

are motivated, engaged, and committed to achieving common organizational objectives. This aligns with the idea that managers who foster a culture of open communication and collaboration are better equipped to ensure their team's alignment with organizational goals, ultimately contributing to their own satisfaction and fulfillment in their roles. These findings agreed with the study of George and Jones (2017), Becker and Huselid (2019), and Johnson and Smith (2020).

Conclusions

Employee engagement plays a pivotal role in influencing a managers job satisfaction. Firstly, when employees are actively engaged in their work, they tend to be more self-motivated and driven to excel. This means that managers can delegate tasks and responsibilities more confidently, knowing that their team is not only competent but also enthusiastic about their roles. This, in turn, reduces the stress and workload on managers, contributing to greater job satisfaction. Engaged employees often require less micromanagement, allowing managers to focus on more strategic aspects of their roles, which can be professionally rewarding.

Secondly, a highly engaged workforce fosters a positive work environment. Managers who oversee engaged teams often experience better working relationships with their employees. Open and constructive communication becomes more prevalent, as engaged employees are more likely to provide feedback and suggestions for improvement. This improved communication can lead to more effective problem-solving and a greater sense of collaboration, both of which enhance the managers' job satisfaction by creating a supportive and cohesive team dynamic.

Lastly, the impact of employee engagement on managers' job satisfaction extends beyond the day-to-day interactions. High levels of employee engagement often correlate with lower turnover rates, as employees are more likely to stay in their roles when they feel valued and motivated. This stability within the team can provide managers with a sense of accomplishment and job security, contributing significantly to their overall job satisfaction. In conclusion, employee engagement is not just a benefit for individual employees; it is a critical factor in shaping the overall job satisfaction and success of managers in an organization and the commercial banks in Rivers State in particular.

Recommendations

From the findings, the following recommendations were made:
1. Management of commercial banks should Conduct regular performance evaluations and feedback sessions to help employees and managers understand their strengths and necessary areas for improvement.
2. Management of commercial banks should Offer health and wellness programs to support the physical and mental well-being of employees and managers.
3. Management of commercial banks should Involve employees and managers in decision-making processes, especially those that directly affect their roles and responsibilities. Encourage their input and feedback.
4. Management of commercial banks should Invests in leadership and management training for managers to ensure they have the skills and knowledge to lead and motivate their teams effectively.
5. Management of commercial banks should adhere to the two dimensions for the job satisfaction

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DIGITAL TECHNOLOGY UTILIZATION FOR EFFECTIVE LEARNING AMONG PART-TIME UNDERGRADUATES IN BAYELSA STATE

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Abstract

The study examined digital technology utilization learning among part time undergraduates' programmes in Bayelsa State. Three research questions and corresponding null hypotheses guided the study. The design of the study is a descriptive survey design. The population of the study consist of 567 lecturers and 1579 part-time undergraduates in Bayelsa State. A sample of 499 respondents comprising 105 lecturers and 394 undergraduates randomly selected from the 4 tertiary institutions in the study area. The instrument used for data collection was "Availability and Utilization of Digital Technology Questionnaire (AUDTQ)" developed by the researcher and validated by experts. The reliability of the instrument was established using Cronbach Alpha formula and the aggregate reliability coefficient for the "Availability and Utilization of Digital Technology Questionnaire (AUDTQ)" was 0.86. The research questions were answered using mean and standard deviation, while the hypotheses were tested using t-test statistic at 0.05 level of significance. The findings revealed that the lack of knowledge of using tools, lack of time to look for tools and lack of computer related skills to operate digital devices are major challenges associated with the use of digital technologies. Also, little or no access to internet, cost of material, ignorance of the existence of tools, ignorance of the existence of tools and poor attitude towards digital technologies are minor challenges associated with the use of digital technologies. Based on the conclusion, it was recommended that lecturers should make it a habit to use digital technologies when teaching.

Keywords: Availability, Digital, Technology, Utilizations, Teaching, Part-time Undergraduates

Introduction

Education in the broad sense is the entire process of socialization by which man and woman learn to adapt, and, where necessary, conquer their environment. It is the process of developing the cognitive, affective and psychomotor faculties of the individuals and groups in order to equip them with knowledge and skills necessary to survive and make progress in the human society. The National Policy on Education (2014) states "Education in Nigeria is an instrument "par excellence" for affective national development…" It is therefore, desirable for the nation to spell out in clear and unequivocal terms the philosophy and objectives that underlie its investment in education. Ojoawo (2015) posited that education is recognized both as an end in itself and as a mean to achieve many other ends. It is the only sector in the economy that has the primary responsibilities of human resources development from cradle to adulthood for the purpose of national development. Akangbou (2011) wrote that "Education is a service provided in all countries of the world with many objectives in mind. These objectives include the development of the skills required for a more rapid growth of the economy and provision of basic knowledge to the citizens of the country concerned". The importance of education in the social and economic development of a country, the success,

survival and continuity of any organization in a competitive world is ultimately determined by the productivity of its employees (workers) as well as the satisfaction which these workers derive from performing their jobs (Olanyan, 2019).

Technology has affected the life of mankind in all ages. When the changes and transformations in the history of mankind is analyzed, traces of technology can be observed. This situation continues today by increasing its intensity. Today, technology is much more involved in everyday than at any other period in history. Technology and in particular information technology is involved in every step of the phase of human life and education system has also been affected by this change (Demir, 2016). Technology has become an indicator of quality in educational practices generally and at such, it does not affect only the teaching and learning processes again, but has begun to transform management processes radically (Cetin, 2016). Changing the nature of teaching and learning naturally requires new management policies and practices. The use of technology in school teaching and learning process refers to the application of electronic devices during the entire processes. It involves using technological devices such as the computer to discharge educational functions.

Digital technology is the term used to cover all the computing and telecommunications whether in research, teaching, entertainment and administration. Digital technology is a broad term which includes; communication devices or applications, radio, television, laptop, iPod, iPhone, androids' phones, blogs, social media, digital games, network hardware and software, satellite system among others. It also includes various services and applications associated with them such as video conferencing and distance learning. It

is an integral aspect of both the teaching and learning process. For instance, teacher's uses technology to improve the effectiveness of instructions in the class, motivates students, school attendance, students' participation, and can be used as both a learning and communication tool. Technology forms the bases for life learning and problem solving. Students can use technologies in their academic works and other areas of interests. Digital technology when used for the purpose of learning enhances students' engagement in learning by searching the web for information to complete individual and group assignments, communicating via the e-mail, allowing them to connect with their peers, and for entertainment. (Adomi, et al., 2014).

The emergence of digital technology has been a thing of joy, interest and entertaining to members of the communities. These technologies such as the internet and the assessment of database would help secondary school students to communicate with one another, to be able to search for educational information that will help them in their school tasks and be able to know what is happening around the world (Idow, bet al., 2014).

Most teenagers in the secondary schools today, are fully aware of the benefits that can be derived from the use of technology, e.g the internet. Studies have shown that students constitute the highest users of the internet in African Countries, and most of them use it for E-mail communication. These teenagers and young adults usually send e-mail to communicate with their friends or partners. The effect of these affects all aspects of their lives. In Nigeria, digital technology may be an invaluable instrument for learning and teaching (Ojedokon & Owolabi, 2015).

The developed countries of Europe and America have less problems meeting the

educational resources needed by their students. Educational sources such as books, CD-ROM, projector, and the internet are in abundance. The emergence of digital technology in developing countries has bridged the digital gap. This enables students and adults to access and participate globally in sharing of information resources. Hence, secondary school students are now enjoying the existence of digital technology in enabling them to use and tap the available educational resources open online in making new friends internationally, distance learning also known as the E-Learning, sport and entertainment. Secondary school students are in the age of digital technology of acquitting themselves with information that could either affect their academic engagement or disengagement behaviour (Adeogun, 2015).

Availability of these digital instructional materials is government's responsibility to her citizens to excel in all ramifications in the 21st century and bring about an increase in social and economic growth; but unfortunately, the reverse is the case. Jegede and Owolabi (2018) in their collaborative study titled, "Computer Education in Nigerian Schools: Gaps Between Policy and Practice" found that digital instructional materials such as computers, computer laboratories, printers, scanners, ebooks, and digital textbooks were either in short supply or not available in Nigerian schools for e-teaching and learning. Conversely Becker (2010) in an independent study revealed that the US primary and secondary schools use digital instructional materials in all subjects.

Akuegwu, et al., (2012) were of the view that some digital instructional materials lacking in schools include computers, laptops, video players, multimedia projectors, power point projectors, digital cameras, internet facilities, computer network, telephone (GSM and Land phones), e-library, television programmes and database among others. This infers the non-usage of digital instructional materials in schools which are to aid knowledge comprehension in students. The regular use of digital instructional materials is important to teachers because it supports and facilitates teachers' professional competence and helps them to be more efficient and effective thereby increasing their interest in teaching (Yusuf 2011, Egomo et al 2012).

In spite of the benefits of using digital instructional materials, it's use among teachers has been low; due to incompetence on the part of teachers and other debilitating factors such as irregular power supply, internet connectivity, telephones dysfunctional nature, and no specific policy for ICT in education (Egomo et al, 2012). Ojugo (2009) also asserted that, though change linked to ICT is rapid and dramatic, in contrast, some teachers tend to resist change or embrace it slowly. It is therefore, high time teachers in general in Nigeria joined their colleagues in other parts of the world to integrate digital instructional materials in their teaching.

Statement of Problem
The integration of digital technology in teaching and learning characterizes the 21st century schools in the more industrialized countries of the world, as an innovative approach to secondary education delivery. It was in line with these global trends that the National Policy on Education (FGN, 2014:53) stated that "government shall provide facilities and necessary infrastructure for the promotion of information and communication technology (ICT) at all levels of education. Contrarily, studies show that there is dearth of trained teachers for e-teaching, facilities, infrastructure, equipment, and digital instructional materials. The question is, are digital technologies available in part-time undergraduates' programmes in Bayelsa

State? If they are available, are they utilized by undergraduates during teaching and learning processes as to produce individuals who would be collaborative, problem-solvers, critical thinkers as to compete favourably with their peers in the global labour market?

Aim and Objectives of the Study
The study examined digital technology utilization among part time undergraduates' programmes in Bayelsa State. Specifically, the study achieved the following:
1. The level of availability of digital technologies for effective learning outcome in part-time programmes in Bayelsa State.
2. The extent to which digital technologies are utilized for effective learning outcome in part-time programmes in Bayelsa State.
3. The challenges associated with the use of digital technologies in part-time programmes in Bayelsa State.

Research Questions
The following research questions were raised to guide the study:
1. What is the level of availability of digital technologies for effective learning outcome in part-time programmes in Bayelsa State?
2. To what extent are digital technologies utilized for effective learning outcome in part-time programmes in Bayelsa State?
3. What are the challenges associated with the use of digital technologies in part-time programmes in Bayelsa State?

Hypotheses
The following null hypotheses were raised and tested at 0.05 level of significance:

H_{O1}: There is no significant difference between the mean responses of lecturers and part-time undergraduates on the level of availability of digital technology for effective learning outcome in Bayelsa State.

H_{O2}: There is no significant difference between the mean responses of lecturers and part-time undergraduates on the extent to which digital technologies are utilized for effective learning outcome in Bayelsa State.

H_{O3}: There is no significant difference between the mean responses of lecturers and part-time undergraduates on the challenges associated with the use of digital technologies for effective learning outcome in Bayelsa State.

Methodology
Descriptive survey design was adopted in this study. The population comprised all the 567 lecturers and 1579 part-time undergraduates in the three tertiary institutions with part time programmes in Bayelsa State (Bayelsa Ministry of Education, 2023). A sample of 499 respondents comprising of 105 lecturers and 394 part-time undergraduates formed the sample of the study. Final year undergraduates' students were purposively selected, because they are the oldest students in the system who can respond to the questionnaire. The lecturers occupying all odd serial numbers in the nominal rolls of various institutions formed the sample. The instrument used for data collection is "Availability and Utilization of Digital Technology Questionnaire (AUDTQ)" developed by the researcher. The items in the AUDTQ are classified into 4 sub-sections namely, A, B, C and D. Section A measured the demographic information of the respondents, while section B, C and D measured the variables, availability, utilization, challenges associated and possible support strategies respectively. The section B, C, and D were styled in a four-point rating scale which the respondents are required to respond to by indicating one option ranging from Very

High Extent (VHE), High Extent (HE), Low Extent (LE) to Very Low Extent (LE) which is rated as 4, 3, 2 and 1 respectively. Cronbach Alpha reliability formula was used to determine the reliability coefficient of the instrument. This was used to determine the internal consistency of the items used in the instruments. Also, the choice of Cronbach Alpha formula was based on the fact that the instruments were polychotomously scored (i.e no right or wrong answer) and the reliability method enabled the researcher to administer the instruments once, saving cost and time. The aggregate reliability coefficient for the instruments was 0.86 which was considered appropriate for the study.

The researcher personally visited the sampled schools and administered the instruments. The lecturers and part-time undergraduates were briefed on the modalities and the reasons behind the administration of the instruments. This method ensured 100% return rate. The data generated from the responses was collated for statistical analysis. The research questions were answered using Mean and standard deviation. T-test statistics was used to test the hypotheses at 0.05 level of significance. The decision rule for answering the research questions was arrived at by finding the average of the 4-point scale, thus;

$$\frac{4+3+2+1}{4} = \frac{10}{4} = 2.50$$ thus, any item with mean of 2.50 and above was interpreted as agreed, while mean score below were interpreted as disagree. For the hypotheses, if calculated t-value is greater than the critical t-value, the null hypotheses will be rejected. Otherwise, the null hypotheses, will be accepted.

Analysis and Results
The entire 499 copies of questionnaires sent out to collect the respondents' data were returned and found useful for the study. Thus, the data collected were presented in tabular form as follows:

Research Question 1
What is the level of availability of digital technologies for effective learning outcome in part-time programmes in Bayelsa State?

Table 1: Mean and standard deviation of responses on the level of availability of digital technologies

S/n	Items	Mean	Std	Remark
1	Computers connected to internet	2.57	0.61	High
2	Laptops	2.34	0.61	Low
3	Tablets	2.23	0.57	Low
4	Examination scoring machines	2.31	0.59	Low
5	Multimedia Classroom	2.34	0.60	Low
6	Projectors	2.23	0.63	Low
7	Television sets	2.17	0.65	Low
8	Close Circuit Television	2.57	0.61	High
9	Digital Library	2.34	0.61	Low
10	Audio players	2.23	0.57	Low
11	Talking calculators	2.31	0.59	Low
12	Smart Board	2.34	0.60	Low
13	Flip classroom models	2.23	0.63	Low
14	Digital dictionaries	2.17	0.65	Low
15	Webcam	2.57	0.61	High
16	Video games	2.34	0.61	Low
	Grand mean	2.37	0.62	Low

Source: Researchers Desk (2023)

The result in table 1 revealed the mean and standard deviation of responses on the level of availability of digital technologies in part-time programmes in Bayelsa State. The grand mean value was 2.37, which is below the criteria mean of 2.50. Since the grand mean value is less than the criteria mean, the level of availability of digital technologies in part-time programmes in Bayelsa State is low.

Research Question 2
To what extent are digital technologies utilized for effective learning outcome in part-time programmes in Bayelsa State?

Table 2: Mean and standard deviation of responses on the extent of utilization of digital technologies

S/n	Items	Mean	std	Remark
1	Computers connected to internet	2.60	0.61	HE
2	Laptops	2.34	0.63	LE
3	Tablets	2.29	0.59	LE
4	Examination scoring machines	2.40	0.59	LE
5	Multimedia Classroom	2.37	0.62	LE
6	Projectors	2.39	0.59	LE
7	Television sets	2.21	0.61	LE
8	Close Circuit Television	2.60	0.61	HE
9	Digital Library	2.34	0.63	LE
10	Audio players	2.29	0.59	LE
11	Talking calculators	2.40	0.59	LE
12	Smart Board	2.37	0.62	LE
13	Flip classroom models	2.39	0.59	LE
14	Digital dictionaries	2.21	0.61	LE
15	Webcam	2.60	0.61	HE
16	Video games	2.34	0.63	LE
	Grand mean	2.36	0.60	LE

Source: Researchers' Desk (2023)

The result in table 2 revealed the mean and standard deviation of responses on the extent digital technologies are utilized in part-time programmes in Bayelsa State. The grand mean value was 2.36, which is below the criteria mean of 2.50. Since the grand mean value is less than the criteria mean, the extent of utilization of digital technologies utilized in part-time programmes in Bayelsa State is low.

Research Question 3
What are the challenges associated with the use of digital technologies in part-time programmes in Bayelsa State?

Table 3: Mean and standard deviation of responses on the challenges associated with the use of digital technologies

S/N	Items	Mean	std	Remark
1	Lack of knowledge of using tools	3.30	0.91	Major
2	Lack of time to look for tools	3.35	0.83	Major
3	Little or no access to internet	2.75	0.79	Minor
4	Cost of material	2.89	0.80	Minor
5	Lack of computer related skills to operate device.	3.55	0.81	Major
6	Ignorance of the existence of tools	2.59	0.81	Minor
7	Inability to acquire devices	3.09	0.83	Moderate
8	Lack of devices in schools	3.19	0.79	Moderate

Source: Researchers' Desk (2023)

The result in table 3 revealed the mean and standard deviation of responses on the challenges associated with the use of digital technologies in part-time programmes in Bayelsa State. Item 15, 16 and 19 have mean value above the criteria mean, hence they are interpreted as major challenges. Item 17, 18, 20, 21 and 22 had mean value less than the criteria mean, hence they are interpreted as minor challenges. Hence, Lack of knowledge of using tools, Lack of time to look for tools and lack of computer related skills to operate digital devices are major challenges associated with the use of digital technologies. Also, the little or no access to internet, cost of material, ignorance of the existence of tools, ignorance of the existence of tools and poor attitude towards instructional materials are minor challenges associated with the use of digital technologies in part-time programmes in Bayelsa State.

Hypotheses

H_{O1}: There is no significant difference between the mean responses of lecturers and part-time undergraduates on the level of availability of digital technology for effective learning outcome in Bayelsa State.

Table 4: T-Test analysis for hypothesis 1

Status	N	X	std	df	tcal	Tcrit	Remark
Lecturers	105	2.45	0.87	497	1.54	1.960	Accept
PTUgraduate	394	2.67	0.97				H01

*PTUgraduate = Part-time Undergraduates.   **Source:** Field work (2023)

The table 4 above revealed that the calculated t–value (t-cal) is less than the tabulated t-value (t-table) at 0.05 level of significant (i.e., t-cal = 1.54 < t-table =1.96, df = 497; P > 0.05). Hence, the null hypothesis is hereby accepted. That is, there is no significant difference between the mean responses of lecturers and part-time undergraduates on the level of availability of digital technology in Bayelsa State.

H_{O2}: There is no significant difference between the mean responses of lecturers and part-time undergraduates on the extent to which digital technologies are utilized for effective learning outcome in Bayelsa State.

Table 5: T-Test analysis for hypothesis 2

Status	N	Mean	Std	Df	t_{cal}	t_{crit}	Remark
Lecturers	105	3.89	0.87	497	0.72	1.96	Accept
PTUgraduate	394	3.87	0.97				H02

Source: Field work (2023)

The table 5 above revealed that the calculated t–value (t-cal) is less than the tabulated t-value (t-table) at 0.05 level of significant (i.e. t-cal = 0.72 < t-table =1.96, df = 497; P > 0.05). Hence, the null hypothesis is hereby accepted. That is, there is no significant difference between the mean responses of lecturers and part-time undergraduates on the extent to which digital technologies are utilized in Bayelsa State.

H_{O3}: There is no significant difference between the mean responses of lecturers and part-time undergraduates on the challenges associated with the use of digital technologies for effective learning outcome in Bayelsa State.

Table 6: T-Test analysis for hypothesis 3

Status	N	mean	std	Df	t_{cal}	t_{crit}	Remark
Lecturers	105	3.88	0.87	497	1.48	1.96	accept
PTUgraduate	394	2.56	0.94				H03

Source: Field work (2023)

The table 6 above revealed that the calculated t–value (t-cal) is greater than the tabulated t-value (t-table) at 0.05 level of significant (i.e. t-cal = 1.48 > t-table =1.96, df = 497; P < 0.05). Hence, the null hypothesis is hereby accepted. That is, there is no significant difference between the mean responses of lecturers and part-time undergraduates on the challenges associated with the use of digital technologies in Bayelsa State.

Discussion of Findings
Level of Availability of Digital Technologies
The result revealed that the level of availability of digital technologies in part-time programmes in Bayelsa State is low. Also, the result in hypothesis 1 revealed that there is no significant difference between the mean responses of lecturers and part-time undergraduates on the level of availability of digital technology in Bayelsa State. This finding supports that of Manir, (2011) who pointed out that the level of availability of digital tools amongst primary school teachers was low in Sokoto State. This is in disagreement with Okiki (2011) who opposed the idea that there was mass awareness of Web based technology in Nigeria. This is in line with the findings of Leem and Lim (2017) who discovered differences in support and opportunity to actively participate in web-based assessment programmes among Korean tertiary institutions.

Extent of Utilization of Digital Technologies
The result revealed that the extent of utilization of digital technologies utilized in part-time programmes in Bayelsa State is

low. Also, the result in hypothesis 2 revealed that, there is no significant difference between the mean responses of lecturers and part-time undergraduates on the extent to which digital technologies are utilized in Bayelsa State. This is in line with Okiki (2011) who reported that the extent of utilization of digital tools amongst primary school teachers is low. This is in line with the findings of Leem and Lim (2017) who discovered that the general conditions surrounding the teaching service in Korea affects teachers' attitude towards the use of digital tools.

Challenges Associated with the use of Digital Technologies
The result revealed that lack of knowledge of using digital tools, lack of time to look for tools and lack of computer related skills to operate digital devices are major challenges associated with the use of digital technologies. Also, the little or no access to internet, cost of material, ignorance of the existence of tools, ignorance of the existence of tools and poor attitude are minor challenges associated with the use of digital technologies in part-time programmes in Bayelsa State. Also, the result in hypothesis 3 revealed that there is no significant difference between the mean responses of lecturers and part-time undergraduates on the challenges associated with the use of digital technologies in Bayelsa State. This finding supports that of Manir, (2011) who pointed out that the challenges associated with the use of digital technologies for teaching in primary schools are little or no access to internet, cost of material, ignorance of the existence of tools, ignorance of the

existence of tools and poor attitude towards digital technologies.

Conclusion

The study examined digital technology utilization for effective learning outcome among part time undergraduates' programmes in Bayelsa State. This study has established that the level of availability and extent of utilisation of digital technologies for effective learning outcome among part time undergraduates' programmes in Bayelsa State is low. The study has affirmed that the lack of knowledge of using tools, lack of time to look for tools and lack of computer related skills to operate digital devices are major challenges associated with the use of digital technologies. The little or no access to internet, cost of material, ignorance of the existence of tools, ignorance of the existence of tools and poor attitude towards digital technologies are minor challenges associated with the use of digital technologies.

Recommendations

The following recommendations based on the findings of this study were made:

1) The directors in charge of part-time programmes should emphasise the importance of digital technologies with the aim of raising the academic performance of the system as it has been proved that digital technologies in teaching and learning enhanced the performance of the students.

2. Lecturers should make it a habit to use digital technologies when teaching.

3. The government should make it a policy requirement that all the digital technologies are inspected regularly by the directors in charge of part-time programmes directors in charge of part-time programmes.

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MANAGEMENT OF TEACHER-PERSONNEL RESOURCE FOR GOALS ATTAINMENT IN PUBLIC SECONDARY SCHOOLS IN BAYELSA STATE, NIGERIA

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Abstract

The paper examined ways of management of teacher-personnel resource for goals attainment in public secondary schools in Bayelsa State, Nigeria. Two research questions and two corresponding hypotheses guided the study. The study is a descriptive design. The population of the study comprised of all the teachers in public secondary schools in Bayelsa State which have a total of 3,432. A sample size of 343 teachers (180 urban teachers and 163 rural teachers) was drawn representing 10% of the entire population using proportionate stratified random sampling technique. A self-structured questionnaire tagged, Management of Teacher-Personnel Resource for Goals Attainment (MTPRGA) was used as the instrument for data collection which yielded a reliability index of 0.88 using Crobach Alpha Statistics. Mean and standard deviation were used to answer the research questions while z-test was used to test the hypotheses. The study revealed among others that periodic training is very essential for sustainable educational goals achievement in public secondary schools in Nigeria. Based on the findings, it was recommended among others that government should organize periodic training for teachers and also increase staff remuneration so as to attain goals in public secondary schools in Bayelsa State, Nigeria. Conclusively, staff training and improved remuneration for teacher-personnel resource are necessary condiments to the attainment of school goals.

Keywords: Management, Teacher-Personnel Resource, Goal Attainment, Bayelsa State

Introduction

The impact on teacher-personnel resource to the accomplishment of school objectives cannot be exaggerated. The survival, the life and the growth of school organization depend largely upon teaching-personnel element. Teachers partner with school head called the principal to set time, strategies, goals formulation, work system, appropriate lecture method and goal achievement. Therefore, management of teacher-personnel resource in the school organization remains an integral issue to deal with, and this must be carried out with utmost care, sincerity and honesty. However, it is empirically reviewed that, the growth and collapse of the school system largely depends on the teachers. This goes to say that, their less contribution and commitment poses great negative impact on students learning outcomes.

Statement of Problem

In order to guarantee that school goals are properly met, management in education are heretofore bound to organize all organizational accomplishments and material resources with or via other persons. In every organization such as the school, teachers are adjudged to be effective when they attain both school goals and personal needs in school. For Modern teaching and learning to be actualized, training and improved staff remuneration are essential to the attainment of quality school goals. Bayelsa State has been prompt in the payment of salary, staff promotion and

commitment of other welfare bothering school administration. However, in the midst these provision and commitment of the state government to teacher, there has been serious concern of government and relevant education stakeholders on the decline of student learning outcomes and moral decay. What is noteworthy to ascertain whether the decline in students' learning outcomes is related to lack of periodic staff training and poor remunerations. It is against this background, the researcher sought to examine management of teacher-personnel resource for goals attainment in public secondary schools in Bayelsa State, Nigeria.

Aim and objectives of the study

The aim of the study is to examine management of teacher-personnel resource for goals attainment in public secondary schools in Bayelsa State, Nigeria. Specifically, the study sought to:

1. ascertain the ways periodic training of teacher-personnel resource promotes goalsattainment in public secondary schools in Bayelsa State, Nigeria.
2. examine the ways remuneration of teacher-personnel resource foster goals attainment in public secondary schools in Bayelsa State, Nigeria.

Research Questions

1. What are the ways in which periodic training of teacher-personnel resource promotes goals attainment of public secondary schools in Bayelsa State, Nigeria?
2. In what ways remuneration of teacher-personnel resource foster goals attainment in public secondary schools in Bayelsa State, Nigeria?

Hypotheses

The following hypotheses were tested in the study at 0.05 level of significance

1. There is no significant difference between urban and rural teachers in their mean ratings on the ways periodic training of teacher-personnel resource can promote goals attainment of public secondary schools in Bayelsa State, Nigeria.
2. There is no significant difference between the mean ratings of teachers' opinion in urban and rural on the ways remuneration of teacher-personnel resource can foster goals attainment in public secondary schools in Bayelsa State, Nigeria.

Conceptual classification
Concept of Teacher-Personnel Resource Management

As earlier mentioned in the introduction, resources are sine qua non for building any system such as the school for the realization of its objectives or goals. Without resources, it is almost clear that nothing can be done in any organization. Onuka (2009) opines that, resources are simply inputs used in the production goods and services for the overall benefit of the organization such as the school. Learning takes place in schools; and schools are made up of teachers, they are purposive, and they are established to achieve an established pattern of goals for the overall benefit of the school. Teachers-personnel resource management can be interchangeably used as teacher- human resource management. The teacher as a personnel resource management according Flippo in Agboola and Akporehe (2016) is the planning, organizing, directing and controlling of procurement, development, compensation, integration, maintenance of teacher-personnel resource for the achievement of school goals. Teacher-personnel management is the significant aspect of school management primarily concerned with how school teachers are managed in school to achieve full implementation of government school

policies and programmes patterning to education.

Teacher-personnel resource function consists of a set of interrelated processes designed to guide the behaviour of the school teachers towards achieving individual, unit and school purpose. Teacher-personnel resource management is the general management of teachers in the school work organization. To Dassler (2007) Teacher- personnel resource management is the policies and practices involved in carrying out staff behaviour in school. Thus, it can be seen as the practice and skill of utilizing teachers to bring out their best for school organizational effectiveness. The idea that individuals (teachers) in work (school) organizations are equipped with a variety of abilities, talents, and attitudes, as well as influence, quality, and profitability to bring organizational goals such as the school (Bratton & Gold, 2012). Additionally, the staff and educational institutions have distinct expectations for their roles and aims, and individuals who fill them must be qualified for the position in order to contribute to the organization's management, which includes welfare.

Adeoye (2000) viewed teacher-personnel resource management as that aspect of management of the people (teachers) in school in order to get the maximum cooperation and commitment from teachers with the ultimate aim of achieving both individuals and school goals. Reason for effective staff management according to Robbins and Coulter (2013) it is a particular state in which to gain or have competitive advantage over others. And achieving competitive success through staff in school means school managers or administrators must change the way feel concerning their staff including the relationship with other staff. Teacher-personnel resource management practices seem to be a obligation concerning workers

(teachers) in improving their understanding, abilities, and aptitudes for school organization, encouraging their effort and improving their retention of excellence teachers while encouraging unmotivated teachers.

Njeke (2016) averred the importance of teacher-personnel resource management as a major strength necessary for the overall development and growth of education of a given nation. In Nigeria and institutions all over the world, the responsibility of giving the right knowledge to learners and reshaping our societies rest heavily on the teachers (personnel resource). Their efforts to contribute to the overall education, economic and societal development are worthwhile.

Concept of Management
Management is an organization activities that is primarily concerned with planning, controlling, directing, communicating and decision-making as well as assessing achievement of staff ensuring that manpower, material and financial resources are adequately provided in that association for effective uses. Management is all about getting things done. It is a process in which all efforts are consciously geared towards achieving goals and objectives. In involves overseeing and coordinating the work activities of other staff so that their activities or work schedules are completed effectively and efficiently. According to Koontz in Agabi (2004), management is the coordination and mobilization of all human, material, and financial resources inside a given system in order to fulfill certain organizational goals, such as the aims and objectives of the school. According to Onuka (2009), management is the skillful coordination of all organizational operations and material resources, either directly or through intermediaries, to guarantee that the objectives of the school as an organization

are successfully met. A competent educational administrator must handle educational resources including people resources carefully and effectively (Babalola, 2006).

Ways of Managing Teacher-Personnel Resource for Educational Goals Attainment

Education helps individual and society to develop and overcome inherent potential problems and challenges. It helps individual fulfill and achieve its potentials through acquisition of knowledge and skills. Acquisition of these skills and knowledge however impacts positively on individual's personal income and the nation's GDP (Ebong, 2006). It is against these aforementioned functions that international communities, government and relevant stakeholders of education all over the world have made commitment to partner with governments of sub-state, state or federal to improve the working conditions of teachers. Teacher-personnel resource management is essentially important; it helps in achieving sustainable educational goals.

Secondary education helps individual to acquire education that will make him/her to be self reliant and help the society at the end of programme. In order for a young person to fully mature, it is anticipated that secondary school will start the process by which they will learn how to appreciate meaningful social interactions, like engaging in conversation with one another, and understand the fundamentals of addressing straightforward social issues. As one of the objectives of secondary education, providing teenagers with fundamental knowledge and information about occupations falls under the category of economic efficiency.

The human element of the school can be looked as the most essential tools in the school. Ofejebe and Ezugoh (2010) view the teachers who facilitate teaching and learning process for the realization of educational goals and outcomes. However, these facilitators of school activities come from different background, family and society, and as such come to school with different feeling, aspiration, motive, demand and among others. Therefore, in a bid to attain these goals, government and school managers should stand up to teachers' inherent problems that may arise. Teachers need quality training, better pay, better reward and incentive system, they need a better working environment to spur them provide positive learning outcomes for learners. This is in line with Abraham (2013) who avers that in every organization such as the school, teachers are adjudge effective when they achieve both school goals and personal needs in school. Similarly, it is only when there is a balance in workplace (school organization needs and personal needs) that unacceptable beheviour and attitude such as lateness to work, truancy, lack of respect to superior authority, fighting and among other will be reduced.

Motivation as correlate to teacher-personnel resource in the achievement of sustainable educational goal is a very vital issue to be considered in school organization. In the light of this, Akinwumiju and Agabi (2008) are of the view that, education can yields good or bad results depending on the quality of training the teacher acquires, and their level of performance. It was further viewed that, a collection of ill-motivated, disgruntled and frustrated teachers in school system cannot produce positive learning outcomes. The relationship between the school heads and staff is influenced by what motivates them to work and also the rewards and fulfillment they derive therein.

Periodic Training of Teacher-Personnel Resource

One of the ways of managing teacher-personnel resource for sustainable educational goals attainment is through periodic training. Training, is an institutional efforts aimed at helping an employee (teacher) to acquire basic skills required to execute assigned duties efficiently. Training is simply an impartation of specific knowledge and skills to the teacher aimed to achieve increased skills required for the job. According to Nwabueze (2011), training is an addition to acquiring new abilities; it aids educators in shortening the time required to master a topic and raising the bar for academic achievement. Teachers who receive training are happier in their jobs. This means that a higher skill level often contributes to an increase in knowledge in terms of both quantity and quality.

Nwabueze also highlights how training boosts educators' spirits. If instructors receive the right training, their morale will rise. A positive outlook on academic objectives fosters more collaboration and aids in students' training. Training also boosts instructors' self-confidence. Teachers have a sense of confidence and ease in their ability to handle their new roles. Nonetheless, having got the required skills, it gives a feeling of safety and security in school. Training imparts teachers to know new ways, methods, strategies and skills in teaching. Training teachers for quality school goals achievement is very important; it helps orient new teachers to have increase understanding of the job.

Training helps to improve the teaching skills in work places and assure better performance of the staff as well as productivity. It also helps to promote job competency, simply put, enhancing quality service delivery by reducing close supervision. Training also reduce the incidence of teachers turnover; increase in personal growth through job satisfaction of the teachers; and also to acquire new skills and prepare staff for promotion/ for new job roles/ future personnel needs. Training is also important for employee helping to solve operational problems in school organization, and increase institution needs; and also to boost staff morale/ motivate the staff to renew their interest in the job.

Eroro in Illoabuchi (2014) claims that the rapid and continuous changes in organizational structure, technological innovation, and the increasing complexity of the work environment have made training essential. In light of this, it is anticipated to support educators in gaining, possessing, and using the information and abilities necessary for an efficient and successful teaching approach. Teachers training, Emechebe in Illoabuchi (2014) note its usefulness to the areas of increased teachers productivity, quality service delivery, exposure of teachers to current issues in school organization, teachers' adaptation to change; and also exposure of teachers to new teaching methods and skills relevant to their jobs. It also gives teachers high morale as well as increased teaching confidence. Furthermore, training encourages teachers to attain qualified capabilities for societal development. It also helps to improve the quality and standard of educational output.

Training helps in the improvement of quality and effectiveness of teachers in schools, this is because they play significant role in the actualization of educational goals and objectives by satisfying their present knowledge status and enhancing their morale in teaching. Training is simply carried out to correct deficiencies and weakness in teachers. Training is the process of giving

educators the tools they need to do their jobs properly, both now and in the future. This will boost productivity and efficiency within the company while also allowing educators to feel good about themselves.

Remuneration of Teacher-Personnel Resource

This is another way of managing teacher-personnel resource in school administration. It is a vital tool for motivating the teacher in a school administration. Whatever is due for the teachers in form of remuneration and salaries should be equally done. Workers most significantly teachers should be well cared in terms of remunerations. Teachers should not be treated with levity; they should be considered and treated fairly and justly. Fair remuneration is when a teacher is paid a wage or salary that is commensurate with his or her qualification, job performance and level of committed to job operation. Ejiogu in Ofejebe and Ezugoh (2010) is of the view that, teachers like their counterparts in other professions want to enjoy better working conditions such as remuneration and salaries. Ofejebe and Ezugoh opine that, remuneration of teacher-personnel resource will lead to quality performance and high job satisfaction. It helps teacher-personnel resource in coordinating and controlling activities thoroughly within the school environment. It also leads to increase in commitment, high level job performance and prestige.

Methodology

This study adopted a descriptive survey design. The population comprised 3,432 teachers in the public secondary schools in Bayelsa State. The proportionate stratified random sampling technique was deployed to select respondents. The study sample comprised 180 teachers in urban areas and 163 teachers in rural areas; this gave a total of three hundred and sixty eight (343) respondents.

The instrument for data collection was questionnaire titled "Managing Teacher-Personnel Resource for Sustainable Educational Goal Achievement in Public Secondary Schools in Bayelsa State, Nigeria" The instrument was face-validated by three experts, one in measurement and evaluation, and two from Educational Management from Niger Delta University, Bayelsa State. The questionnaire gave index of 0.84 using Cronbach alpha statistics to obtain the reliability coefficient for the study. The researchers used standard deviation and mean to answer the research questions and z-test to test the hypotheses at 0.05 level of significance. A mean of 2.5 and above was accepted as determinant and vice versa.

Research question 1: What are the ways in which periodic training of teacher- personnel resource promotes sustainable goals achievement of public secondary schools in Bayelsa State, Nigeria?

Table 1: mean and standard deviation on the ways in which periodic training of teacher-personnel resource promotes sustainable goals achievement

s/n	Items	Teachers in urban areas Mean	Std	Decision	Teachers in rural areas Mean	Std	Decision
1	increases teachers' skills required for the job	3.09	.74	Agreed	2.78	.77	Agreed
2	Increase in teachers' job satisfaction	3.04	.88	Agreed	2.79	1.01	Agreed
3	Achievement in quality of content knowledge	2.99	.85	Agreed	2.89	.76	Agreed
4	Increases teachers' high moral	3.08	.84	Agreed	2.74	.85	Agreed
5	increases teachers' confidence	3.06	.88	Agreed	3.06	.82	Agreed
	Aggregate mean and standard deviation	**3.052**	**0.838**		**2.852**	**0.842**	

Data on table 1 revealed that items with serial numbers 1, 2, 3, 4 &5 have mean values above the criterion mean value of 2.50 and are agreed by teachers in urban and rural areas as the ways in which periodic training of teacher-personnel resource promotes sustainable goals achievement of public secondary schools in Bayelsa State, Nigeria. The ways in which periodic training of teacher-personnel resource promotes sustainable goals achievement of public secondary schools in Bayelsa State are: increase in teachers' skills required for the job, achievement in the quality of content knowledge, increases in teachers' high morale and increase in teachers' confidence.

Research question 2: In what ways can remuneration of teacher-personnel resource enhance sustainable goals achievement in public secondary schools in Bayelsa State, Nigeria?

Table 2: mean and standard deviation on the ways remuneration of teacher-personnel resource endangers sustainable goals achievement

S/N	Items	Teachers in urban areas Mean	Std	Decision	Teachers in rural areas Mean	Std	Decision
6	It motivates the teacher in a school administration	2.66	.73	Agreed	2.54	.80	Agreed
7	It enhances quality performance	2.87	.79	Agreed	2.79	.71	Agreed
8	It leads to collaboration	2.73	.94	Agreed	2.56	.92	Agreed
9	It leads to increased job commitment	2.79	.74	Agreed	2.80	.79	Agreed
10	Reduction in school conflicts	3.07	.73	Agreed	2.81	.87	Agreed
	Aggregate mean and standard deviation	**2.824**	**0.786**		**2.7**	**0.818**	

Data on table 2 revealed that items with serial numbers 6,7,8,9 &10 have their various mean values above the criterion mean value of 2.50 and are agreed by the teachers in urban and rural areas as the ways remuneration of teacher-personnel resource

endangers sustainable goals achievement in public secondary schools in Bayelsa State, Nigeria. The ways remuneration of teacher-personnel resource endangers sustainable goals achievement in public secondary schools in Bayelsa State, Nigeria are that it motivates the teacher in a school administration, it enhances quality performance, it leads to collaboration; it

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leads to increased job commitment and reduction in school conflict.

Hypothesis 1: There is significant difference between the mean ratings of teachers in urban and rural on the ways periodic training of teacher-personnel resource can promote sustainable goals achievement of public secondary schools in Bayelsa State, Nigeria

Table 3: t-test on the mean difference between mean ratings teachers in urban and rural areas on the ways periodic training of teacher-personnel resource can promote sustainable goals achievement

Gender	N	Mean	Std	Df	t-cal	Sig.	Alpha value	Decision
Teachers in urban areas	180	15.26	2.85					
				341	3.15	0.00	0.05	significant
Teachers in rural areas	163	14.23	3.19					

Data on table 3 showed that teachers in urban areas have mean and standard deviation scores of 15.26 and 2.85 while the teachers in rural areas have mean and standard deviation scores of 14.23 and 2.46 respectively. With a degree of freedom of 341 and t-calculated value of 3.15, the hypothesis is rejected because the significant value of 0.00 is less than the alpha value of 0.05. Therefore, there is a significant difference between the mean ratings of teachers in urban and rural on the ways periodic training

of teacher-personnel resource can promote sustainable goals achievement of public secondary schools in Bayelsa State, Nigeria.

Hypothesis 2: There is no significant difference between the mean ratings of teachers in urban and rural areas on the ways remuneration of teacher-personnel resource can foster sustainable goals attainment in public secondary schools in Bayelsa State, Nigeria.

Table 4: t-test on the mean difference between mean ratings teachers in urban and rural areas on the ways remuneration of teacher-personnel resource can foster sustainable goals attainment.

Gender	N	Mean	Std	Df	t-cal	Sig.	Alpha value	Decision
teachers in urban areas	180	14.12	3.16					
				341	1.85	0.06	0.05	Not significant
teachers in rural areas	163	13.50	2.98					

Data on table 4 showed that teachers in urban areas have mean and standard deviation scores of 15.12 and 3.16 while the teachers in rural areas have mean and standard deviation scores of 13.50 and 2.98 respectively. With a degree of freedom of 341 and t-calculated value of 1.85, the hypothesis is failed to be rejected because the significant value of 0.06 is greater than the alpha value of 0.05. Therefore, there is no significant difference between the mean ratings of teachers in urban and rural areas on the ways remuneration of teacher-personnel resource can endangers sustainable goals achievement in public secondary schools in Bayelsa State, Nigeria.

Summary of Findings
The findings are summarized as shown below:

1. The ways in which periodic training of teacher-personnel resource promotes sustainable goals attainment of public secondary schools in Bayelsa State are: training increases teachers' skills required for the job, achievement in quality of content knowledge, increase in teachers' high morale and increase in teachers' confidence. The hypothesis revealed that there is a significant difference between the mean ratings of teachers in urban and rural on the ways periodic training of teacher-personnel resource can promote sustainable goals attainment of public secondary schools in Bayelsa State, Nigeria.
2. The ways remuneration of teacher-personnel resource endangers sustainable goals attainment in public secondary schools in Bayelsa State, Nigeria are: Remuneration motivates teachers' in school administration, enhances quality performance, it leads to collaboration; it leads to increased job commitment and reduction in school conflicts. The hypothesis revealed that there is no significant difference between the mean ratings of teachers in urban and rural areas on the ways remuneration of teacher-personnel resource can endangers sustainable goals attainment in public secondary schools in Bayelsa State, Nigeria.

Conclusion
Following the foregoing findings, periodic training and improved remuneration for teacher-personnel resource is necessary for sustainable educational goals achievement public secondary schools in Bayelsa State, Nigeria. The provision of the aforementioned variables cannot be overemphasized. The variables which have been investigated by the present study such as the teachers training and remuneration are very essential for sustainable educational goals achievement. However, the aforementioned variables have not been periodically provided for teachers, and have negatively affected their morale and passion for the profession. This situation calls for government's attention to conduct periodic training for teachers in a bid to achieve sustainable educational goals in public secondary schools in Bayelsa State, Nigeria. Also, government should increase teachers' remuneration so as to boast their moraleso as to achieve sustainable educational goals in public schools in Bayelsa State, Nigeria.

Recommendations

From the findings of this study, the following recommendations were made:

1. Government should organize periodic teachers training to achieve increase in teachers' skills, job satisfaction, achievement of quality content knowledge; increase in teachers' moral and confidence.
2. Government should increase teachers remuneration in order to motivate teachers, enhancement of quality performance, collaboration, increased job commitment and reduction of school conflicts.

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BENCHMARKING AND ORGANIZATIONAL PERFORMANCE of TELECOMMUNICATION INDUSTRIES IN PORT HARCOURT, RIVERS STATE, NIGERIA

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Abstract
This paper examined the relationship between benchmarking and organizational performance in Nigeria. The objectives of the study were to examine how dimensions of benchmarking such as process benchmarking, internal benchmarking, and external benchmarking influence organizational performance in Nigerian economy, in terms of efficiency, enhanced competitive advantage, and profitability. The study used secondary sources of data, and qualitative content analysis to analyse the secondary data. The study proved that benchmarking enhances organizational performance, despite the absence of empirical validations in the study. It therefore suggests that empirical studies be carried out on this subject. The study concluded that for an organization seeking to improve its performance in efficiency, enhanced competitive advantage, profitability and more, benchmarking or leaning from the best-in-class in the industry is a great tool to apply, so as to achieve sustainable competitive advantage in the contemporary business world. The study recommended that managers of organizations must, as a matter of urgency, apply internal benchmarking in order to ensure that the various departments are learning from each other for effective utilization of organizations' resources and attainment of corporate goals.

Keywords: benchmarking, organizational performance, efficiency, enhanced competitive advantage, profitability.

Introduction

The development of new information and communication technologies, globalization, and fierce competition have forced organizations to continuously search for and adopt new configurations (i.e structures and processes) by which to exist. In other words, organizations are undergoing changes to evolve, survive and compete in their respective industrial environments (Karamu, 2016). The explosion of management tools and techniques in the 1990s has helped organizations successfully; change is the evidence of this situation. Prominent among these techniques is benchmarking, which has proved to be valuable in various sectors in developed economies. It would therefore be vital to examine the prospects of benchmarking process in developing countries with a view to helping individual companies evaluate their competitive position relative to their competitors.

To establish how well or badly you are doing, to identify areas for improvement and importantly, to get new ideas, it pays to compare your organization with its best-performing peers, you need to study what the 'best-in-class' companies are doing, how well they carry out specific activities and processes, and what they are doing that is new and different and might work well in your company (Armstrong, 2018).

Tzu (2012) in his work, 'the art of war', gave a list of strategic assessment. He affirmed that you should compare yourself

to your opponent in seven different ways before you engage them in war. By careful examination of who is superior in each of the seven parts, you would know who would win the battle. In business, similar comparisons are needed to assure survival. It is reasonable to assume that the company with the most efficient business process, best products, shortest delivery and highest quality will lead its industry. Conversely, a company that excels in nothing needs to improve its practices to avoid being eliminated through competition.

Conceptually, organizational performance is the extent to which the operational activities of a corporate entity brings about the achievement of targets and satisfaction of customers' expectations. It has been argued by many authors that organizational performance is the key factor for successful businesses, business effectiveness, efficiency, and outcomes (Randeree & Al Youha, 2019; Boyatzis & Ratti, 2017; Deshpande et al., 2015; Ryan et al., 2019). Therefore, the performance of any organization depends largely on the employed techniques and tools, which should be flexible enough to accommodate change and achieve organizational goals. In the literature, many tools and techniques can help in enhancing organizational performance such as benchmarking. Benchmarking is considered as one of the top recommended technique for enhancing organizational performance and attaining competitive advantages (Coburn et al., 2017; Alosani et al., 2016). It is a tool used by organization to learn best practices from other organizations to enhance performance and maintain continuous improvement. In other words, organizations can improve their performance by learning from similar or different organizations. Efficiency, enhanced competitive advantage, and profitability are the measures of organizational performance the study is looking at the popularity and effectiveness of benchmarking reflects its inclusion in

excellence awards like the Balridge Quality Award (Hackman & Wageman, 2017) that is positively reflected in the expansion of its use in different organizations. This clearly has been shown in management literature (Vaziri, 2016), which argues that benchmarking assists organizations to improve performance by determining their attainable goals and choosing appropriate methods to achieve such goals. In various organizations such as Xerox, Toyota, AT&T, Ford, Southwest Airlines, and General Electric, benchmarking is used to bring significant improvements in performance, raise profits, control costs and improve their services (Alosani et al., 2016).

Literature is full of practical experiences about benchmarking and its usage such as information technology, warehousing, manufacturing, health care (Gardner, 2016; Northcott & Llewellyn, 2015; Wait & Nolte, 2015), facility management, food service industry (Johnson & Champers, 2017) and construction industry (Presley & Meade, 2010; Alosani et al., 2016)

For an organization to continue performing better it must have strategies that have lasting contribution to the daily operations. As Foster (2013) rightly puts it, the strategies should be decisions that shape the long-term capabilities of the company's operations and their contribution to overall strategy through the on-going reconciliation of market requirements and operations resources. This work therefore, is aimed at investigating the relevance of benchmarking to organizational performance of Telecommunication Industries in Port Harcourt.

Conceptual Review
Concept of Benchmarking
Benchmarking has its root in an English word "benchmark" which comes from a construction terminology, meaning leveling, leveling point, the standard

measure of value-benchmark by which other values are measured and compared to (Babović et al., 2018)and some of the leading exponents in business include Xerox and general electric (GE) (Yasin, 2014). The original word in the English language has been identified as a new word buzzword which is used in theory and practice to describe a modern method of comparing its own business to the greatest organizations. Nevertheless, benchmarking is a standard for comparing, measuring and marking a reference point. Benchmark is defined as a standardized test or set of test used for comparing alternatives (Babović et al., 2018).

A benchmark can be established at any level of the organization in any functional area. The ultimate goals is quite simple; to be better than the best, to attain a competitive edge. The following keywords becomes paramount in any discussion of benchmark whether in the industry or any other organizations to means- standard, measure, barometer, criterion, yardstick, example, touchstone, metric, rule etc (Otamiri, 2014).

In relation to that, benchmarking has numerous definitions in literature. One of the most common definitions was provided by Camp (2016) where he defined it as the search for the best industry practices which will lead to exceptional performance through the implementation of these best practices. Kumar et al. (2015) pointed out that benchmarking aims to improve the performance of an organization by identifying, understanding, and adapting good practices of other organizations. Moreover, it is seeking to find best practice and then trying to apply to achieve the organization's goals. Furthermore, Maire et al. (2015) stated that benchmarking aims to compare and contrast certain identified areas of organizational performance with others, which would enable organizations to identify gaps and weaknesses in order to take appropriate remedial actions. Cummings et al. (2018) posits that benchmarking is the process of improving performance by continuously identifying, understanding and adapting practices and processes found inside and outside the organizations. Benchmarking has been described as a powerful tool for overcoming paradigm blindness (Otamiri, 2014). Similarly, Malik and Nwogu (2017) averred that benchmarking is the process of identifying, understanding and adapting practices from within the same organizations or from other organizations to improve performance.

Although, there are many definitions in the literature, but there is no agreed definition of benchmarking. In general, it is defined as an effective tool used to search for best practices from other organization in order to apply these practices in the organization in order to gain some benefits. Other definitions focus on how benchmarking can improve performance by finding, choosing, and adapting the best practices and processes in outstanding organization. Several organizations have adopted benchmarking as a part of TQM approach (Wynn-Williams, 2015) and one of significant continuous process tools.

The American Center for Productivity and Quality considers benchmarking to be a "systematic and constant process of measuring and comparing business processes of one organization to business processes of a leader on the world's market in order to gain information that will help the organization take action to improve their performance" (Cvetković, & Arsić, 2010).Rohlfer (2014) revealed that benchmarking refers to as a search of best practices and applying them in order to cover identified gaps, achieve required improvements and accomplish continuous process improvement in an organization towards gaining competitiveness.

From the foregoing, benchmarking is conceptually defined as a process of measuring the performance of a company's products, services, or processes against those of another business considered to be the best in the industry. Benchmarking is not just seeking to make changes, but its main objective is to add value to the organization. In other words, if the benchmarking activities do not add any value to the organization, they should be discontinued (Mollaee, Rahimi, & Tavassoli, 2009). Furthermore, comparing data and copying the best practices from other organizations are not considered as benchmarking. Instead, benchmarking is a broad process that seeks to know strengths and weaknesses in organization to apply the best practices that are learned from other organizations (Camp, 1989).

In modern business, the existence and development of organizations are initially influenced by the external environment. The internal economy is important due to increase of productivity, economy and profitability. In the aspect of international and marketing and competitiveness, organizations are dealt with issues of how to retain and the existing and win new markets. By introducing benchmarking, orgnaizations determine the objectives in accordance with the needs and demands of consumers or costumers. These organizations therefore monitor their own results, as well as accomplishments of other competititors, compare them, and so they percieve their position, strengths and weaknesses in relation to the competition. Also, it becomes obvious where to intervene, whereas new business ideas and solutions to improve their own competitiveness are created as well.

In order to make an organization the best one, it is necessary for it to know itself, its strengths and weaknesses, to comprehend the way the leading companies conduct their business on the market it wants to gain

success, too, and to use the best available procedures, to constantly improve them and never stop upgrading their own business (Jovanović, and Kilibarda, 2019).

Application of benchmarking contributes to comprehension of critical processes, studies and motivation, learning from other competitors' business, creating business systems, showing organizations how to manage business and adapt to changes, directing towards the demands and needs of consumers and the market itself, a better and more quality decision-making, making organizations become aware of their strengths and weaknesses, motivating employees to accept and introduce innovations in the enterprise, increase of the economic efficiency and profitability of the business (Ćorović, 2018).

Baldrige (2018) outlined the following core areas were benchmarking can be applied. They include: leadership, strategic planning, customer and market focus, information analysis, human resource development & management, process management and business units. Notwithstanding, he also stated that benchmarking can be done in terms of process benchmarking, internal benchmarking, and external benchmarking. These dimensions are discussed in the subsequent paragraphs.

Dimensions of Benchmarking
Process benchmarking: This is where the initiating firm focuses its observation and investigation of business process with a goal of identifying and observing the best practices from one or more benchmark firms. There is no single benchmarking process that has been universally adopted. The wide appeal and acceptance of benchmarking has led to the emergence of benchmarking methodologies (Otamiri, 2014). There are as many benchmarking processes and steps as there are organizations that use them, but no matter which method is used, the major steps

involved according to Camp (2016) are; i. Select the subject ii. Define the process iii. Identify potential partner iv. Collect data and select partners v. Determine the gap vi. Establish process differences vii. Target future performance viii. Communicate ix. Adjust goal x. Implement xi. Review and recalibrate

Process benchmarking is all about better understanding your processes, comparing performance against internal and external benchmarks, and finding ways to optimize and improve your processes (Eric, 2019). The idea is that, by understanding how top performers complete a process, you can find ways to make your own processes more efficient, faster and more effective. To gain or maintain a competitive edge in a volatile business environment, organizations strive to improve the efficiency and effectiveness of their internal processes. Process benchmarking can be an instrumental part of a successful process improvement program. Process benchmarking offers many benefits to organizations seeking better operational performance, including (Eric, 2019):

i. A process benchmarking exercise often leads an organization to more clearly understand and articulate its current processes, giving the organization a better grasp of its starting point as it considers potential change initiatives.

ii. Process benchmarking shows an organization how it rates in operational performance compared to peers and industry leaders, and highlights the areas that have the greatest potential for near-term and long-term process improvement.

iii. A process benchmarking exercise yields empirical data that can be invaluable in justifying a resource request or in building a powerful business case for process improvement initiatives.

Mollae and Rahimi (2019) argued that benchmarking aims to achieve continuous improvements through applying the following five steps:

i. Deciding what to benchmark by making priorities and determining a certain process.

ii. Analyzing the starting position and the aim by identifying measurement tools that enable to determine the improvement that occurred. S

iii. Selecting a suitable partner.

iv. Getting the required information from the partner.

v. Applying the lessons learned and taking action to improve.

While Koehler and Pankoweski (2013) described the process of benchmarking as consisting of general steps. These steps entail the following

i. Identify the subject and key characteristics of the benchmarking.

ii. Identify who you will benchmark-other agencies, companies and collect data.

iii. Analyze the reasons for the gaps that exist between your program and the best. Examine your process using teams who do the work to see where improvement can be done. Examine what the best does that makes them the best.

iv.

Similarly, Timble (2012) posits that all process of improvement efforts requires a sound methodology and implementation and benchmarking is no different. He outlined a 9- step process of benchmarking to include; set objectives and define the scope of efforts, gain support from your organization, select a benchmarking approach, identify benchmarking partners, gather information, distill the learning (sieve information), select ideas to implement, run a pilot and implement ideas.

Process benchmarking, according to this work, is the process of comparing selected production processes of a business or organization with those of another seen to

be the best in the industry. Jetmarova (2016) proposed a specific benchmarking cycle which was initiated and developed by four organizations which are extensively involved in benchmarking (Boeing, Digital Equipment, Motorola and Xerox). This approach establishes the general context for the creation of a process model, uses the four phases of benchmarking - planning, data collection, analysis and improvement through adaptation.

Finding appropriate answers to the questions "What to benchmark?" and "Who is the best?" are regarded as critical factors of success. Motive power of benchmarking is to find answers for the questions: "How they do it?" and "How we are going to do it?"

Arnold (2015) formulated a seven step benchmarking process in a research conducted in 1999 by the Colorado chapter of the public risk management association.

1. Identify what to benchmark
2. Determine what to benchmark
3. Identify who to benchmark
4. Collect the data
5. Analyze data and determine the gap
6. Set goals and develop an action plan
7. Monitor the process, adjust and return to step 1.

Internal Benchmarking: This involves identifying the best in-house practice and disseminating these practices throughout the organization (Lankford, 2017). During internal benchmarking, an organization looks within for ideas for improvement usually with an operational focus (McGonagle et al., 2018). It allows managers in the organization to be more knowledgeable about the organization as a whole and may be the best option for an organization previously unexposed to benchmarking or with many relatively autonomous but similar operations (McGonagle et al., 2017). According to Tarricone (2008), it can assist in identifying vital operations and will expose an

organization to processes essential to benchmarking.

Internal benchmarking is the simplest form of benchmarking because no external limits have to be considered (Kai, 2017). With internal benchmarking, organizations try to learn from their branches, departments and sister companies. At the internal benchmarking, the look of the management is turned inside before it is turned outside. Current operating sequences and practices are to be registered objectively and to be be understood. This way the necessary details to concentrate the study on the aspects are obtained. Organizations with multiple locations will often start with internal benchmarking (Ferdinand, 2019). The primary reason, because the benchmarking data is more readily accessible. For example, a hotel management company which operates several hotels of the same brand will have access to operational and financial data for all of these properties. They can make comparisons, such as looking at rooms revenue and labor costs for these hotels, without having to go searching for the information from an external source. Other examples of expenses which could be explored include: linen, complimentary food & beverage and information technology. All of which can be major costs and damaging to overall profitability if not kept in check.

Internal benchmarking is the process of comparing the performance of a section or department of a business or organization with another within the organization, in order to troubleshoot the fault behind the weakened one, and thereafter find a lasting solution to it (researcher's definition). Once the benchmarks are computed, and comparisons made across locations, the top performers can be identified. Then, it is time to dig a little deeper. Maybe Hotel A has a much higher cost of labor than Hotel B. Well, are they in a location with higher minimum wages? Is Hotel A a union hotel?

Union hotels will often have a higher labor cost than non-union hotels; therefore, when benchmarking, make sure the hotel characteristics are examined to filter out operational discrepancies. Once all of the noise has been factored out of the figures, then best practices can be determined and spread to the other properties.

External Benchmarking: External benchmarking also known as a competitive benchmarking is the type of benchmarking which looks beyond one's own company. This type of benchmarking is an extension of internal benchmarking. The benchmarking partner may be direct competitor or a company in the same line of business serving a different market in another country. In this case the degree of compatibility is high. External benchmarking consists of comparing company operations to other organizations in some kind of formal study (Bendell et al., 2018). For some obvious reasons, this type of benchmarking is the most difficult to practice. This is because, most organizations may not be interested in helping a competitor by sharing relevant information (Otamiri, 2014).

External benchmarking does require additional planning and effort as it requires the collection of benchmarking data from other companies (Kai, 2017). In order to gather external benchmarks, an organization has multiple options such as creating formal or informal alliances with other companies to gather data and compare operational best practices, purchasing industry reports or examining public financial filings.

In the lodging industry, there are multiple third-party companies which offer formal benchmarking services. It is up to the organization going through the benchmarking process to determine which third-party provider fits their needs the best.

The researcher therefore defines external benchmarking as the act of comparing a business organization with another, so as to know where it falls short in its performance. In external benchmarking, the key is finding a third-party benchmarking company that will be your partner (Nicolas et al., 2017). The company's goal should be to assist you in your operation and not to just sell you a report. How flexible is the company? Will they create custom reports based on your needs and how quickly can they develop these reports? Also, determine what educational offerings this firm can provide. Are they simply pushing out the numbers or trying to educate the industry?

Organizational Performance

The concept of organizational performance is the organizational goals that have been set in a given period of time to outline its accomplishments that are involved in each stage. It is the sum of accomplishments that have been achieved by all departments. The idea of organizational performance is affiliated to the survival and success of an organization (Ahmed & Shafiq, 2014). Organizational performance is a multidimensional construct that consists of four elements - customer-focused performance, including customer satisfaction, and product or service performance; financial and market performance, including revenue, profits, market position, cash-to-cash cycle time, and earnings per share; human resource performance, including employee organizational effectiveness, including time to market, level of innovation, and production and supply chain flexibility (Alam, 2013). In order to achieve the desired level of financial performance, many organizations have restructured and implemented total quality management programs and introduced competitive staff benefits. Despite such attempts, many organizations have not achieved the anticipated results or have not experienced

high performance. Organizational performance includes effectiveness, efficiency, productivity, quality, and innovation (Zheng & McLean, 2010).

Organizational performance basically can be defined as the outcome that indicate or reflect the organization's efficiencies or inefficiencies in term of reputation, competencies and financial performance (Ahmed & Shafiq, 2014). It is of high importance, among others, to note that organizational performance was referring to the real output or outcome of an organization as measured against its intended outputs, goals and objective. Organizational performance encompasses the real outcome or consequences of a company as compared alongside its future goals or objectives. It also cuts across strategic planners, operations, finance, legal, and organizational development as a matter of concern to authorities in many fields of endeavor. Also, it is psychotherapy of an organization's output as measured by goals and purpose. Inside business group, three main results are calculated: financial performance, shareholder value performance (in some cases, production capacity performance may be analyzed) and market performance. Four types of organizational performance measures exists. They are human resource outcomes, organizational outcomes, financial accounting outcome, and capital market outcomes.

Organizational performance is considered as one of the most extensive dependent variable used in organizational research in recent times but it remains as one of the most obscure and loosely outlined constructs (Richards et al., 2018). Barney (2001) pointed out that the organizational performance aims to coordinate efforts and assets in order to work together to accomplish an organization's goal, and so long as those assets achieve value; the organization will continue to exist.

Organizational performance represents a major concern for any organization, and therefore, defining and measuring performance is not an easy task due to different definitions provided and existing contentious among researchers. Even though the organizational performance's concept is very popular in literature, it is complicated to find unified definition due to its various meanings. Therefore, according to Moullin (2007) organizational performance is considered as a measurement tool for the effectiveness of organization's management and how it can deliver the value to its customers and stakeholders. Another definition by Daft (2006) stated that organizational performance is the organization's ability to accomplish its strategy, goals and objectives as well its resources effectively and efficiently.

Organizational performance, in the context of this study, is the extent to which the operational activities of a corporate entity brings about the achievement of targets and satisfaction of customers' expectations. Organizational outcomes contain labour productivity, customer satisfaction, and quality of product services. Financial accounting outcomes included three measures such as returns on assets, return on equity, and profitability. Capital market outcomes reflect how market evaluates an organization which consists of the three indicators which is stock price, growth rate of stock price and market returns. Organizational performance is tied to work performance. Work performance here denotes the way employees perform their work. An employee's performance is determined during job performance review, with an employer taking into account factors such as leadership skills and productivity to analyze each employee on an individual basis. Job performance reviews are often done yearly and can determine raise eligibility, whether an employee is right for promotion or if an

employee should be fired (Rowold, 2011). There were so many ways to evaluate employee work performance. According to Rowold (2011), high performance work system and practices have need identified as playing a key role in the achievement of business goals and improved organizational effectiveness. While there is no agreement on an ideal configuration or bundle of such systems and practices. The logic is that high performance work systems influence and align employee's attitude and behaviours with strategic goal of the organization and they increase employee commitment and subsequently organizational performance. In this work, however, organizational performance is measured using efficiency, enhanced competitive advantage, and profitability.

Measures of Organizational Performance

Efficiency: Dictionary's definition of efficiency as fitness or power to accomplish, or success in accomplishing the purpose intended, adequate power, effectiveness, efficacy. Later on, it is pointed out that efficiency acquired a second meaning – the ratio between input and output, effort and results, expenditure and income, cost and the resulting pleasure. This second meaning became current in Business and Economics, only since the beginning of the 20th Century. Still later on, influenced by the scientific management movement, efficiency was defined as the ratio of actual performance to the standard performance (Ejiofor, 2014).

Apart from efficiency, another closely related performance variables is effectiveness. To be literally means to have effects, when we say that something is effective we mean that it has effects that we desired that we recognize as intentional in the design of the thing in question. When we say that a television set is effective we mean that it provides clear picture and

reasonable reproduction of sounds (Nwachukwu, 2016).

Efficiency means doing things in the right way (Drucker, 2017). Two sorts of efficiency are often referred to, namely static efficiency and dynamic efficiency (Ghemawat & Ricart, 2014). Static efficiency relates to refining existing products, processes or opportunities; making improvements within existing conditions. Dynamic efficiency refers to the continuous development of new products, processes or opportunities, so that profitability improves.

Merriam-Webster Dictionary (2019) defines efficiency as the capability to producing desired results with little or no waste (as of time or material). But what does it mean to actually be efficient in how you spend your days? Efficiency means negotiating each day's circumstances while ensuring there is enough time for non-negotiables like sleep and self-care. This nuance is especially important for working professionals. Efficiency does not always mean sitting down at a desk in the morning, whittling down a to-do list, and leaving the office by 5 p.m. Efficiency means doing your best despite internal and external factors, leaving ample time to take care of yourself.

In the concept of this study, efficiency is the ability to act or produce effectively with a minimum of waste, expenditure or unnecessary effort. Something is only efficient when it is effective. In other words: something is efficient if it has a useful effect. It has to be functional. The focus is on the resources and speed with which organizational goals are achieved. The effectiveness of your organization is determined by how successfully you assign resources in order to achieve your (organizational) goals in the right way. In other words, how well your organization converts input into output, such as

products, programmes and services. In this way effectiveness contributes to the success of your organization (Love, 2016).

Efficiency as a measure of employee performance is an employee characteristic and relates to the speed and accuracy of an employee at the job task. The concept relates to employee productivity - the more efficient they are the more productive they will be if managed correctly. Employee Efficiency is therefore a complex measurable parameter which characterizes an output produced by efforts and by achievements of an employee. There is no single understanding of this quite wide term, but usually sense of employee efficiency refers to the following conceptions which intersect with each other in certain aspects and usually are used in a mixture (Park, 2018):

1. Productivity-oriented approach: it stands for objective appraising of the value produced by efforts and talents of the employee and comparing this value against the worth of inputs and resources provided to this employee by the organization. In other words this attitude means determining the level of employee profitability: his or her ability to convert investments into direct profits or some long-term benefits;

2. Objectives-oriented approach: it stands for determining an ability of employee to accomplish certain amount of work (or to achieve some other required objectives) within a given period of time or/and other business resources. This attitude identifies an employee as efficient one if he or she properly fulfills certain working plans or matches certain productive norms. These plans usually imply certain inbuilt level of profitability;

3. Performance-oriented approach: this attitude means giving an appraisal to a manner which an employee adheres to while carrying out his or her job. In this case the employee efficiency is analyzed by measuring compliance of his/her activities with certain standards or requirements. This attitude states that employee is 100% efficient when he or she strictly follows a predefined procedure or workflow which is considered as efficient.

Theoretical Framework

This study is cemented with Resource-Based View (RBV) Theory. This theory was fathered by Barney Jay in 1991. The theory sees resources as key to superior firm performance. If a resource exhibits value, rarity, imitability and organization (VRIO) attributes, the resource enables the firm to gain and sustain competitive advantage (Barney, 1991). There two critical assumptions of RBV theory. They assume that resources must be:

i. **Heterogeneous**. The first assumption is that skills, capabilities and other resources that organizations possess differ from one company to another. If organizations would have the same amount and mix of resources, they could not employ different strategies to outcompete each other. What one company would do, the other could simply follow and no competitive advantage could be achieved. This is the scenario of perfect competition, yet real world markets are far from perfectly competitive and some companies, which are exposed to the same external and competitive forces (same external conditions), are able to implement different strategies and outperform each other. Therefore, RBV assumes that companies achieve competitive advantage by using their different bundles of resources (Rothaermel, 2012).

ii. **Immobile**. The second assumption of RBV is that resources are not mobile and do not move from company to company, at least in short-run. Due to this immobility, companies cannot

replicate rivals' resources and implement the same strategies. Intangible resources, such as brand equity, processes, knowledge or intellectual property are usually immobile (Rothaermel, 2012).

Implication of Resource-Based View Theory to the Study

It is intriguing to note that skills, capabilities and other resources that organizations possess differ from one company to another. Nevertheless, all organizations want to be at the forefront of growth, development and competitive edge. Thus, for them to achieve these feats, they must improve greatly on their benchmarking strategies such as process benchmarking, internal benchmarking, and external, in order to enhance their performance. This would be feasible when management adopts modern ways of carrying out benchmarking activities that would drive organizations towards the path of healthy competitive advantage, efficiency, and profitability. Since the organizations seek for perfect competition to outperform, they must adopt trending benchmarking practices that have the capacity to push organizations to their success lane.

Finally, the immobility of resources helps top management to design an enabling environment for benchmarking and response measures to strive while improving the organization's performance. Intangible resources, such as brand equity, processes, knowledge or intellectual property are usually immobile. These resources are both human and non-human. For organizations to thrive in their performance, they must upgrade in their efficiency, competitive advantage, as well as customer profitability through the efficacious use of benchmarking (process benchmarking, internal benchmarking, and external benchmarking) to promote product and service satisfaction to customers.

Discussion of findings
Relationship between Benchmarking and Organizational Performance

This work sets to theoretically examine the influence of benchmarking in terms of process benchmarking, internal benchmarking, and external benchmarking on organizational performance. Organizational performance was measured in terms of efficiency, enhanced competitive advantage, and profitability.

The first research objective was to determine the relationship between process benchmarking and organizational performance. Process benchmarking helps the initiating firm focuses its observation and investigation of business process with a goal of identifying and observing the best practices from one or more benchmark firms. Supportively, Eric (2019) posits that process benchmarking is all about better understanding your processes, comparing performance against internal and external benchmarks, and finding ways to optimize and improve your processes. Benchmarking can be applied at the strategic and operational levels (Vaziri, 2017). According to Elmuti et al (2007), a common theme in the application of benchmarking by organizations is the need for benchmarking to be linked to strategic goals. Detoro (2015) recommends that process benchmarking be used by management as part of an overall strategy to fulfill their organizations mission and vision. Benchmarking has spread fast and become one of the most used competitive technique (Chen, 2016). It is widely used as a tool to improve performance (Yasin,2002), eliminate the process of trial and error, enhance efficiency of developing new products (Hong et al., 2014), and improve customer satisfaction (Brah et al., 2015). Adam (2018) did a study with data obtained from 157 U.S manufacturing businesses. The study revealed that among the three benchmarking measures that is,

(1) internal preliminary competitive analysis, (2) extemal competitive analysis, (3) degree of organizational commitment, and (4) prior benchmarking experience (Elnathan et al. 1996), three of them have a positive effect on performance that is significant. These include, prior experience with benchmarking, the commitment of the organization to benchmark, and internal preliminary competitive analysis. In a nutshell, the main idea behind process benchmarking is that, by understanding how top performers complete a process, you can find ways to make your own processes more efficient, faster and more effective (Eric, 2019).

The second research objective was to determine the relationship between internal benchmarking and organizational performance. Internal benchmarking is useful in any organization where two or more location perform the same type of task (most decentralized companies can benefit by identifying best practice internal to the firm, then incorporating it in their ongoing operations. According to Kathleen et al. (2017), internal benchmarking is the comparison of similar operations or functions across a company or with associated companies in order to identify the level of service that is best practiced within this common setting. There is a considerable impact of benchmarking on organizational performance.

During internal benchmarking, an organization looks within for ideas for improvement usually with an operational focus (McGonagle et al., 2018). It allows managers in the organization to be more knowledgeable about the organization as a whole and may be the best option for an organization previously unexposed to benchmarking or with many relatively autonomous but similar operations (McGonagle et al., 2017). Using benchmarking influences the culture of organizations which, in turn, influences the

organizational performance. Voss et.al (1997) proposed that benchmarking promotes performance directly through identification of practices and performance goals. They also propose that benchmarking increases a firm's understanding of its position relative to competitors, which is beneficial for performance and argue that benchmarking is a part of a learning organization, which has links to increased performance. To understand the link between performance and benchmarking Voss et.al (1997) suggests use of indicators of good performance on both the operational and business performance frontiers. These include: measures of quality, productivity, cycle time, increased market share, and customer satisfaction.

The third research objective in this study was to determine the relationship between external benchmarking and organizational performance. This benchmarking strategy helps an organization compare its performance and growth with that of another organizations that is viewed as best in the organization. As a result, the organization is pushed to get challenged and improve on its performance, such as efficiency, profitability, competitive advantage, etc. In external benchmarking, the key is finding a third-party benchmarking company that will be your partner (Nicolas et al., 2017). The application of benchmarking in Nigerian organization, especially external benchmarking, is manifested in several corporate organizations that have changed and improved performance to achieve their objectives and become one of the best (if not the best) in their industry (Sev, 2019).

Oweka (2016) observed that Cowbell Milk company for instance, benchmarked the Peak Milk product and went ahead to reduce the cholesterol content of its product and repackaged it to the customers for improved customer satisfaction. The

Cowbell further took consideration of the economic conditions of Nigerian populace and started providing milk for adults and also in small sachets at affordable prices for low income earners. The report of the market audit and research service showed that 62% of Nigerians use powdered milk out of which cowbell enjoys 46% with peak milk trailing behind with 22% (Mars, 2018).

According to Zilkmund (2017), several organizations have employed benchmarking to boost the success of their operations as well as check competition. For example, Fidelity investment at one point even visited specialized tool manufacturers and transportation companies to better understand how to improve its own logistics and massive mail delivery operations. Fidelity wanted to see how benchmarking other leading edge companies using advanced processing technologies can help it ensure that customers account and new information are not lost in its own handling process. Awoyinfa and Dimgba (2016) highlighted that several Nigerian organizations have equally adopted benchmarking strategy to boost the quality of their products and services. For instance, ABC transport service benchmarked her service with what is obtained in the airline industry by not only providing a comfortable waiting room for her customers but also providing them with at least a meal on board their buses.

Also, Red Star Express, am indigenous courier company benchmarked speedy delivery and safety of her packages with DHL limited, another reputable courier company. All these are done to gain sustainable competitive advantage in the industry and by extension achieve the organization's corporate or strategies goals and objectives. In essence benchmarking, however the type, should be applied in order to enhance performance and to achieve corporate and strategic organizational objectives or goals.

Recommendations
Based on the findings made from this study and its conclusion, the following recommendations are made:

1. Managers of organizations must, as a matter of urgency, apply internal benchmarking in order to ensure that the various departments are learning from each other for effective utilization of organizations' resources and attainment of corporate goals.

2. In trying to benchmark, managers and shareholders as well as owners of organizations (both private and public) should endeavour to meticulously follow the steps discussed in the benchmarking process. This will go a long way in helping to reduce ambiguity in the activities of benchmarking, thereby improving on both the quality of their products and the general performance of the organization as a whole.

3. Managers and shareholders of corporate organizations should benchmark, as this will help the organizations improve their operations that are highly competitive and also learn new ways of doing things from within or outside their industry.

4. Managers and shareholders of organizations should compare their practices with one another. Benchmarking similar organizations does not only create room for profitability, it also creates room for overall improvement.

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INFLUENCE OF INNOVATIVE TECHNOLOGIES ON CONTEMPORARY LIBRARY SERVICES DELIVERY IN RIVERS STATE UNIVERSITY LIBRARIES

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Abstract
The study investigated the Influence of Innovative Technologies on Contemporary Library Services Delivery in Rivers State University Libraries. Five (5) research questions were used to guide the study. Descriptive survey design was applied to the study. The population of the study consisted of 80 library staff of Ignatius Ajuru University of Education, and Rivers State University, Port-Harcourt. The Sample size for the study was the entire population of 80 library staff; hence purposive sampling techniques was adopted to select the sample size. A self-structured instrument titled "Influence of Innovative Technologies on Contemporary Library Services Delivery Questionnaire (IINTELSCDQ)" was used for data collection. The instrument for data collection was validated by experts in the field of study on faced and content validity. The Pearson Product Moment Correlation (PPMC) method was used to determine the reliability index of 0.82 which guaranteed the use of the instrument. The descriptive statistics (mean and standard deviation) were employed to answer the research questions. The result of findings revealed that the extent to which electronic mails, social media platforms, cloud computing services and online databases influenced library services were significantly high. Although, the extent to which the use artificial intelligence influenced library services was significantly low. The study therefore recommended among others that; Librarians should be encouraged to accept new technologies, attend trainings and utilize fully the new technologies for improved service delivery.

Keywords: Innovative Technologies, Contemporary Libraries, Library Services, Service Delivery, University Libraries.

Introduction
Library services encompass all the activities performed by libraries to fulfill their users' needs. As defined by Law Insider (2022), library services delivery refers to the performance of all activities related to the collection and organization of library materials available to the public. University libraries carry out a range of services, including indexing and abstracting, current awareness services, selective dissemination of information (SDI), and answering user queries, ensuring the satisfaction of library patrons. Effective service delivery is paramount in university libraries operations. To deliver services effectively in a contemporary society, university libraries must ensure their collections go beyond books and print materials, encompassing non-print materials and other resources. Contemporary libraries have now applied computing power for the management of records (Ogunjimi,2020).

Innovative technology refers to the various technologies used in the processing of information, including coding, creation, storage, retrieval, manipulation, dissemination, and transmission (Etebu & Zacchaeus, 2020). The influence of innovative technology on library service

delivery has undergone significant development. With internet connectivity, university libraries can extend their reach beyond their physical spaces, providing patrons access to resources available within their libraries. The application of innovative technologies has undoubtedly brought significant advancements to libraries, reshaping their structure and redefining the roles of librarians. In spite of the enormous merit of social media, it is addictive these days for young people but a platform for recreation (Ordu & David-West, 2020).

Librarians in university libraries operate in an ever-changing technological environment. The rapid growth of innovative technologies and their implementation in libraries have had a profound impact on librarians, prompting serious questions about how they need to adapt to new tasks and activities in a globally interconnected world. Against this backdrop, the researcher aims to investigate the influence of innovative technologies on contemporary library service delivery in Rivers State universities.

Statement of the Problem

Innovative technologies in the library are very important as it makes library service delivery now more effective, efficient and timely compared to the traditional mode of operation and service delivery. It makes library operation easier and ensures that more than one person at a time can have access to library resources. It ensures that information is retrieved as quickly as possible and that knowledge is organized easily with less stress.

Observations have shown that Rivers State University libraries technologies has been increasing exponentially in other fields; this has not been the case in the library. The challenges faced by libraries today, pose a tangible risk to the traditional role of libraries. Libraries are now struggling with

operational inefficiency, technological disadvantage, difficulty in maintaining current patrons and engaging new ones, and an inability to demonstrate value and benefits to all stakeholders.

Furthermore, most of them carry out library services manually rather than employing innovative technologies. The services rendered by most of these libraries do not meet with users' expectations; users find it difficult to access and locate information needed without stress. Information resources that are supposed to have been available for use are still being processed due to insufficient innovative technologies to facilitate the process. It is against this backdrop that the researcher seeks to investigate the influence of innovative technologies on contemporary library service delivery in Rivers State University libraries.

Purpose of the Study

The purpose of the study was to examine the influence of innovative technologies on contemporary library service delivery in Rivers State University libraries. More specifically,

1. To examine the influence of use of electronic mails on contemporary library services delivery in Rivers State University libraries.
2. To examine the influence of use of social media platforms on contemporary library services delivery in Rivers State University libraries.
3. To investigate the influence of use of cloud computing services on contemporary library services delivery in Rivers State University libraries are still striving to be fully automated. This c
4. To examine the influence of use of online database on contemporary library services delivery in Rivers State University libraries.
5. To examine the influence of use of artificial intelligence on contemporary

library services delivery in Rivers State University libraries.

Research Questions

The following research questions are designed to guide the study:

1. To what extent does the use of electronic mails influence library services on contemporary library services delivery in Rivers State University libraries?
2. To what extent does the use of social media platforms influence library services on contemporary library services delivery in Rivers State University libraries?
3. To what extent does the use of cloud computing services influence library services on contemporary library services delivery in Rivers State University libraries?
4. To what extent does the use of online database influence library services on contemporary library services delivery in Rivers State University libraries?
5. To what extent does the use of artificial intelligence influence library services on contemporary library services delivery in Rivers State University libraries?

Literature Review

Innovation as defined by Tella (2020), refers to the development and implementation of new ideas through interactions within an institutional context. These ideas can range from novel combinations of existing concepts to entirely unique approaches that challenge the status quo.

Information and communication technologies (ICTs) are critical for advancement in today's society, bringing about development and change in the digital age. ICTs encompass a wide range of resources and technical tools used for connecting, disseminating, storing, and managing information (Tripathi, 2023).

Innovative technologies have upgraded traditional library services and brought about significant changes. Services such as Online Public Access Catalogs (OPAC) and Web OPAC searching, Virtual Reference Desk (VRD) or Virtual Reference Services (VRS) using e-resources and CD-ROMs, gateways, portals, and online databases, FAQ, and Ask Librarian services have advanced library capabilities. Database searching for bibliographies and topical information, as well as current awareness services based on electronic publications and internet resources, provide unique search features and display formats (Emmanuel & Augustine, 2021).

A good way to think about ICT is to consider all the uses of digital technology that already exist to help individuals, businesses and organizations use information (Egbe, 2020). The concept of a "Library without Walls," once merely a dream, is now becoming a reality. Libraries are increasingly becoming places where people can acquire ICT skills in a welcoming atmosphere, which greatly contributes to capacity building. One impact of innovative technologies, as observed by Omeluzor, et al (2020), is the reduced dependence on libraries for publication access. Computer-literate users can access online publications from anywhere, while information can be searched, transmitted, and reproduced using network technology.

Obiageli (2012) examined the email competence of librarians and found that approximately 86% of the respondents possessed email skills. However, only a small percentage (35%) admitted to using email competence in their library duties. The respondents identified a lack of computers and internet access as major obstacles.

The emergence of social media has simplified communication processes that were previously complex, owing to its user-friendly nature (Joel, et al 2020). Social media encompasses activities involving online socializing and networking through words, pictures, and videos. Ternenge (2019) defines social media as a group of internet-based applications built on the ideological and technological foundations of Web 2.0, enabling the creation and exchange of user-generated content. Social media can play a vital role in raising awareness about reliable sources of information among students and society by providing alternative knowledge sources (Bahar, 2014). According to Saidu and Sani (2022), social networking sites are applications that facilitate user connection by creating personal profiles, granting access to friends and colleagues, and enabling communication through emails and instant messages. Today's success requires not only core academic knowledge but also skills such as communication, creativity, innovation, and critical thinking (Essien, et al, 2022).

Harnessing social media to advocate for libraries not only promotes their services but also encourages library users to become advocates themselves. Chi (2020) conducted a study exploring the perceptions of university librarians towards social media. The survey, which involved 38 libraries, aimed to understand librarians' perceptions of the usefulness of social media, the factors influencing the decision to use these platforms, and the ways in which libraries engage with patrons through social media. The results indicate that libraries primarily use these tools for publicity, marketing, improving reference services, and facilitating knowledge sharing among staff.

According to Kutty (2019), cloud-based services enable libraries to optimize web resources and disseminate information

effectively, even for those with limited expertise in information technology. Libraries also rely on computers to support additional services like integrated library management software (ILMS), websites or portals, and digital libraries or institutional repositories (Onwubiko, et al 2021). This adoption of the cloud computing model would redefine and restructure the delivery of information services. Libraries are now leveraging AI technologies to achieve seamless integration between readers and library systems, allowing for user interaction on a unified platform. Notably, developed countries have embraced and extensively implemented AI technologies across various domains, whereas libraries in developing countries are still grappling with their adoption (Tella, 2020).

Essien, et al (2022), conducted a study on the effect of Information and Communication Technology (ICT) use on library service delivery which investigated two universities: the University of Ghana Library in Ghana and Jiangsu University Library in China. The study employed a quantitative approach, using a structured questionnaire to collect data from 62 staff members from Jiangsu University Library and 80 staff members from the University of Ghana Library, resulting in a total sample size of 142 respondents. Statistical methods such as mean scores, standard deviations, independent samples t-test, and structural equation modeling were employed to analyze the gathered data. The results indicated that Reference, Digital, and Circulation services were effective in both universities' service delivery, while Social media showed less effectiveness. Furthermore, the study revealed that challenges such as a lack of trained library personnel, poor internet connectivity, and erratic power supply hindered the use of ICT in the University of Ghana Library. Importantly, the study demonstrated that the level of ICT use significantly influenced the level of library services

delivered by both Jiangsu University Library and the University of Ghana Library.

Azubuike, et al, (2021) in a study on the awareness and utilization of electronic databases for scholarly research by faculty of education lecturers in federal universities in the South East region of Nigeria. The research aimed to investigate the awareness and utilization of electronic databases among faculty members in three selected federal universities. A descriptive survey design was employed, and the target population consisted of 591 lecturers from faculties of education in the South East zone. The study revealed that faculty of education lecturers were aware of the electronic databases highlighted in the study and utilized them for scholarly research.

A study by Aiyebelehin, et al (2020), on the awareness and use of cloud computing services by librarians in selected universities in Edo State, Nigeria, were examined. Simple percentage, frequency count, and mean were used to analyze the collected data. The analysis revealed that librarians were highly aware of the use of OCLC, World Cat, and Google Docs. Additionally, the librarians used cloud computing services and technologies for collection development functions and cataloging.

A study by Nwokedi, et al (2018) aimed to determine the effects of E-mail competence and use on service delivery by librarians in university libraries in the South East zone of Nigeria. The study employed a survey research design and targeted all 189 librarians working in government-owned university libraries within the South East zone. The research instrument used was a questionnaire, and the data analysis involved frequency counts, percentages, means, standard deviation, and ANOVA. The findings revealed that librarians'

competence in e-mail and its use significantly affected their service delivery.

Akanbi, et al (2020) carried out a study on Application of Information and Communication Technology (ICT) in Information Dissemination in Special Libraries in Nigeria. The study employed a survey research design using the Enumeration sampling technique. Apart from CAS, it was found that selective dissemination of information (SDI) is not done with the aid of technological tools in these libraries and these libraries rarely make use of OPAC to provide easy access to their resources, efficiency and effectiveness of ICT in the dissemination of information were not realized because of the low usage of ICT to drive operations in the library.

Adamu and Abdullahi (2018) in a study on using Information Communication Technologies (ICTs) for safeguarding the libraries from Threats of Insurgency in Nigeria employed the systematic review method in carrying this research where related literatures were reviewed on how ICTs contribute toward safeguarding the libraries. The findings revealed that insurgence posed a serious threat to the library, its users, staff and the collections; while manual security systems is not enough to curtail the nefarious acts of insurgence; and using ICT security systems in checkmating any criminal activities will really help.

Abubakar, et al (2017) carried out a study on Information and Communication Technology Accessibility as Correlate of E-Resources Usage among Postgraduate Students in Nigerian University Libraries. This study examined the correlation of ICT accessibility and use of e-resources in Nigerian university libraries among postgraduate students. A survey research design and multi-stage sampling technique were used to select 2726 postgraduate

students from 16 Nigerian federal conventional universities. The study showed that there is positive, very strong and significant relationship between postgraduate students' ICT accessibility and their use of library e-resources.

Umeji, et al (2013) in a study on the Information /ICT Literacy Levels and Skills among Librarians in Madonna University Library, Okija. Findings showed that librarians studied have very low literacy levels/skills. From the study it was found out that the librarians didn't have information/ICT literacy/skills because of major challenges facing them such funds, time, environment of the system.

Methodology
A descriptive survey research design was adopted for the study, which involved collecting and systematically describing data on the characteristics, features, and facts of a specific population. The study population consisted of 80 library staff members at both the Rivers State University Library and Ignatius Ajuru University of Education Library. The Rivers State University Library consisted of a total of 45 library staff. members while Ignatius Ajuru University of Education Library has a staff count of 35..

The study utilized a sample size of 80 library staff members which are the entire population of the study. Hence, purposive sampling technique was employed due to the manageable size of the population. The instrument for data collection was a self structured questionnaire entitled: "Influence of Innovative Technologies on Contemporary Library Service Delivery Questionnaire (IINTELSCDQ)" aligned with the research questions. The questionnaire comprised of two sections: Section A was designed to gathering pertinent background information about the

respondents. On the other hand, Section B encompassed items derived from the research questions of the study. The remaining questions were formulated in accordance with a four-point rating scale, allowing respondents to select an option that reflects their level of agreement. The response modes included the following: Very High Extent (VHE), High Extent (HE), Low Extent (LE), and Not at All (NA). The questionnaire was subjected to faced and content validity, hence a reliability coefficient of 0.82 provided valuable insights into the consistency and suitability of the questionnaire's measurements over time.

The questionnaire was administered personally by the researcher of which ample time was allocated to the respondents to ensure they have sufficient opportunity to respond to the questionnaire thoroughly. The data collected was subjected to analysis using various statistical measures such as, frequency distribution tables, mean, and standard deviation. A criterion mean of 2.50 was adopted as a benchmark for evaluation. Hence any mean value that falls above 2.50 was considered positive and accepted, indicating a favorable response. Conversely, mean values below 2.50 was considered negative and rejected, representing an unfavorable response. This analytical approach was allowed for a more nuanced understanding of the data, enabling the identification of trends, patterns, and the overall sentiment towards the subject under investigation.

Presentation of Data and Interpretation of Results
This explained the presentation of data, analysis and interpretation of the results. It also highlighted the summary of findings and discussion of findings.

Demographic Data

Variable	Category	Frequency	Percent
Gender	Male	39	48.8
	Female	41	51.2
	Total	**80**	**100.0**
University Library	Rivers State University Central Library	44	55.0
	Dame Patience Jonathan Automated Library	36	45.0
	Total	**80**	**100.0**
Job Title	Admin Officer	12	15.0
	Binder	3	3.8
	Cleaner	7	8.8
	Library Officer	23	28.8
	Librarian	21	26.3
	Security	3	3.8
	Library Clerk	2	2.5
	Library Assistant	7	8.8
	Secretary	2	2.5
	Total	**80**	**100.0**
Department/Unit	Registry	11	13.8
	Bindery Unit	4	5.0
	Cleaning Unit	6	7.5
	Library Unit	26	32.5
	Acquisition Unit	2	2.5
	Security Unit	3	3.8
	Circulation Unit	11	13.8
	Cataloguing Unit	7	8.8
	Referencing Unit	4	5.0
	Serial Unit	4	5.0
	Admin Office	1	1.3
	Electronic Library	1	1.3
	Total	**80**	**100.0**

The data in the table above shows the socio-demographic data of respondents in terms of gender, university library, job title, and department/unit. By gender, the frequency of male respondents is 39 (48.8%), the frequency of female respondents is 41 (51.2%). By university library, the frequency of respondents working in Rivers State University Central Library is 44 (55.0%), the frequency of respondents working in Dame Patience Jonathan Automated Library is 36 (45.0%). By job title, the frequency of respondents who are admin officer is 12 (15.0%), the frequency of respondents who are binders is 3 (3.8%), the frequency of respondents who are cleaners is 7 (8.8%), the frequency of respondents who are library officers is 23 (28.8%), the frequency of respondents who are librarians is 21 (26.3%), the frequency of respondents who are security officers is 3 (3.8%), the frequency of respondents who are library clerks is 2 (2.5%), the frequency of respondents who are library assistants is 7 (8.8%), and the frequency of respondents who are secretaries is 2 (2.5%). By department/unit, the frequency of respondents who are in registry department is 11 (13.8%), the frequency of respondents who are in bindery unit is 4 (5.0%), the frequency of respondents who are in cleaning unit is 6 (7.5%), the frequency of respondents who are in library unit is 26 (32.5%), the frequency of respondents who are in acquisition unit is 2 (2.5%), the frequency

of respondents who are in security unit is 3 (3.8%), the frequency of respondents who are in circulation unit is 11 (13.8%), the frequency of respondents who are in cataloguing unit is 7 (8.8%), the frequency of respondents who are in referencing unit is 4 (5.0%), the frequency of respondents who are in serial unit is 4 (5.0%), the frequency of respondents who are in admin office 1 (1.3%), and the frequency of respondents who are in electronic library is 1 (1.3%).

Research Question 1: To what extent does the use of electronic mails influence library services on contemporary library service delivery in Rivers State University libraries?

Table 1: To what extent the use of electronic mails influence library services on contemporary library services delivery in Rivers State University libraries

S/N	Items	Male n=39		Female n=41		MS	Remarks
		Mean	SD	Mean	SD		
	The use of electronic mails enhances communication between library staffs and users	3.56	0.50	3.71	0.46	3.64	High Extent
	Electronic mails facilitate the timely delivery of library notifications and announcements	3.41	0.64	3.76	0.49	3.59	High Extent
	Users find it convenient to communicate with library staffs via electronic mails for queries and support	3.55	0.50	3.41	0.50	3.48	High Extent
	Electronic mails improve the efficiency of document delivery services within the library	3.41	0.75	3.59	0.50	3.50	High Extent
	Library staffs use electronic mails to promote library events and services to the university community	3.64	0.58	3.61	0.63	3.63	High Extent
	The use of electronic mails contributes to the effective organizational communication, library activities and resource acquisition	3.33	0.90	3.54	0.55	3.44	High Extent
	Grand Total	**3.49**	**0.65**	**3.60**	**0.52**	**3.54**	**High Extent**

The data in table 1 shows how use of electronic mails influence library services on contemporary library service delivery in Rivers State University libraries. The table also showed the use of electronic mails enhances communication between library staffs and users (Mean=3.64), facilitate the timely delivery of library notifications and announcements (Mean=3.59), users find it convenient to communicate with library staffs via electronic mails for queries and support (Mean=3.48), improve the efficiency of document delivery services within the library(Mean=3.50), library staffs use electronic mails to promote library events and services to the university

community (Mean=3.63), contributes to the effective organizational communication, library activities and resource acquisition (Mean=3.44)

Research Question 2: To what extent does the use of social media platforms influence library services on contemporary library service delivery in Rivers State University libraries?

Table 2: **To what extent does the use of social media platforms influence library services on contemporary library services delivery in Rivers State University libraries**

S/N	Items	Male n=39		Female n=41		MS	Remarks
		Mean	SD	Mean	SD		
	Social media platforms enhance library's engagements with users and the academic community	3.59	0.55	3.66	0.53	3.63	High Extent
	Library services advertised on social media platforms attract a broader audience	3.41	0.79	3.54	0.64	3.48	High Extent
	Social media platforms facilitate the sharing of information about library resources and events	3.62	0.63	3.73	0.55	3.68	High Extent
	Users find it convenient to interact with the library through social media for quick updates	3.33	0.84	3.61	0.49	3.48	High Extent
	The library effectively uses social media to gather feedback and improve services based on user preferences	3.45	0.72	3.46	0.81	3.46	High Extent
	Social media platforms play a significant role in promoting library advocacy and awareness	3.50	0.73	3.46	0.74	3.48	High Extent
	Grand Total	**3.48**	**0.71**	**3.58**	**0.63**	**3.53**	**High Extent**

The data in table 2 shows how the use of social media platforms influence library services for contemporary library services delivery in Rivers State University libraries. The table also showed social media platforms enhance library's engagements with users and the academic community (Mean=3.63), library services advertised on social media platforms attract a broader audience (Mean=3.48), facilitate the sharing of information about library resources and events (Mean=3.68), users find it convenient to interact with the

library through social media for quick updates (Mean=3.48), the library effectively uses social media to gather feedback and improve services based on user preferences (Mean=3.46), play a significant role in promoting library advocacy and awareness (Mean=3.48).

Research Question 3: To what extent does the use of cloud computing services influence library services on contemporary library service delivery in Rivers State University libraries?

Table 3: **To what extent does the use of cloud computing services influence library services on contemporary library services delivery in Rivers State University libraries**

S/N	Items	Male n=39		Female n=41		MS	Remarks
		Mean	SD	Mean	SD		
	Cloud computing services enable seamless access to digital resources and databases	3.26	0.75	3.51	0.55	3.39	High Extent
	Library staff efficiently collaborate and share information using cloud-based platforms	3.37	0.67	3.27	0.84	3.32	High Extent
	Users find it convenient to store and access their personal research materials on cloud storage provided by the library	3.42	0.77	3.44	0.78	3.43	High Extent
	Cloud-based systems contribute to data back-up and preservation of library resources	3.38	0.81	3.34	0.66	3.36	High Extent
	Library staff can remotely access and manage library services through cloud computing	3.10	0.88	3.20	0.78	3.15	High Extent
	The use of cloud computing services enhances the scalability and flexibility of library operations	3.11	0.92	3.41	0.77	3.27	High Extent
	Grand Total	**3.27**	**0.80**	**3.36**	**0.73**	**3.32**	**High Extent**

The data in table 3 shows that how the use of cloud computing services influence library services for effective library service delivery in Rivers State University libraries is (Mean=3.32). The table also showed cloud computing services enable seamless access to digital resources and databases (Mean=3.39), library staffs efficiently collaborate and share information using cloud-based platforms (Mean=3.32), users find it convenient to store and access their personal research materials on cloud storage provided by the library (Mean=3.43), cloud-based systems contribute to data back-up and preservation of library resources (Mean=3.36), library staffs can remotely access and manage library services through cloud computing (Mean=3.15), the use of cloud computing services enhances the scalability and flexibility of library operations (Mean=3.27).

Research Question 4: To what extent does the use of online databases influence library services on contemporary library service delivery in Rivers State University libraries?

Table 4: **To what extent does the use of online databases influence library services on contemporary library services delivery in Rivers State University libraries**

| S/N | Items | Male n=39 | | Female n=41 | | MS | Remarks |
		Mean	SD	Mean	SD		
	Online databases offer a wide range of scholarly resources and academic materials	3.41	0.75	3.68	0.47	3.54	High Extent
	Users find it easy to search, retrieve, and access information from online databases	3.56	0.75	3.58	0.68	3.57	High Extent
	Library staffs efficiently assist users in navigating and utilizing online databases	3.36	0.58	3.25	0.93	3.30	High Extent
	The use of online databases contributes to the accuracy and relevance of research materials	3.42	0.76	3.35	0.66	3.38	High Extent
	Online databases provide access to up-to-date and current information for academic research	3.18	0.95	3.45	0.78	3.32	High Extent
	Library staffs utilize online databases to support users in their research and academic pursuits	3.44	0.79	3.23	0.73	3.33	High Extent
	Grand Total	**3.40**	**0.76**	**3.42**	**0.71**	**3.41**	**High Extent**

The data in table 4 shows that how the use of online databases influence library services for contemporary library service delivery in Rivers State University libraries is (Mean=3.41). The table also showed online databases offer a wide range of scholarly resources and academic materials(Mean=3.54), users find it easy to search, retrieve, and access information from online databases (Mean=3.57), library staffs efficiently assist users in navigating and utilizing online databases (Mean=3.30), the use of online databases contributes to the accuracy and relevance of research materials (Mean=3.38), online databases provide access to up-to-date and current information for academic research (Mean=3.32), library staffs utilize online databases to support users in their research and academic pursuits (Mean=3.33).

Research Question 5: To what extent does the use of artificial intelligence influence library services on contemporary library services delivery in Rivers State University libraries?

Table 5: **To what extent does the use of artificial intelligence influence library services on contemporary library services delivery in Rivers State University libraries**

S/N	Items	Male n=39		Female n=41		MS	Remarks
		Mean	SD	Mean	SD		
	Artificial intelligence enhances the efficiency of library search and discovery tools	3.21	0.66	3.51	0.56	3.36	High Extent
	Users find AI-powered recommendation systems helpful in discovering relevant resources	3.23	0.74	3.53	0.60	3.38	High Extent
	AI-driven chatbots and virtual assistants provide prompt and accurate responses to their users	3.18	0.76	3.18	0.98	3.18	High Extent
	Artificial intelligence supports data analysis and decision-making for library services	3.23	0.84	3.43	0.59	3.33	High Extent
	The use of AI contributes to personalized and user-centric library experiences	3.36	0.84	3.31	0.89	3.33	High Extent
	Library staff leverage artificial intelligence to optimize resource allocation and service management	2.97	0.91	3.08	0.97	3.03	High Extent
	Grand Total	**3.20**	**0.79**	**3.34**	**0.77**	**3.27**	**High Extent**

The data in table 5 shows that how the use of artificial intelligence influence library services on contemporary library service delivery in Rivers State University libraries is (Mean=3.27). The data also showed artificial intelligence enhances the efficiency of library search and discovery tools (Mean=3.36), users find AI-powered recommendation systems helpful in discovering relevant resources (Mean=3.38), AI-driven chatbots and virtual assistants provide prompt and accurate responses to their users (Mean=3.18), artificial intelligence supports data analysis and decision-making for library services (Mean=3.33), the use of AI contributes to personalized and user-centric library experiences (Mean=3.33), library staffs leverage artificial intelligence to optimize resource allocation and service management (Mean=3.03).**.**

Discussion of Findings
The data in table 1 showed that the extent to which the use of electronic mails influence library services on contemporary library service delivery in Rivers State University libraries was high. This supports the assertions of Nwokedi, Samuel & Amkpa, (2018), that information service delivery is enhanced as reference librarians use mails in notifying library clienteles about the acquisition of new reference materials in the library.

The data in table 2 showed that the extent to which the use of social media platforms influence library services on contemporary library service delivery in Rivers State University libraries was high. According to Yusuf, Adebayo, Bello and Kayode (2022), social media profiles are effective in reaching different user groups across various online platforms and as such librarians are successful in marketing

library resources and services through Facebook and other social networking site.

The data in table 3 showed that the extent to which the use of cloud computing influence library services on contemporary library service delivery in Rivers State University libraries is high. Cloud-based services enable librarians optimize web resources and disseminate information effectively, Kutty (2019). It helps in safeguarding and managing recorded, private and sensitive data of libraries.

The data in table 4 showed that the extent to which the use of online databases influence library services on contemporary library service delivery in Rivers State University libraries was high. Abubakar and Akor (2017) asserts that electronic databases contain collections of electronic resources (E-journals/books) from diverse disciplines, as such academic libraries subscribe to databases of books and journals relevant to the university's curriculum thereby facilitating teaching and learning within the university's environment.

The data in table 5 shows that the extent to which the use of artificial intelligence influence library services on contemporary library service delivery in Rivers State University libraries was low. The use of Artificial Intelligence in academic libraries enables more effective analysis of large datasets, fostering cross-datasets analysis and eliminating repetitive and mundane tasks. However, libraries in developing countries like Nigeria have shown resistance to technological innovations and change, thereby these technologies are not utilized (Wheatley & Hervieux, 2019).

Conclusion
Innovative technologies have a great impact on contemporary library services delivery in Rivers State university libraries. The use of electronic mails, social media platforms, cloud computing and online databases improves service delivery from libraries, as librarians can send updates on the acquisition of collections to clienteles through mails, connect to a wider range of users and advertise library holdings and services through social handles and experience ease in carrying out daily routines as repetitive jobs are minimized with the use of technologies. However, not all these innovative technologies are fully integrated and utilized in libraries because of resistance to change and unwillingness to gain more technical know-how for the full use of these technologies for effective delivery of services.

Recommendations
Based on the outcome of the findings, the following recommendations were made:
1. Other innovative technologies should be introduced in academic libraries by university authorities and ensure its utilization by library staff.
2. The librarians should be encouraged to accept new technologies, attend trainings and utilize it fully to improve service delivery.
3. Those technologies already utilized should consistently be in use by librarians and also upgrade in technical know-how in order to explore new packages.

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EFFECT OF COOPERATIVE LEARNING ON STUDENTS' ACADEMIC PERFORMANCE IN SOCIAL STUDIES IN JUNIOR SECONDARY SCHOOLS IN ELEME LOCAL GOVERNMENT AREA OF RIVERS STATE.

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Abstract
The study investigated the Effect of cooperative learning on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State. Three research questions and three hypotheses guided the study.
Quasi-experimental research design was adopted. The target population for the study consisted of 2,560 public junior secondary school students in Eleme Local Government Area. The sample of the study consisted (200) students, which was obtained using simple random sampling by balloting. The instrument used for data collection of the study was Social Studies Achievement Test (SSAT), which consists of 30 multiple choice test items. The reliability of the instrument was carried out using test retest approach in which the initial and final scores were correlated using Pearson's Product Moment correlation coefficient (PPMCC) yielded a reliability coefficient of 0.80, which was good enough for the study. For data analysis, the research questions were answered using mean and standard deviation while the research hypotheses were tested at 0.05 level of significant using the Analysis of Variance (ANOVA). Results of the study showed that; there is a significant difference between the pre-test and posttest scores of students in the control and experimental group on the positive interdependence on students' academic performance in social studies while promotive interaction and group processing showed no significant difference between the pre-test and posttest scores of students in the control and experimental groups on students' academic performance. It was concluded based on the finding that positive interdependence was a strong determinant factor of higher academic performance of junior secondary school students. It was also recommended that adequate attention should be given to positive interdependence learning as it relates to cooperative learning styles of students for greater and better academic performance.

Keywords: Cooperative Learning, Students' Academic Performance,

Introduction
Students' poor academic performance generally has become an issue of concern to educational stakeholders. Over the years, educational researchers are trying to find lasting solutions to this problem hence the major purpose of teaching and learning is to achieve higher performance examinations. To achieve this, teachers employ different teaching methods to ensure students obtain good grades in school. As a result, emphasis is on teaching methods that will improve learning and understanding. One of these is cooperative learning method, which assumes that students working as team to achieve a single goal of learning a particular aspect result in more understanding than solo efforts. This method, although have many salient features for improving teaching-

learning process, however, is not practiced normally due to many reasons including time and energy required to manage its activities. In addition to this, previous research studies that have tried to prove its significance in terms of learning had chosen the field of science and relevant areas. In the field of arts, humanities and social sciences it has not gained much popularity.

Cooperative learning is a teaching approach, which aims to organize classroom activities to be student participatory to encourage learning with understanding to improve academic and social learning experiences. It is a successful teaching strategy in which individual differences are taken into consideration. It is a teaching/learning process in which students work together in small group to maximize each other's learning ability. In addition to above assertion, students who fully participate in group activities, exhibit collaborative behaviours, provide constructive feedback and cooperate with their groups to perform a task hence there is the likelihood of them having higher academic performance at the end of the instruction.

Cooperative learning is an active pedagogy that grasses understanding of concept, improve higher academic performance; increase attendance, time on task, motivations, concentration and independence in class. Hence, it is viewed as an appropriate teaching method that provides maximum opportunities to the students for learning socialization and academic improvement. There are basic forms or elements of cooperative learning, which include positive interdependence that emphasizes that students must fully participate and put forth effort within their group and each group member has a task to deliver, promotive interaction; members promote each other's success and students explain to one another what they have

learnt and assist one another with understanding and completion of assignments and group processing that occur when group members reflect on which member actions were helpful and also make decisions about which actions to continue or change. The purpose of group processing is to clarify and improve the effectiveness with which members carry out processes necessary to achieve the group's goals.

Cooperative learning encourages students to interact and communicate with their peers to cross-fertilize ideas to have better understanding of concept or topic taught. However, cooperative learning promotes values such as honesty, cooperation, mutual respect, responsibility, tolerance, and willingness to satisfy a consensus. Execution of duties in cooperative learning can develop self-confidence in students. There are several types of cooperative learning techniques available. Some of them utilize student pairing, while others utilize small groups of four or five students. These techniques have been created into structures to use in any content area (Effandi & Iksan 2020).

Social studies is an integrative field of study, which probes man's life, his interactions with his physical and social environment, and his knowledge of science and technology to solve problems in his environment. Social studies are all around us, in everything we do. It connects us with the real world and is widely used in various areas since it covers multiple fields of social science. Social studies as a subject is of great importance to students. The main purpose of teaching social studies at secondary school level is to maximize the social development of students which presents the discipline of social studies as very complex and dynamic, yet in many classrooms it is taught through teacher-centered activities like memorization of

facts and concepts, lectures, and heavy reliance on textbooks.

Singh (2020) defined social studies, as the study of man and society and their main aim is to help students understand the world in which they live in to help them become responsible citizens. This is only possible by promoting critical thinking, encouraging a readiness of social change, creating a disposition for acting on the behalf of the general welfare, developing an appreciation of other cultures, a realization of other cultures, and inter-dependence between man and nation. With a social studies background, students become adults that can participate civilly in our democratic society.

However, the decline in students' academic performance in social studies has been a source of concern to stake holders in education. The reason for the decline in social studies achievement in Junior Secondary schools may vary, but could sometimes be related to the teaching method being used by the teachers to teach students. Students receive such information passively with less motivation. Therefore, teaching should be interactive to keep the students in active class. The teaching should be organized in such a way that there could be more effective. Teaching methods that will emphasize fewer lectures, more students directed classes, more discussion; Social studies' teachers should design classroom that will make students feel active and participatory for students to have a high level of success and low level of failure. Studies have shown that students learn best when they are active than when they are passive learners (Nwagbo, 2018). Researchers have argued that everyone is capable of learning, but may learn in different ways. The quality of education that teachers provide to students is depended upon what teachers do in the classrooms (Adeyemi 2018). Students should be given the opportunities to develop, interact, and share with friends through cooperative learning activities.

Statement of the problem
A noticeable gap is evidently seen in the academic performances of students in junior secondary school in Eleme Local Government Area of Rivers State. The subject "Social Studies" in particular is increasingly becoming unattractive or seemingly relegated at the junior school level. The increasing poor performance in public examination has over the years been a great concern to researchers and stakeholders in education. However, the dwindling performance of students in public examination in social studies can be attributed to several factors such as poor study habits, poor teaching method, lack of concentration in class, indiscipline, family issues, peer influence, absenteeism and the likes. Addressing this problem, the researcher seeks to investigate the effect of cooperative learning on students' academic performance in social studies in junior secondary schools in Eleme Local Government Area of Rivers State.

Aim and Objectives of the Study
The objective of this study is to investigate the Effect of cooperative learning on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State. In specific terms, the study objectives were to;

1. Determine the pre-test and post-test mean scores difference of students on the effect of Positive Interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State.
2. Examine the pre-test and post-test mean scores difference of students on the effect of Promotive Interaction on students' academic performance in social studies in junior secondary

schools in Eleme local Government Area of Rivers State.

3. Find out the pre-test and post-test mean scores difference of students on the effect of Group Processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State.

Research Question
The following research questions guided the study:

1. What is the pre-test and post-test mean scores difference of students in the control and experimental group on the effect of Positive Interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State?

2. What is the pre-test and post-test mean scores difference of students in the control and experimental group on the effect of Promotive Interaction on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State?

3. What is the pre-test and post-test mean scores difference of students in the control and experimental group on the effect of Group processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State?

Hypotheses
The following null hypotheses were formulated for the study, and tested at 0.05 level of significant.

1. There is no significant effect on pre-pest and post-test scores of students in the control and experimental group on the effect of Positive Interdependence on students' academic performance in social studies in junior secondary

schools in Eleme local Government Area of Rivers State.

2. There is no significant effect on pre-pest and post-test scores of students in the control and experimental group on the effect of Promotive Interaction on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State

3. There is no significant effect on pre-pest and post-test scores of students in the control and experimental group on the effect of Group Processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State.

Methodology
The study adopted a quasi-experimental research design. The study involved random selection of students to experimental and control group. The target population for the study consisted of 2,560 public junior secondary school students in Eleme Local Government Area. The sample of the study consisted (200) students, which was obtained using simple random sampling by balloting. The instrument used for data collection of the study was Social Studies Achievement Test (SSAT), which consists of 30 multiple choice test items. Two experts in the Department of Educational Psychology, Guidance and counselling, Ignatius Ajuru University of Education validated the instrument for data collection.

The reliability of the instrument was carried out using test retest approach in which the initial and final scores were correlated using Pearson's Product Moment correlation (PPMC) yielded a reliability coefficient of 0.80, which was good enough for the study. For data analysis, the research questions were answered using mean and standard deviation while the research hypotheses were tested at 0.05

level of significant using the Analysis of Variance (ANOVA).

Results
Research Question one: What is the pre-test and post-test mean scores difference of students in the control and experimental group on the effect of positive interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State?

Table 4.1.1: Summary of descriptive statistics on the pre-test and post test scores on the effect of Positive Interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State

Positive Interdependence	Design	N	Pretest Mean	SD	N	Posttest Mean	SD	Mean Difference Mean	SD
	Control	65	52.15	3.54	65	60.84	7.26	**8.69**	**3.72**
	Experimental	89	61.94	6.97	89	79.65	4.6	**17.71**	**2.37**

The data in table 4.1.1 showed the mean difference of the pre-test and post test scores of in the control and experimental groups on the effects of positive interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State. The table revealed that the pretest means scores difference of students in the experimental group (**Mean = 17.71, SD = 2.37**) is higher than the mean score of students in the control (**Mean = 8.69, SD = 3.72**).

Research Question Two: What is the pre-test and post-test mean scores difference of students in the control and experimental group on the effect of Promotive Interaction on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State?

Table 4.1.2: Summary of descriptive statistics on the pre-test and post test mean scores of students in the control and experimental groups on the effect of Promotive Interaction on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State

Promotive interaction	Design	N	Pretest Mean	SD	N	Posttest Mean	SD	Mean Difference Mean	SD
	Control	61	51.9	3.36	61	61.09	7.12	**9.19**	**3.76**
	Experimental	90	62.16	7.24	90	79.72	4.62	**17.56**	**2.62**

The data in table 4.1.2 showed the mean of the pre-test and post test scores of in the control and experimental groups on the effects of promotive interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State. The table revealed that the means scores difference of students in the experimental group (**Mean = 17.56, SD = 2.62**) is higher than the pretest mean score of students in the control (**Mean = 9.19, SD = 3.76**).

Research Question Three: What is the pre-test and post-test mean scores difference of students in the control and experimental group on the effect of Group processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State?

Table 4.1.3: Summary of descriptive statistics on the pre-test and post test scores of students in the control and experimental groups on the effects of Group processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State

Group processing	Design	Pre-test			Post-test			Mean Difference	
		N	Mean	SD	N	Mean	SD	Mean	SD
	Control	62	52.01	3.45	62	60.82	7.39	**8.81**	**3.94**
	Experimental	93	62.66	7.72	93	79.72	4.69	**17.06**	**3.03**

The data in table 4.1.3 showed the mean of the pre-test and post test mean scores difference of in the control and experimental groups on the effects of group processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State. The table revealed that the means scores difference of students in the experimental group (**Mean = 17.06, SD = 3.03**) is higher than the pretest mean score of students in the control (**Mean = 8.81, SD = 3.94).**

Hypothesis One: There is no significant effect on pre-pest and post-test scores of students in the control and experimental group on the effect of Positive Interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State.

Table 4.1.4: Summary of Analysis of Variance on the effect of pre-test and posttest scores of students in the control and experimental group on the effect of Positive Interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	25935.558[a]	2	12967.779	408.272	.000
Intercept	11435.197	1	11435.197	360.021	.000
Group	10174.643	1	10174.643	320.334	.000
Pretest	2150.367	1	2150.367	67.701	.000
Error	8734.715	275	31.763		
Total	1549312.000	278			
Corrected Total	34670.273	277			

a. R Squared = .748 (Adjusted R Squared = .746)

The data in table 4.1.4 above showed that there is a significant difference between the pre-test and posttest scores of students in the control and experimental group on the Positive Interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State (F1, 278= 320.021, Sig.= 0.000), Hence the null hypothesis one is rejected and the alternate hypothesis retained at 0.05 level of significance. Meaning that there is a significant difference between the pre-test and posttest scores of students in the control and experimental group on the effect of Positive Interdependence on

students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State.

Hypothesis Two: There is no significant effect on pre-pest and post-test scores of students in the control and experimental group on the effect of Promotive Interaction on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State.

Table 4.1.5: Summary of Analysis of Variance on the effect of pre-test and posttest scores of students in the control and experimental groups on the effects of promotive interaction on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	25951.756[a]	3	8650.585	271.865	.000
Intercept	5273.640	1	5273.640	165.737	.000
Group	7881.174	1	7881.174	247.684	.000
Pretest	1280.170	1	1280.170	40.232	.000
Education	16.198	1	16.198	.509	.476
Error	8718.517	274	31.819		
Total	1549312.000	278			
Corrected Total	34670.273	277			

a. R Squared = .749 (Adjusted R Squared = .746)

The data in table 4.1.5 above showed that there is no significant difference between the pre-test and posttest scores of students in the control and experimental groups on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State (F1, 278= 0.509, Sig.=0.476), Hence, the null hypothesis two is accepted and the alternate hypothesis rejected at 0.05 level of significance. Meaning that there is no significant difference between the pre-test and posttest scores of students in the control and experimental groups on the effects of effect of Promotive Interaction on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State.

Hypothesis Three: There is no significant effect on pre-pest and post-test scores of students in the control and experimental group on the effect of Group Processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State.

Table 4.1.6: Summary of Analysis of Variance on the effect of pre-test and posttest scores of students in the control and experimental groups on the effects of Group Processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	25989.532[a]	3	8663.177	273.446	.000
Intercept	5237.044	1	5237.044	165.303	.000
Group	7458.082	1	7458.082	235.408	.000
Pretest	1501.981	1	1501.981	47.409	.000
SES	53.974	1	53.974	1.704	.193
Error	8680.741	274	31.682		
Total	1549312.000	278			
Corrected Total	34670.273	277			

a. R Squared = .750 (Adjusted R Squared = .747)

The data in table 4.1.6 above showed that there is no significant difference between the pre-test and posttest scores of students in the control and experimental groups on Group Processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State (F1, 278=0.193, Sig.=0.476), Hence, the null hypothesis three is accepted and the alternate hypothesis rejected at 0.05 level of significance. Meaning that there is no significant difference between the pre-test and posttest scores of students in the control and experimental groups on the effects of Group Processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State.

Discussion of Finding

The summary of descriptive statistics on the pre-test and post test mean scores difference on the effect of Positive Interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State table 4.1.1 revealed that the pretest means scores difference of students in the experimental group **(Mean = 17.71, SD = 2.37)** is higher than the mean score of students in the control **(Mean = 8.69, SD = 3.72).** However, the summary of Analysis of Variance on the effect of pre-test and posttest scores of students in the control and experimental group on the effect of Positive Interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State showed that 4.1.4 showed that there is a significant difference between the pre-test and posttest scores of students in the control and experimental group on the Positive Interdependence on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State (F1, 278= 320.021, Sig.= 0.000). The result of the finding of the study collaborates the studies of Murray et al. (2002), Abdullah et. al (2018) and Alshammari (2020) who revealed in their different studies that there is significant effect of positive interdependence on students' academic performance of secondary school students.

The summary of descriptive statistics on the pre-test and post test mean scores of students in the control and experimental groups on the effect of Promotive

Interaction on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State on table 4.1.2 revealed that the means scores difference of students in the experimental group **(Mean = 17.56, SD = 2.62)** is higher than the pretest mean score of students in the control **(Mean = 9.19, SD = 3.76).** Again, the summary of Analysis of Variance on the effect of pre-test and posttest scores of students in the control and experimental groups on the effects of promotive interaction on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State in table 4.1.5 showed that there is no significant difference between the pre-test and posttest scores of students in the control and experimental groups on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State (F1, 278= 0.509, Sig.=0.476). The finding of the result agreed with the findings of *Sharan* (2020) that there is no significant effect of promotive interaction on students' academic performance but disagreed with the findings of Azmin (2019), Gambari (2018), Johnson and Johnson (2018), Bukumola (2021) investigated the relationship between promotive interaction and students' academic performance among secondary school students and found that there was a significant relationship between promotive interaction and students' academic performance in secondary school students.

The summary of descriptive statistics on the pre-test and post test scores of students in the control and experimental groups on the effects of Group processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State in table 4.1.3 revealed that the means scores difference of students in the

experimental group **(Mean = 17.06, SD = 3.03)** is higher than the pretest mean score of students in the control **(Mean = 8.81, SD = 3.94).** Furthermore, the summary of Analysis of Variance on the effect of pre-test and posttest scores of students in the control and experimental groups on the effects of Group Processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State in table 4.1.6 showed that there is no significant difference between the pre-test and posttest scores of students in the control and experimental groups on Group Processing on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State (F1, 278=0.193, Sig.=0.476). The result of the finding disagreed with the findings of Harman and Nguyen (2017), Nguyen and Harman (2016) and Azahin (2017) who separately investigated the relationship between group processing on students' academic performance in senior secondary schools and found a positive significant relationship between group processing and students' academic performance. But the result of the study agreed with the finding of Keramati (2017) who examined the effect of group processing method of learning on the academic performance of students in biology found that there was no significant effect of group processing on students' academic performance in Biology hence, there was no significant difference in the test scores of the students in control group and those in experimental group.

Conclusion
The study is to investigate the effect of cooperative learning on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State. From the data analysis, the results of the study showed that there positive interdependence have positive effect on students' academic

performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State while promotive interaction and group processing have negative effect on students' academic performance in social studies in junior secondary schools in Eleme local Government Area of Rivers State. Based on the finding, it was concluded that positive interdependence is a strong determinant factor of high academic performance of secondary school students, therefore, adequate attention should be given to learning as it relates to cooperative learning styles of students for greater and better academic performance among students.

Recommendations

Considering the findings, discussion and conclusions of the study, the following recommendations are made;

1. Positive interdependence learning method should be encouraged by students to make their studies more interesting for higher academic performance in school.
2. Promotive interaction should not be encouraged always as learning method hence according to the finding of this study did not effect students' academic performance.
3. Group processing should be discouraged sometimes in order to enable students to be engaged in on issues relating to their academic performance.

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AGRICULTURAL EDUCATION AS A PANACEA FOR MITIGATING YOUTH MIGRATION IN UGHELLI SOUTH LOCAL GOVERNMENT AREA OF DELTA STATE, NIGERIA

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Abstract

The study investigated agricultural education as a panacea for mitigating youth migration in Ughelli South Local Government Area of Delta State, Nigeria A two stage sampling procedure was used to select 450 youths in 42 farming communities in Ughelli South Local Government Area of Delta State. A thirty items questionnaire was used for data collection. Cronbach Alpha reliability method was used to establish the reliability of the instrument which yielded the reliability coefficient of 0.75. Mean and standard deviation was utilized in analyzing the data collected. Findings revealed that absence of social amenities, poverty and search for better education and wages in the cities were the major causes of youth migration. It was also revealed that youth migration has negative consequences on the rural areas where the migrants left, the study found that with agricultural education in place, the migration of the youths can be reduced as they will be exposed to various modern techniques in agriculture that can improve their standard of living since one of the major causes of youth migration is poverty and lack of employment. it was recommended that infrastructural development should be hastened in farming communities if the government intends to retain the youth and reduce youth migration in rural areas. The government should embark upon massive youth development programmes through agricultural education in all the states of the federation with skills acquisition.

Keywords: Agricultural education, panacea, youth, migration, mitigation.

Introduction

A high number of Nigerians live in poverty. The poverty often results in migration of people mostly youths from one country to another in search of a better life. While human movement from one place to another has been a global phenomenon throughout history, it is as relevant today as it ever was. With about 1 billion migrants globally, 258 million are international migrants and about 763 million as domestic migrants (this means the migrant within a particular geographical area are usually between states in a nation). 68 million domestic and international migrants are forcefully sent back to their original countries today, this shows how migration in general is a problem (Amirth, 2019).

Migration has various definitions, but one constant fact is that it involves the permanent or temporary change of residence of a year or more. The United Nation (2019) defined migration as a type of geological relocation between one place to another, for the most part including a change of residence from home of origin to a destination place. As cited by Woldegebriel (2017), migration is the relocation of individuals in space frequently including an adjustment in one's residence. Migration can also occur when an individual relocates to another territory city or town within a country, or unemployed people relocating to other nations or region seeking employment opportunities or for more beneficial economic chances, (Kebede, 2020). This type of migration is what Nigerian youths are facing today as a result of limited job opportunities and high rate of economic hardship in the country. The neglect of agricultural activities due to the discovery of crude oil have also worsen the situation.

The government focused on the oil industry instead of the agricultural sector which encourages the drifting away of the abled youths from rural area to the urban centres leaving farming in the hands of older people and the women as most wives were left behind. Subsequently, number of farmland put into cultivation as a result of reduction in labour force diminished greatly, thus affecting production rate and income from agriculture and thus increasing poverty in Nigeria (Ayinde, 2020).

Youth is a term defined by many authors and organizations. The United Nations (2019) defines youth as all individuals aged between 15 and 24. In 2007, World Development Report, which focuses on 'the next generation', expands the definition of youth to include all young people aged between 12 and 24 (Benell, 2017). However, according to Torimiro

(2019), youth can be described as a group of young people between the ages of 13 to 30. They are naive but hopeful about the future. This definition applies to developing countries like Nigeria, where many people over 30 years old still live with their parents. The Children and Youth-in-Agriculture Programme (CYIAP- Network, 2016) took cognizance of the circumstances of poverty, unemployment and deprivations that are prevalent in Nigeria and some other developing countries which make certain people still rely on others for development, protection and survival up to the age of 40 years to define youth as people from ages 19 to 40 years.

Over the years, many studies have tried to identify the determinants of internal and international migration with special focus on youths (House and Rempel, 2020). Adams (2021) argued that migration is typically an individual decision made on the basis of the income that one expects to receive given his/her own specific human capital characteristics, such as age, education and skills. But recent trends emphasized that migration decisions are not taken by an individual in isolation but are influenced by the actual or intentional migration choices in one's peer group by the group's specific characteristics. As emphasized by Epstein (2022) migrant networks, peer influences, immigrant clusters, herd behaviour, chain migration were the major causes of migration of people from one location to the other, while Bauer (2016) stated that social influences have a significant impact on the migrant's decisions about when and where to migrate. Zainab and Mustapha (2021) assert that absence of social amenities and poverty were the major causes of youth migration from rural to urban cities in Borno State. Youth migration has many consequences. Akande (2016), reports that reduction in farm size, hired and family labour, low improvement in social

and community activities were the identified effects of youth migration in Nigeria. Overcoming the consequences of youth migration in Nigeria require urgent attention and agricultural education can help create jobs for the youths in Nigeria because of many skill opportunities it offers for self-employment.

Agricultural education can help to equip youths with knowledge in precision agriculture, organic farming, and technology integration emerges as a fundamental strategy (Ibe, 2019). This aligns with the idea that enhancing agricultural skills can make farming more attractive and economically viable for the youths thereby reducing the rate at which the youths migrate to other places in search for jobs. Also, agricultural education can foster an entrepreneurial mindset among the youth (Omonona & Adenegan, 2018). As the country grapples with the adverse consequences of youth migration, the imperative to explore and implement effective solutions becomes paramount. This paper posits that agricultural education holds the key to mitigating youth migration in Nigeria, offering a sustainable approach to address the root causes and channel the potential of the youth towards transformative agricultural practices.

Statement of the problem
Presently, Delta State and particularly Ughelli South Local Government Area (LGA) in Nigeria, is confronted with a pressing challenge of escalating youth migration, leading to adverse consequences for both rural development and the local economy. The gravity of this issue prompts an investigation into the efficacy of agricultural education as a potential panacea for mitigating youth migration. Despite its predominantly agrarian nature, Ughelli South LGA faces a paradoxical situation where agriculture, the primary economic activity, fails to offer sufficient employment opportunities for the youths. This disconnection between the local economy and the aspirations of young individuals contributes to the allure of urban areas, perpetuating the cycle of youth migration (Nwaka, 2017). Unfortunately, there seem to be negative stereotypes and perceptions surrounding agriculture as a low-status occupation, discouraging the youths from considering it as a viable career option which has also increase the migration of youths in Nigeria. In light of these pressing issues, there is an urgent need to investigate and assess the potential of agricultural education as a strategic intervention to mitigate youth migration in Ughelli South LGA. Addressing the identified problems will not only retain human capital but also contribute to the sustainable development of the local economy.

Aim and Objectives of the study
The aim of this study is to assess agricultural education as a panacea for mitigating youth migration in Ughelli South Local Government Area of Delta State. The specific objectives for this study are to;
1. determine the causes of youth migration in Ughelli South Local Government Area of Delta State
2. identify the consequences of youth migration in Ughelli South Local Government Area of Delta State
3. ascertain how agricultural education can mitigate youth migration in Ughelli South Local Government Area of Delta State

Research questions
Three research questions will guide this study.
1. What are the causes of youth migration in Ughelli South Local Government Area of Delta State?
2. What are the consequences of youth migration in Ughelli South Local Government Area of Delta State?

3. How can agricultural education mitigate against youth migration in Ughelli South Local Government Area of Delta State?

Methodology

The study was conducted in Delta State, Nigeria with particular reference to Ughelli South Local Government Area of Delta State. Descriptive survey research design was used in this study. The population of the study was 4500 (four thousand five hundred) youths in 42 farming communities in Ughelli South Local Government Area of Delta State. For sampling selection, a two stage sampling procedure was adopted. The first stage involved a purposive selection of ten farming communities in Ughelli South Local Government Area of Delta State with each community having 45 youths bringing the total to 450 youths which comprised of 250 males and 200 females for the study. The Taro Yamane formula was used for determination of the sample. A thirty items questionnaire was developed based on the research questions and was used for data collection. The instrument had a 4-point response scale of Strongly Agree, Agree, Disagree and Strongly Disagree coded as (4, ,3, 2, 1) respectively. The instrument was face validated by three experts, from the Department of Agricultural Education, Ignatius Ajuru University of Education Port-Harcourt. Their suggestions were used to improve the final copy of the questionnaire. To obtain the reliability of the instrument, 20 copies of the questionnaire were tested on youths in Ughelli North local government area who were not part of the study sample. Cronbach Alpha reliability method was used to establish the reliability of the instrument which yielded the reliability coefficient of 0.75. 200 copies of the instrument were administered by personal contact of the researcher with the help of two research assistants who are familiar with the area of the study. The whole 450 copies were retrieved, completely filled and used for data analysis representing 100% rate. To answer the research questions, mean and standard deviation was utilized. Using 2.50 as cut off point, any item with mean value of 2.50 and above was regarded as "Agree" while any questionnaire item with mean value of less than 2.50 was regarded as disagree.

Results

Research Question 1: What are the causes of youth migration in Ughelli South Local Government Area of Delta State?

Table 1: Mean responses of respondents on the causes of youth migration   in Ughelli South Local Government Area of Delta State   *(n=450)*

s/n	Causes of Youth Migration:	X	SD	Remarks
1	Unemployment and Underemployment:	3.49	1.74	Agree
2	Rural-Urban Disparities	1.72	1.76	disagree
3	Educational Pursuits:	3.67	0.70	Agree
4	Political Instability and Insecurity	3.83	0.84	Agree
5	Lack of Basic Infrastructure such as good roads, pipe borne water	3.78	0.84	Agree
6	lack of social amenities such as electricity	3.84	0.88	Agree
7	poverty	3.47	0.49	Agree
8	Famine	3.44	0.45	Agree
9	Search for better wages	3.68	0.76	Agree
10	Better technology	2.69	0.71	Agree
	Grand mean and S.D.	**2.98**	**0.65**	

Results in Table 1 showed that unemployment and underemployment, educational pursuits, political instability and insecurity, lack of basic infrastructures such as good roads, pipe borne water, lack of social amenities such as electricity, poverty, famine, search for better wage and better technology were the major causes of youth migration in Ughelli South Local Government Area of Delta State. This finding was accepted because 9 items had a mean value above the cut-off point of 2.50 which indicated that all the items were the major causes of youth migration in Ughelli South Local Government Area of Delta State with grand mean score of 2.98 and standard deviation of 0.65 respectively.

Research Question 2: What are the consequences of youth migration in Ughelli South Local Government Area of Delta State?

Table 2: Mean responses of youths on consequences of youth migration in Ughelli South Local Government Area of Delta State (*n=450*)

s/n	Consequences of youth migration :	X	SD	Remarks
1	Brain drain	2.56	0.67	Agree
2	Agricultural Decline	3.01	0.87	Agree
3	Economic Instability	3.44	0.89	Agree
4	Social Disintegration	2.98	0.78	Agree
5	reduction in family labour	2.73	0.57	Agree
6	reduction in hired labour	2.68	0.58	Agree
7	reduction in farm size	2.57	0.54	Agree
8	low improvement in social amenities	2.82	0.62	Agree
9	Decrease in the standard of living of the people	2.76	0.73	Agree
10	low community development activities	2.59	0.64	Agree
	Grand mean and S.D.	**2.63**	**0.62**	

Results in Table 2 showed that the respondents agreed that the consequences of youth migration in Ughelli South Local Government Area of Delta State include; brain drain, agricultural decline, economic instability, social disintegration, reduction in family labour, reduction in hired labour, reduction in farm size, low improvement in social amenities, fall in the standard of living of the people and low community development activities. This finding was accepted because all the 10 items had a mean value above the cut-off point of 2.50 which indicated that all the items were the major consequences of youth migration in Ughelli South Local Government Area of Delta State with grand mean score of 2.63 and standard deviation of 0.63 respectively.

Research Question 3: How can agricultural education mitigate youth migration in Ughelli South Local Government Area of Delta State?

Table 2: Mean responses of youths on skill areas in agricultural education that can mitigate youth migration in Ughelli South Local Government Area of Delta State

(n450)

s/n	How agricultural education can mitigate youth migration:	X	SD	Remarks
1	Equipping youth with knowledge and proficiency in modern and sustainable farming techniques can reduce youth migration	3.55	0.49	Agree
2	Agricultural education should emphasize agribusiness management skill	3.40	0.49	Agree
3	participating in agricultural value chains can provide youth with insights into the broader economic aspects of agriculture	3.91	0.78	Agree
4	Exposing the youths to skills in poultry farming	3.95	0.70	Agree
5	Equipping the youths with skills in Dairy farming	3.75	0.40	Agree
6	Agricultural education can provide skills to youth in fish farming	3.23	0.64	Agree
7	Agricultural education provide youths with skills in raw material processing	3.22	0.62	Agree
8	Adequate in cassava farming can help reduce youth migration	3.77	0.42	Agree
9	Training the youths in agricultural resource management can reduce youth migration	3.55	0.56	Agree
10	Agricultural sector should be made more attractive through investment in agricultural education to motivate youth into farming	3.69	0.63	Agree
	Grand mean and S.D.	**3.68**	**0.52**	

Results in Table 3 showed that the respondents agreed that agricultural education can mitigate youth migration in Ughelli South Local Government Area of Delta State through the following ways; equipping youth with knowledge and proficiency in modern and sustainable farming techniques, emphasize agribusiness management skills, exposing the youths to skills in poultry, dairy and fish farming, provide youths with skills in raw material processing, This finding was accepted because all the 10 items had a mean value above the cut-off point of 2.50 which indicated that all the items were the major ways agricultural education can help mitigate youth migration in Ughelli South Local Government Area of Delta State

with grand mean score of 3.68 and standard deviation of 0.52 respectively.

Discussion of the Findings

The findings of the study from research questions showed that unemployment and underemployment, educational pursuits, political instability, insecurity and lack of basic infrastructures such as good roads, pipe borne water were the causes of youth migration. Other causes as revealed by the findings are lack of social amenities such as electricity, poverty, famine, search for better wage and better technology. These findings suggest that the movement of youths from rural to urban area or from Nigeria to other countries was due to the high rate of unemployment in Nigeria and

the fact is that these youths lack basic amenities in their communities. This is evident among youths in Ughelli South Local Government Area of Delta State despite the rich agricultural land. The findings support Zainab and Mustapha, (2021) assertions that absence of social amenities and poverty were the major causes of youth migration from rural to urban cities in Nigeria.

The findings also revealed that youth migration have numerous consequences. The findings suggest that migration of the youths often lead to brain-drain in the country. It was also revealed that reduction in farm size, reduction in hired labour, reduction in household income, reduction in family labour and low improvement in social amenities were the major consequences of youth migration in the study area. Also others consequences identified were fall in the standard of living of the people and low community development activities. This study implies that youth migration from rural to urban centre causes reduction in the size of farmland under cultivation, thereby reducing the household income. The number of family and hired labour are also reduced. These are all negative consequences on the farming communities in Delta State. This finding conform with Akande (2016), reports that reduction in farm size, hired and family labour and low improvement in social and community activities were the identified effects of youth migration in Nigeria.

The research findings on how agricultural education can mitigate youth migration in Ughelli South Local Government Area of Delta State indicate that the significance of imparting modern farming techniques through agricultural education. Equipping youths with knowledge in precision agriculture, organic farming, and technology integration emerges as a fundamental strategy (Ibe, 2019). This aligns with the idea that enhancing agricultural skills can make farming more attractive and economically viable for the youth thereby reducing the rate at which the youths migrate to other places in search for jobs. Also, agricultural education can foster an entrepreneurial mindset among the youths (Omonona & Adenegan, 2018). This finding supports the notion that viewing agriculture as a business can enhance its appeal to young individuals.

Conclusion
Youth migration had been a contending issue in Nigeria as people migrate because it is for their benefit. However, the study showed that youth migration has some negative effects on the rural areas where the migrants left. Migration of these active and agile youths may result in low standard of living and reduction in agricultural production. however, the study found that with agricultural education in place, the migration of the youths can be reducing as they will be exposed to various modern techniques in agriculture that can improve their standard of living since one of the major cause of migration of youths is poverty and lack of employment.

Recommendations
According to the findings from the study, it is suggested that:
1. Infrastructural development should be hastened in farming communities if the government intends to retain the youth and reduce migration of youths in rural areas in Nigeria.
2. The government should embark upon massive youth development programmes through agricultural education in all the states of the federation with skills acquisition.
3. The agricultural sector should be made more attractive to attract more youths in agriculture as this can help reduce youth migration in Nigeria.

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DISSONANCE REDUCTION STRATEGIES AND CUSTOMER PATRONAGE OF MADE IN NIGERIA GOODS

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Abstract
This study investigated the relationship between dissonance reduction strategies and customer patronage of made in Nigeria goods. Specifically, the objectives of the study were to determine the relationship between attitude change and behavior change relate with customer satisfaction and customer loyalty of made in Nigeria goods in Rivers State. The population for the study was one hundred and nineteen (119) manufacturing firms in Rivers State. A census approach was adopted in the determination of the respondents for this paper, questionnaire was distributed in the frame of 2 copies by firm bringing a total of 238 respondents for the study through questionnaire that was designed in the Likert scaake. Spearman Rank Order Correlation was used to test four hypotheses. From results of the analysis it was revealed that attitude change and behvaiour change which are the dimensions of dissonance reduction strategies positively and significantly relate with customer satisfaction customer loyalty. Based on these findings, it was concluded the relationship between dissonance reduction strategies and customer patronage of Made in Nigeria goods is a crucial factor influencing consumer behavior and loyalty. It was therefore recommended that Nigerian businesses should focus on developing and implementing dissonance reduction strategies that address the specific concerns and doubts customers may have when purchasing locally-made products. These strategies should include clear and transparent information about the products, quality assurances, and responsive customer support to alleviate post-purchase cognitive dissonance.

Keywords: Dissonance Reduction; Attitude; Behaviour; Patronage

Introduction
Most consumers purchase goods and services based on their past experiences and information from producers and sellers. Often, these consumers go through various stages from problem recognition, information search, alternatives evaluation, choice (decision) and post purchase evaluation. After a purchase, use and/consumption of a product or service, the consumer undertakes a post purchase evaluation in order to seek consistency in his/her beliefs and perceptions. So inconsistency or discrepancy occurs when one of these beliefs conflicts with another previously held referred to as 'cognitive dissonance'. The concept of consumer dissonance has captured the interest of many marketing and business researchers due to its explicit role in determining the success and failure of organizations. Consumers' motivation to satisfying their needs and wants begins with setting certain standards which lead them into evaluating every alternative. Therefore, consumer dissonance occurs when none of the alternatives meet the consumer's evaluation of the product. The major reason behind consumer dissonance is because customers are always looking for the best deal in the market that satisfies their preference and needs. In order to eliminate or reduce the discrepancy between beliefs and behaviours, he/she would seek to find out

the cause and take remedial measures. Business organizations especially in the service sector have important roles to play in curbing consumer dissonance and its negative effect on repeat purchase of their goods and services.

Dissonance reduction strategies hold significant relevance in understanding and influencing customer patronage of "Made in Nigeria" goods. The concept of cognitive dissonance, as proposed by Festinger (1957), is particularly evident in consumer behavior when individuals face conflicting thoughts about their purchase decisions. In the context of products originating in Nigeria, consumers may experience dissonance due to perceived risks associated with unfamiliar or domestically produced brands (Okonkwo, 2020). Understanding and effectively addressing this dissonance is crucial for fostering customer patronage.

Moreover, dissonance reduction strategies should extend beyond mere information provision. Building trust is paramount, as noted by Smith (2018). Businesses cultivating relationships based on trust and credibility are more likely to mitigate dissonance and secure customer loyalty. Offering after-sales support, reliable warranties, and consistent product quality contribute to an environment where consumers feel confident in their decision to patronize "Made in Nigeria" goods. Dissonance reduction strategies play a crucial role in shaping customer patronage within the realm of consumer behavior. As individuals navigate purchasing decisions, the cognitive discomfort arising from post-purchase dissonance necessitates the adoption of various strategies to mitigate conflicting thoughts and reinforce positive perceptions. Scholars argue that dissonance reduction is essential for cultivating customer loyalty (Smith, 2018). This introduction delves into the multifaceted landscape of dissonance reduction

strategies and their impact on fostering sustained customer patronage, shedding light on the intricate dynamics that influence consumer behavior in the marketplace.

Statement of Problem
The relationship between dissonance reduction and customer patronage of made in Nigeria goods is an important area of study in the field of consumer behavior. In the contemporary marketplace, consumers encounter cognitive dissonance as they navigate through purchasing decisions for locally-produced products. The inherent uncertainty and perceived risks associated with unfamiliar brands often lead to conflicting thoughts, influencing consumer behavior. While the importance of dissonance reduction strategies is acknowledged in the broader context of consumer behavior, there is a notable gap in understanding their specific implications for the patronage of Nigerian-made goods.

Patronage of locally made goods is often considered beneficial for the Nigerian economy, as it supports local industries, creates employment opportunities, and reduces dependence on imported goods. Understanding the relationship between dissonance reduction and customer patronage of made in Nigeria goods is crucial for policymakers, marketers, and researchers. By examining how consumers cope with dissonance and whether it influences their continued patronage of locally made products, valuable insights can be gained to enhance marketing strategies, improve product quality, and promote sustainable consumption patterns. According to Festinger's theory of cognitive dissonance, individuals strive to reduce dissonance by either changing their attitudes or beliefs to align with their behaviors (Festinger, 1957). Previous research has shown that there exist a relationship between cognitive dissonance and customer patronage but none has

actually carried out a study to properly investigate ways in which cognitive dissonance can be reduced in the context of made in Nigeria goods so as to enhance customer patronage, it is on this premise that the researcher decided to investigate the relationship between dissonance reduction strategies and customer patronage of made in Nigeria goods.

Conceptual Framework
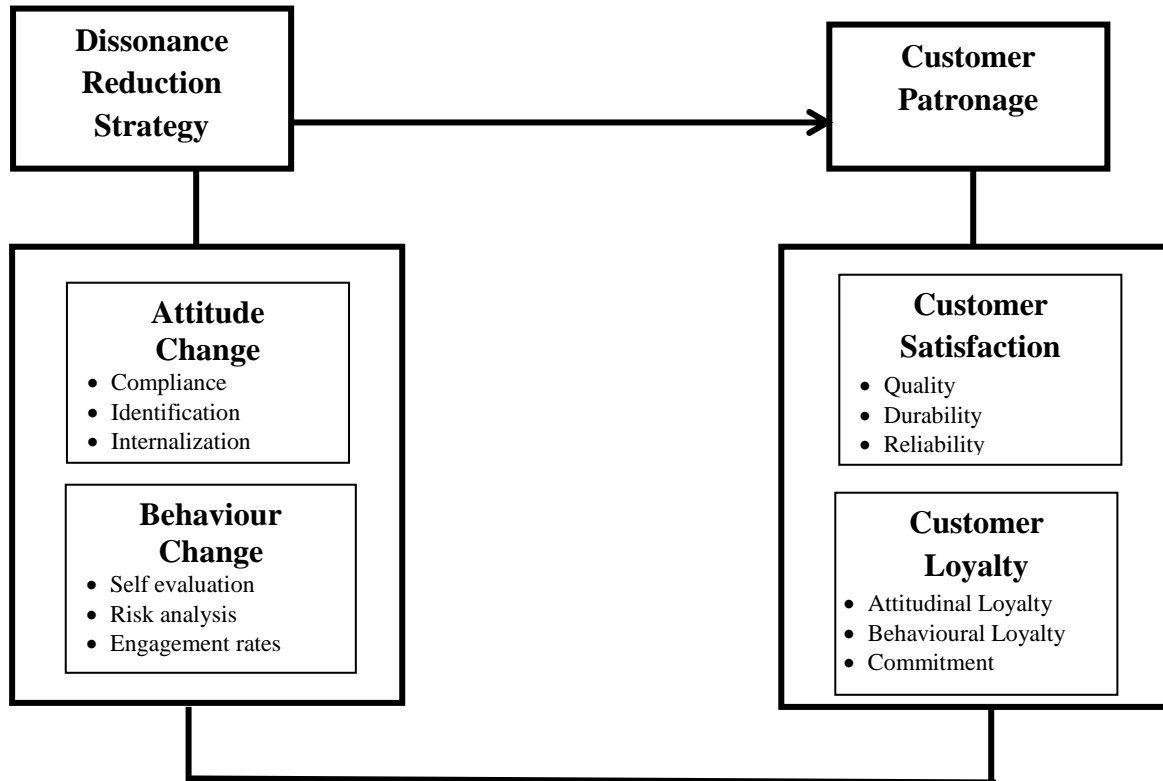
Figure 1.1: the conceptual framework the relationship between dissonance reduction strategy and patronage of made in Nigeria goods in Port Harcourt
Source: Christensen and Raynor (2013)

Aim and Objectives of the Study
The aim of this paper is to investigate the relationship between dissonance reduction strategies and customer patronage of made in Nigeria goods. The objectives of the paper are to:
1. examine how attitude change relates to customer satisfaction of made in Nigeria goods.
2. explain how attitude change relates to customer loyalty of made in Nigeria goods.

3. investigate how behaviour change relates to customer satisfaction of made in Nigeria goods.
4. ascertain how behaviour change relates to customer loyalty of made in Nigeria goods.

Research Questions
The research questions to guide the paper are:
1. What is the relationship between attitude change and customer satisfaction of made in Nigeria goods?

2. What is the relationship between attitude change and customer loyalty of made in Nigeria goods?
3. What is the relationship between behaviour change and customer satisfaction of made in Nigeria goods?
4. What is the relationship between behaviour change and customer loyalty of made in Nigeria goods?

Research Hypotheses
The following null hypotheses were tested to know the level of relationship between the variables:

H_{01}:   There is no significant relationship between attitude change and customer satisfaction of made in Nigeria goods.

H_{02}:   There is no significant relationship between attitude change and customer loyalty of made in Nigeria goods.

H_{03}:   There is no significant relationship between attitude change and customer satisfaction of made in Nigeria goods.

H_{04}:   There is no significant relationship between attitude change and customer loyalty of made in Nigeria goods.

Review of Related Literatures
Concept of Dissonance Reduction
The concept of dissonance reduction, rooted in Leon Festinger's seminal work, revolves around the cognitive discomfort individuals experience when confronted with conflicting beliefs, attitudes, or behaviors (Festinger, 1957). Cognitive dissonance theory posits that people are motivated to maintain internal consistency and coherence in their cognitions. When inconsistency arises, individuals are driven to alleviate the discomfort through various psychological mechanisms, collectively known as dissonance reduction strategies. Another strategy in dissonance reduction involves acquiring new information to support one's choices or behaviors. By seeking out positive aspects or justifications for a decision, individuals attempt to reconcile conflicting cognitions.

This is evident in consumer behavior, where post-purchase dissonance may lead individuals to actively search for positive reviews or information that reinforces their choice (Harmon-Jones & Mills, 1999).

Moreover, dissonance reduction strategies can extend to selective exposure, where individuals avoid information or situations that might intensify their cognitive dissonance. This avoidance mechanism serves to protect existing beliefs and maintain a more comfortable mental state (Festinger, 1957). In consumer contexts, individuals might steer clear of reviews or discussions that challenge their satisfaction with a recent purchase.

Dissonance Reduction Strategies
Attitude Change
When an individual is faced with dissonant cognitions the motivation to reduce the dissonance can lead to changing one of the dissonant cognitions. Attitude change is one way to achieve this and it is well documented in CDT research (Devine et al., 1999). Research has usually focused on engaging people in counter-attitudinal behaviour which has resulted in these individuals changing their attitude in order to resolve the inconsistency between behaviour and attitude (Devine et al., 1999). For example, usually when a consumer has to make referrals on behalf of a company in order to receive a bonus, the consumer increases their positive attitude towards the company (Kuester & Benkenstein 2014). Interestingly, if the bonus in exchange for the referral is significant, similar inflation of attitude cannot be identified. CDT can explain this phenomenon, because conducting counterattitudinal behaviour (recommending a company without sincerity) creates dissonance. The dissonance is greater when there is no substantial benefit to explain the inconsistency between the behaviour and attitude. Thus, in order to reduce the

dissonance after recommending a company without a heavy reason to do so, the consumer inflates their attitude towards the company and so inconsistency is resolved. Marketers can intuitively acknowledge that attitudes shape consumers' actions but this emphasizes that actions shape attitudes as well.

However, Tormala (2010) found in his research that the attitude inflation that is well documented in research, seems to be merely a bubble-like effect. After consumers made a decision between products the researchers had them read negative reviews and discovered that attitude change described as spreading of alternatives is more fragile to collapse after subsequent negative information then attitude after a low-dissonance decision. However, it cannot be assumed that the research findings have direct applications to real-life situations, since the research setting did not take into account that according to the cognitive dissonance theory the motivation to reduce dissonance entails avoiding dissonant cognitions (Brehm, 1956). Thus, if all the presumptions of CDT would have been taken into account, the consumers would have been given the chance to avoid reading the information that was consonant towards the cognition of having made a certain choice.

Behaviour Change
If the individual has cognitions of current or past behaviour that are dissonant with the individuals' attitudes, it is possible for the individual to change the behaviour in order to reduce dissonance. In the previous look into CDT research that had led to attitude change, the experiments often examined the consequences of irrevocable decisions i.e. behaviour that would not occur again (e.g. purchase decision (especially in a laboratory setting) or a challenging entry process for membership). However, research has also examined how

dissonance between attitude and reoccurring (and thus revocable) behaviour is reduced. In these examples change of subsequent behaviour is often the outcome (Priolo et al., 2019).

All in all, behaviour change is a straightforward dissonance reduction strategy that can be intuitively understood. Festinger used the example of quitting smoking to exemplify how behaviour change is a dissonance reduction strategy (1957). An individual quits smoking when their pro-health attitude is dissonant with the cognitions of their smoking behaviour. Another everyday example could be changing a carnivore diet to a vegetarian diet when anti meat and anti dairy industry cognitions are too dissonant with cognitions of one's purchasing behaviour which financially supports these very industries. However, as anyone can see, few things are as black and white as the previous examples. Active smokers can have an anti-smoking attitude and would not for example let their loved ones smoke. Or a dog owner that praises the intelligence of animals and condemns people who keep their pets in small apartments, at the same time financially supports industrial farming by consuming meat and dairy products. The following dissonance reduction strategies aim to shed light on these type of situations where dissonance is reduced only through perceptual and subjective change.

Concept of Customer Patronage
Patronage refers to the intentional act of repurchasing or reburying a firm's preferred products or services over a long period of time. It can also be a positive word of mouth advert from an existing customer to a potential customer. Furthermore, patronage could also mean a positive referred from a customer to the organization's product or services. Customer patronage is very important in today's competitive global business arena. Patronage refers to a passionate

commitment held by a customer to repurchase or rebuy a preferred product or service over and over again **(Bell**, & Smalley, **2015).** The central theme that customer patronage runs through is the amount of expenditure dedicated to a particular brand or store (Loyal customers help in promoting organization's business by providing positive word of mouth (WOM), creating positive business referrals, providing references and praising the organization as a result of the satisfaction they encountered. When a firm is consistent in their service delivery, the customers will have no choice than to remain with them and also make referrals on behalf of the firms. In other words, when a firm is losing customers, they are in turn loosing profits and referrals. And when the organizations do not take lightly their service recovery strategies, they tend to attract customers that will advertise them through positive word of mouth (WOM), which will heavily affect their customer-based and profit level.

Customers' patronage is the impulses desire and consideration within the customer or customers which include the purchasing of goods from a certain outlet (Levy, 2013). A formal definition of patronage is the power of appointing people to governmental or political positions and the positions so distributed (Webster's II New College Dictionary, 2005). Generally, the word patronage has a negative connotation that this straight-forward definition fails to convey. Patronage suggests the transgression of real or perceived boundaries of legitimate political influence, the violation of principles of merit and competition in civil service recruitment and promotion. Nonetheless, it is important to recognize that governments the world-over accept that some political appointments are fully legitimate. A small number of these appointments are justified as a means for political leaders to fashion a circle of

government policymakers and managers who share a common agenda. Patronage is clearly a problem, however, when these appointments pervade public administration, severely undermining merit principles. Somewhere between these two extremes the line between appropriate and inappropriate uses of patronage is.

Customer Satisfaction
Kotler and Armstrong (2013), define customer satisfaction as the extent to which a product's perceived performance matches a buyer's expectations. It is seen as a necessary condition for a company to long survive and to also generate loyal customers. According to Beard (2014), customer satisfaction plays an important role within a business. Not only is it the leading indicator to measure customer loyalty, identify unhappy customers, reduce customer's churn and increase revenue, it is also a key point of differentiation that helps to attract new customers in competitive environments. Also, Hoyer and Maclnnis (2001) also warned of severe consequences for not satisfying customers. According to them, dissatisfied consumers can: - Discontinue with the purchase of the good or service. - Complain to the company or to a third party and perhaps return the item. - Engage in negative word-of-mouth communication. Still in Beard (2014), Barbera and Marzursky (1983), observed that while satisfaction influences repurchase intensions, dissatisfaction brings about customer defection or discontinuation of purchase. What is more, Fornell (1992), Alabar (2012) in Balogun, et al., (2013) add that customer satisfaction holds the potential for increasing an organization's customer base, increases the use of more volatile customer mix and increases the firm reputation. It also assists in obtaining competitive advantage through intelligent identification and satisfaction of customer's needs better and sooner than competitors

and sustenance of customer satisfaction through better product/service.

Customer Loyalty

Customer loyalty is the state in which consumers adopt positive mindsets toward and put into action supportive behaviors toward a company or brand. The ultimate consequence of consistently positive emotional experience, significant attribute-based contentment, and professed value of an experience that includes the product or services is customer loyalty. The realization of customer loyalty is becoming more complex as a result of increased competition. Businesses work hard to keep clients as loyal as possible and avoid taking any steps that would allow competitors to seize these customers (Alhadid, 2015).

Customer loyalty has long been a hot topic in the corporate world (Leong et al. 2012), and recent study in the field of marketing (BOSE & RAO 2011) has demonstrated a growing interest in the topic (Kuusik, 2007). Loyalty is a strong belief in the value that a company offers, which over time results in more frequent purchases. According to Oracle Corporation (2005), loyalty is a favorable belief, generated over the course of multiple interactions, in the value that a company and its products or services provide, which leads to continued interactions and purchases over time. The particular components of loyalty, however, continue to be hotly debated in the business sector (Thompson, 2007).

Theoretical Foundation

The theory that underpinned this paper is the cognitive dissonance theory by Festinger, it will be explained below:

Cognitive Dissonance Theory by Leon Festinger

A little more than 60 years ago, Leon Festinger published A Theory of Cognitive Dissonance (1957). Festinger's theory of cognitive dissonance has been one of the most influential theories in social psychology (Jones, 1985). It has generated hundreds and hundreds of studies, from which much has been learned about the determinants of attitudes and beliefs, the internalization of values, the consequences of decisions, the effects of disagreement among persons, and other important psychological processes.

As presented by Festinger in 1957, dissonance theory began by postulating that pairs of cognitions (elements of knowledge) can be relevant or irrelevant to one another. If two cognitions are relevant to one another, they are either consonant or dissonant. Two cognitions are consonant if one follows from the other, and they are dissonant if the obverse (opposite) of one cognition follows from the other. The existence of dissonance, being psychologically uncomfortable, motivates the person to reduce the dissonance and leads to avoidance of information likely to increase the dissonance. The greater the magnitude of the dissonance, the greater is the pressure to reduce dissonance.

Empirical Review

In a study by Kuka and Jakada (2015), on the effect of cognitive dissonance on the marketing of fairly used cars in Nigeria, it was highlighted that the main effect of cognitive dissonance in the purchase of a fairly used car is the risk associated with the inconsistencies in the buyer's mind that often results in economic and psychological imbalances. These imbalances often lead to the demarketing of a product through negative word-of-mouth communication. Thus, the study recommended that marketers should seek to sell a product that satisfies the buyers' needs in order to facilitate repeat purchases. In doing so, it should be remembered that the sale is made only when the actual purchase is completed and marketers should continue to reinforce the buyers' attitudes about the product at all times. This practice helps to build

consumers' confidence and reduces the perceived risk of making a wrong purchase. It can also reduce the buyers post purchase dissonance and develop their trust on the marketer's product. Given the level of involvement of the purchase decision, some buyers may feel somewhat uncomfortable at some point after purchase especially if they identified some inconsistencies between the chosen car and the forgone alternatives. Therefore, there is a need for used car sellers to teach their customer-contact people how to resolve problems and diffuse customer anger. They should endeavour to import quality and environmental-friendly used cars into Nigeria in order to reduce the probability of dissonance.

Another study by Nadeem (2007) revealed that dissonance can be created by a retailer's sales staff, because the consumer may feel that he or she was persuaded into the purchase. On the other hand, a store sales staff can reduce dissonance by providing information and reassurance. Such positive support could assist consumers to decide to repurchase the same product at subsequent times. Not to be forgotten in a hurry is the incident which occurred in 2004, in which there was an uproar that the popular noodle brand Indomie was deadly as it had killed a consumer with several others ending up in hospital. This incident resulted in dissonance towards the brand. To remedy the situation, the National Agency for Food and drug Administration and Control (NAFDAC) tried to dispel the fear over the safety of the product by declaring it fit for human consumption after a series of laboratory tests which revealed that only three batches totalling about 360,000 packets of Indomie were actually contaminated by an acute toxic Carbofuran. Consequently, the then Director-General of NAFDAC, Late Prof. Dora Akunyili ordered an immediate recall of the affected batches of Indomie for destruction by the

agency (BNW, 2004). Also, the company's managing director had to eat the noodles during national news period in order to persuade consumers and eliminate their fears.

YuLun and Ching-Jui (2014) supports that despite the fact that people tend to expect intuitively that opinions guide other people's actions, Cognitive dissonance as one of action-opinion concepts, people's behaviors can lead to ensuing inspiration on individual opinions in addition to beliefs through validations that happens to preserve the truthfulness of perception of self or general worldview. He further asserted that, the level of dissonance, of course, can vary with the standing of the belief, attitude or principle and with the level of discrepancy among specific behavior and the belief. In whichever case, according to this perspective, the bigger the dissonance, the higher one gets motivated to resolve it. In addition, when consumers who are experiencing conflicting emotions and engaging in self-persuasion in a situation in which they feel cognitively dissonant, read about others' experiences and compare their own experiences, that may be more positive or negative than the consumer's own experiences, with the experiences of others, as a result of accessing that information their feelings and cognition might change; they might then, accordingly, change their word-of-mouth (WOM) messages about the product.

Methodology
This study adopted correlational research design. The population for this study comprised of all manufacturers of local manufacturers in Rivers State, primary data was gathered from the respondents for working on the selected study. Questionnaires were developed for collecting the relevant data from the respondents and all the questions were based on likert scale. The items were created by considering the prior researches.

Different measures were used to study each and every construct in the study. Targeted population for the study was one hundred and nineteen (119) manufacturing firms in Rivers State as sourced from www.directory.com. A census approach was adopted in the determination of the respondents for this paper, questionnaire will be distributed in the frame of 2 copies by firm bringing a total of 238 respondents for the study. Data gathered through convenience sampling. Cronbach's alpha and Composite Reliability (CR) used as reliability measures. The Spearman Rank Order Correlation Coefficient will be used to test the hypotheses stated with the help of Statistical Package for Social Sciences (SPSS) 23.0.

Data Analysis
Testing of Hypotheses
Research Question One: What is the relationship between attitude change and customer satisfaction of made in Nigeria goods?

Hypothesis One: There is no significant relationship between attitude change and customer satisfaction of made in Nigeria goods.

Table 1: relationship between attitude change and customer satisfaction of made in Nigeria goods.

			Attitude Change	Customer Satisfaction
Spearman's rho	Attitude Change	Correlation Coefficient	1.000	.880**
		Sig. (2-tailed)	.	.000
		N	238	238
	Customer Satisfaction	Correlation Coefficient	.880**	1.000
		Sig. (2-tailed)	.000	.
		N	238	238
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: SPSS output, 2023.

The SPSS output on Table 1 shows that a Spearman's Correlation was run to assess the relationship between attitude change and customer satisfaction of made in Nigeria goods in Rivers State. The strength and direction of the relationship between the variables are indicated by the Spearman's rho which is 0.880. This means there is a very strong and positive relationship between attitude change and customer satisfaction. Furthermore, significance of the relationship is shown by the probability value which is 0.000 less than the threshold of 0.05 indicating that the relationship between the variables is statistically significant. In other words, there is a very strong, positive and statistically significant relationship between attitude change and customer satisfaction of made in Nigeria goods in Rivers State (rho = 0.880, N = 238, $p = 0.000 < 0.05$).

Research Question Two: What is the relationship between attitude change and customer loyalty of made in Nigeria goods?

Hypothesis Two: There is no significant relationship between attitude change and customer loyalty of made in Nigeria goods.

Table 2: relationship between attitude change and customer loyalty of made in Nigeria goods.

			Attitude Change	Customer Loyalty
Spearman's rho	Attitude	Correlation Coefficient	1.000	.593**
	Change	Sig. (2-tailed)	.	.000
		N	238	238
	Customer	Correlation Coefficient	.593**	1.000
	Loyalty	Sig. (2-tailed)	.000	.
		N	238	238
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: SPSS output, 2023.

The SPSS output on Table 2 shows that a Spearman's Correlation was run to assess the relationship between attitude change and customer loyalty of made in Nigeria goods in Rivers State. The strength and direction of the relationship between the variables are indicated by the Spearman's rho which is 0.593. This means there is a moderate and positive relationship between attitude change and customer loyalty. Furthermore, significance of the relationship is shown by the probability value which is 0.000 less than the threshold of 0.05 indicating that the relationship between the variables is statistically significant. In other words, there is a moderate, positive and statistically significant relationship between attitude change and customer loyalty of made in Nigeria goods in Rivers State (rho = 0.593, N = 238, $p = 0.000 < 0.05$).

Research Question Three: What is the relationship between behaviour change and customer satisfaction of made in Nigeria goods?

Hypothesis Three: There is no significant relationship between behaviour change and customer satisfaction of made in Nigeria goods.

Table 3: relationship between behaviour change and customer satisfaction of made in Nigeria goods.

			Behavior Change	Customer Satisfaction
Spearman's rho	Behaviour	Correlation Coefficient	1.000	.724**
	Change	Sig. (2-tailed)	.	.000
		N	238	238
	Customer Satisfaction	Correlation Coefficient	.724**	1.000
		Sig. (2-tailed)	.000	.
		N	238	238
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: SPSS output, 2023.

The SPSS output on Table 3 shows that a Spearman's Correlation was run to assess the relationship between behaviour change and customer satisfaction of made in Nigeria goods in Rivers State. The strength and direction of the relationship between the variables are indicated by the Spearman's rho which is 0.724. This means there is a strong and positive relationship between behaviour change and customer satisfaction. Furthermore, significance of the relationship is shown by the probability value which is 0.000 less than the threshold of 0.05 indicating that the relationship between the variables is statistically significant. In other words, there is a strong, positive and statistically significant relationship between behaviour change and customer satisfaction of made in Nigeria goods in Rivers State (rho = 0.724, N = 238, $p = 0.000 < 0.05$).

Research Question Four: What is the relationship between behaviour change and customer loyalty of made in Nigeria goods?

Hypothesis Four: There is no significant relationship between behaviour change and customer loyalty of made in Nigeria goods.

Table 4: relationship between behaviour change and customer loyalty of made in Nigeria goods.

			Behavior Change	Customer Loyalty
Spearman's rho	Behaviour Change	Correlation Coefficient	1.000	.924**
		Sig. (2-tailed)	.	.000
		N	238	238
	Customer Loyalty	Correlation Coefficient	.924**	1.000
		Sig. (2-tailed)	.000	.
		N	238	238
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: SPSS output, 2023.

The SPSS output on Table 3 shows that a Spearman's Correlation was run to assess the relationship between behaviour change and customer loyalty of made in Nigeria goods in Rivers State. The strength and direction of the relationship between the variables are indicated by the Spearman's rho which is 0.924. This means there is a very strong and positive relationship between behaviour change and customer loyalty. Furthermore, significance of the relationship is shown by the probability value which is 0.000 less than the threshold of 0.05 indicating that the relationship between the variables is statistically significant. In other words, there is a very strong, positive and statistically significant relationship between behaviour change and customer loyalty of made in Nigeria goods in Rivers State (rho = 0.924, N = 238, $p = 0.000 < 0.05$).

Conclusion
Cognitive dissonance is caused by a discrepancy between the outcome of a behavioural act and the standard to which it is compared. When customers feel abandoned, cognitive dissonance surfaces and repeat sales decline. Today this issue is more pertinent than ever because customers are far less loyal to brands and sellers than in the past, because buyers are more inclined to look for the best deal, especially in the case of poor after-the-sale follow-up. More and more buyers favour building relationships with sellers. It is unlikely that

dissonance can ever be totally avoided, but where the elements creating the dissonance are relatively unimportant, the pressure to correct them will be low.

Recommendations

Based on the research findings and analysis, the following recommendations are made:

- Nigerian businesses should focus on developing and implementing dissonance reduction strategies that address the specific concerns and doubts customers may have when purchasing locally-made products. These strategies should include clear and transparent information about the products, quality assurances, and responsive customer support to alleviate post-purchase cognitive dissonance.
- Emphasize the quality and authenticity of Made in Nigeria goods through branding and marketing efforts. Highlight the unique features and benefits of these products to reduce perceived risks associated with them.
- Invest in building a strong reputation for reliability and consistency in delivering quality products. Customer reviews and testimonials can play a significant role in establishing trust.
- Develop campaigns and educational materials that inform consumers about the value of supporting local industries and the positive impact of their patronage on the Nigerian economy. Educated consumers are more likely to support local products.

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EMOTIONAL BRANDING AND CONSUMER PURCHASE BEHAVIOUR OF FASHION FIRMS IN PORT HARCOURT

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Abstract
This study examined the relationship between emotional branding and consumer purchase behaviour of fashion firms in Port Harcourt. The research design adopted was correlational research design because the study involved the investigation of relationship between two variables. The population in the study was infinite. A sample size of 384 was drawn using Krejcie & Morgan sample size determination table. However, only 372 respondents provided information for the study. Structured questionnaire and the hypotheses were tested using Pearson Product Moment Correlation. The finding show that brand authenticity and brand personality have positive and significant relationship with impulsive purchase behaviour and routine purchase behaviour. All the proxies for emotional branding have a positive effect on measures of consumer purchase behaviour. It was concluded that emotional branding significantly impacts consumer purchase behaviour of fashion firms in Port Harcourt. When brands establish an emotional connection with consumers, it can lead to increased brand loyalty, positive word-of-mouth, and higher engagement. It was therefore recommended amongst others that fashion firms should investigate the specific emotions that resonate most with the target audience of fashion brands. Analyze how emotions like nostalgia, aspiration, or self-expression influence consumers' attachment to the brand and their purchase decisions.

Keywords: Emotional branding, purchase behaviour, brand authenticity

Introduction
Emotional branding plays a pivotal role in influencing consumer purchase behavior within the realm of fashion firms. As consumers increasingly seek meaningful connections with brands, emotional elements in branding become integral for establishing and maintaining a strong consumer-brand relationship (Smith & Wheeler, 2018). The emotional resonance created by fashion firms goes beyond mere product attributes, tapping into the deeper realms of consumer sentiment and identity. This connection not only influences immediate purchase decisions but also fosters long-term brand loyalty (Kapferer, 2012).

Emotional branding can significantly influence consumer purchase behavior in the context of fashion firms. When fashion brands effectively evoke emotions and create a strong emotional connection with consumers, it can lead to increased brand loyalty, positive brand associations, and a willingness to pay premium prices. This emotional connection often stems from aligning the brand's values, storytelling, and imagery with the target audience's emotions and aspirations. Research in this area suggests that emotional branding strategies can lead to higher customer engagement, repeat purchases, and a competitive edge in the fashion industry.

A potential research gap in the study of emotional branding and consumer behaviour of fashion firms in Port Harcourt could be the exploration of how cultural factors influence the effectiveness of emotional branding strategies. Investigating how cultural values, norms, and societal contexts impact the way consumers respond to emotional appeals could provide valuable insights. This research could delve into whether emotional branding messages need to be adapted to suit different cultural backgrounds and how cultural sensitivity impacts consumer perceptions and behaviors. Additionally, there might be an opportunity to study the long-term effects of emotional branding, examining how sustained emotional connections influence consumer loyalty and advocacy over extended periods.

Statement of the Problem

The research problem addressed in this study is to understand the extent and nature of the relationship between emotional branding and consumer purchase behaviour of fashion firms in Port Harcourt. While prior research has established a positive correlation between emotional branding and consumer behavior, there is a need to delve deeper into the specific mechanisms through which emotional branding influences purchase decisions especially among the fashion firms in Port Harcourt.

The strategies of emotional marketing help companies differentiate themselves in a challenging environment. It is very influential, because it pushes the audience to think and act differently. Most often it taps into the audiences' dreams and desires. Emotions are complex and they have developed through the years, adapting to the changing social environment. According to Bowman (2018, para 2), If you want to turn casual customers into more powerful brand ambassadors, you need to give them a compelling, emotional reason to invest in your brand. Emotional marketing thus serves the purpose of connecting with the disillusioned customer in a more fruitful way and the imprints are more permanent on a customer's mind. Definitely, it makes the brand sustainable in the customer's mind. This study aims to explore how emotional branding strategies, such as storytelling, brand personality, and values alignment, relate with various stages of the consumer purchase process, from initial awareness to post-purchase behavior. By examining this relationship in detail, the research seeks to provide insights into the nuances of emotional branding's effects on consumer choices, with the ultimate goal of assisting businesses in crafting more effective branding strategies that resonate with their target audience's emotions and drive purchase behavior.

Conceptual Framework
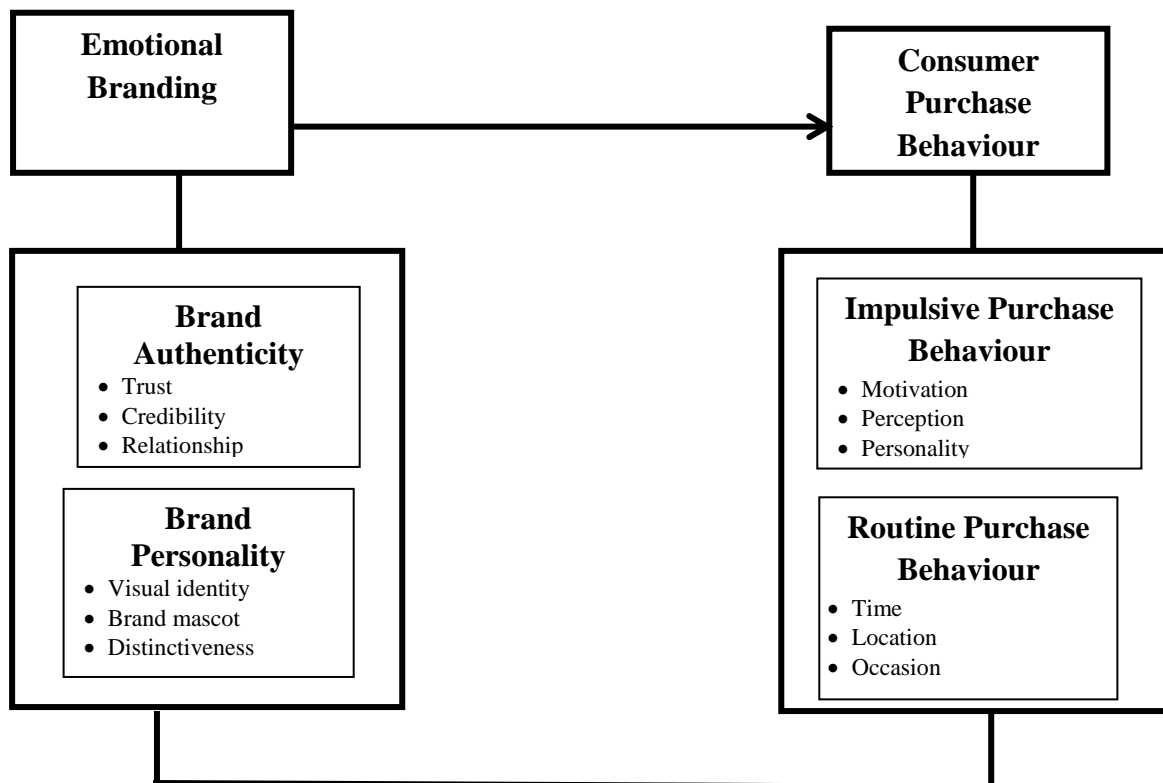
Figure 1.1: the conceptual framework the relationship between emotional branding and consumer purchase behaviour of fashions firms in Port Harcourt
Source: Pierre, Haythem & Dwight (2011).

Aim and Objectives of the Study
The aim of the study is to investigate the relationship between emotional branding and consumer purchase behaviour of fashion firms in Port Harcourt. The objectives of the paper are to:
1. determine the relationship between brand authenticity and impulsive purchase behavior of fashion firms in Port Harcourt.
2. ascertain the relationship between brand authenticity and routine purchase behavior of fashion firms in Port Harcourt.
3. define the relationship between brand personality and impulsive purchase behavior of fashion firms in Port Harcourt.

4. assess the relationship between brand personality and routine purchase behavior of fashion firms in Port Harcourt.

Research Questions
The paper was guided by the following research questions:
1. What is the relationship between brand authenticity and impulsive purchase behavior of fashion firms in Port Harcourt?
2. What is the relationship between brand authenticity and routine purchase behavior of fashion firms in Port Harcourt?
3. What is the relationship between brand personality and impulsive

purchase behavior of fashion firms in Port Harcourt?

4. What is the relationship between brand personality and routine purchase behavior of fashion firms in Port Harcourt?

Research Hypotheses

The following hypotheses were tested using 0.05 Alpha level of significance:

H_{01}: There is no significant relationship between brand authenticity and impulsive purchase behaviour of fashion firms in Port Harcourt.

H_{02}: There is no significant relationship between brand authenticity and routine purchase behaviour of fashion firms in Port Harcourt.

H_{03}: There is no significant relationship between brand personality and impulsive purchase behaviour of fashion firms in Port Harcourt.

H_{04}: There is no significant relationship between brand personality and routine purchase behaviour of fashion firms in Port Harcourt.

Review of Related Literatures
Concept of Emotional Branding

Emotional branding is a multifaceted marketing strategy that centers on creating deep and meaningful connections between a brand and its consumers by tapping into emotional elements (Smith & Wheeler, 2018). Unlike traditional marketing approaches that focus solely on product features, emotional branding recognizes the power of emotions in shaping consumer perceptions, preferences, and loyalty. It involves the strategic incorporation of emotional elements in brand communication, positioning, and overall brand experience to resonate with consumers on a more personal and profound level.

The core concept of emotional branding revolves around the idea that consumers are not only rational decision-makers but are also driven by emotions in their purchasing behavior (Kapferer, 2012). Emotions play a pivotal role in influencing how consumers perceive and connect with a brand. Whether it's joy, nostalgia, excitement, or a sense of belonging, these emotions become integral components of the brand identity. This emotional resonance creates a unique and memorable brand experience, setting it apart from competitors and fostering a stronger bond with consumers. One key aspect of emotional branding is the emphasis on storytelling. Brands craft narratives that go beyond product specifications, weaving stories that evoke emotions and resonate with the target audience (Smith & Wheeler, 2018). These narratives often align with consumers' values, aspirations, and lifestyles, creating a sense of connection and relatability. For example, a fashion brand might tell a story of sustainability, ethical practices, or empowerment, aiming to forge an emotional link with consumers who share these values.

Brand Personality

For decades, brand personality has been acknowledged as a crucial area of study. Researchers have given brand personality a lot of attention, although some have questioned its conceptual, methodological, and substantive aspects. There is ongoing debate regarding the definition of brand personality as a conceptual framework and how it differs from brand image and users' image (Aaker & Fournier, 1995). The human traits connected to a particular brand are referred to as its brand personality (Aaker, 1997). Sweeney and Brandon (2006) defined brand personality as the collection of human personality traits that are significant to describing the brand as a relationship partner and relate to the interpersonal domain of human personality (Wang, et al., 2009).

The concept's methodological aspect has to do with how brand personality is measured.

Big-Five personality scale is frequently used as an integrative and quantifiable framework. According to the Big-Five paradigm (Golberg, 1990 and Azoulay & Kapferer, 2003), there are five dimensions: openness, conscientiousness, extraversion, agreeableness, and neuroticism. Additionally, Aaker (1997) created a scale with five components: honesty, excitement, competence, sophistication, and ruggedness.

Concept Consumer Purchase Behaviour

Consumer buying behaviour signifies more than just the approach of consumer towards buying a product. Marketing efforts therefore also emphasize on consumer's consumption of services, ideas and activities. The manner in which consumer buys a product is extremely important to marketers. It involves understanding a set of decisions (what, why, when, how much and how often) that the consumer makes over the time. This research scrutinizes consumer behaviour in a wider perspective and highlights its dependency on the most popular jewellery segments. It proceeds in two directions where the consumers and jewellers move parallel and also highlights traditional as well as branded jewellers and jewellery market of Jaipur.

In general terms Consumer is a person who consumes, especially an individual belonging to a particular gender, age, sex, religion etc. and who acquires goods or services for direct use or ownership rather than for resale or use in production and manufacturing. In other words, it can be said that the Consumer is an individual who buys products or services for personal use and not for resale or reproduce. A consumer is an important person who can make the decision to purchase an item from a particular store, and can be swayed by marketing and advertisements.

Impulsive Purchase behaviour

Impulsive purchase behavior is a phenomenon characterized by spontaneous, unplanned, and often emotionally-driven buying decisions. This consumer behavior deviates from the more deliberate and rational decision-making processes and is influenced by various psychological and situational factors. Understanding the concept of impulsive buying is essential for businesses aiming to capitalize on these spontaneous tendencies and tailor their marketing strategies accordingly. One key aspect influencing impulsive purchase behavior is the role of emotions. Emotions, such as excitement, curiosity, or the desire for instant gratification, play a significant role in impulsive buying decisions (Verhagen, Wiggers, & Donkers, 2015). The surge of positive emotions triggered by a product or a promotional offer can lead consumers to make on-the-spot purchases, driven by the desire to experience immediate pleasure or relief. Marketers often leverage emotional appeals and create a sense of urgency to tap into these impulsive tendencies.

Another contributing factor is the influence of situational and environmental cues. Impulsive buying is often heightened in certain contexts, such as in-store promotions, sales events, or during periods of heightened emotional arousal (Rook, 1987). Limited-time offers, attractive displays, and the availability of products in proximity to checkout counters are common strategies employed by retailers to capitalize on impulsive tendencies. Understanding these environmental triggers is crucial for businesses looking to optimize their retail layouts and promotional efforts.

Routine response behaviour

Routine purchase behavior is a type of consumer decision-making process characterized by low involvement and minimal cognitive effort. In contrast to more complex decision-making scenarios,

routine purchases involve regularly buying familiar products with little consideration or evaluation. This behavior is often associated with everyday items or frequently purchased goods where consumers develop habitual buying patterns (Solomon et al., 2019). The concept of routine purchase behavior is closely tied to the model of consumer decision-making stages. In the context of routine purchases, consumers typically engage in a simplified decision-making process that consists of problem recognition, information search (which may be minimal or non-existent), evaluation of alternatives (often involving habitual choices), and the actual purchase (Solomon et al., 2019). The post-purchase evaluation phase is usually brief or even absent, given the habitual nature of these transactions.

Theoretical Framework
The theories that underpin this paper is the theory of buyer behaviour. The theories are discussed under the following heading:

Theory of buyer behaviour
The Theory of Buyer Behaviour Howard developed the first consumer decision-model in 1963 (Du Plessis, Rousseau et al. 1991). This model was developed further in 1969 by Howard and Sheth to become the 'Theory of Buyer Behaviour' (or Howard & Sheth Model) (Howard and Sheth 1969). It provides a sophisticated integration of the various social, psychological and marketing influences on consumer choice into a coherent sequence of information processing (Foxall 1990).

Input variables are the environmental stimuli that the consumer is subjected to, and is communicated from a variety of sources. Significant stimuli are actual elements of products and brands that the buyer confronts (Loudon & Della Bitta 1993), while symbolic stimuli refers to the representations of products and brands as constructed by marketers through advertising and act on the consumer indirectly (Howard & Sheth 1969). Social stimuli include the influence of family and other peer and reference groups. The influence of such stimuli is internalised by the consumer before they affect the decision process.

Empirical Review
Kshitiz and Pratyusha (2022) carried out a research work on emotional marketing on consumer behaviour. This paper was about how emotional marketing affects consumer behaviour and how emotions will affect the decision-making process of the consumers. To know the consumers' response to different kinds of emotions, 150 samples were collected randomly using a questionnaire. The questions included how emotions affect them in various situations, which type of emotions they feel often, and how they feel after purchasing a product. According to the estimated results, it was found that emotions play a major role in consumer behaviour; further, it depends on their current mood and past experiences. Though it was proved that emotions affect consumer behaviour, it was completely subjective in nature as every individual has a variety of emotions based on their experiences in life. It is practically not possible to satisfy every customer's emotional needs. Future research can focus on various emotions and the behavioural aspects that can have an impact, and a cross-sectional study can be conducted. Rather than depending on the consumer mindset at the time of buying, it would better to influence consumers' emotions using advertisements and brand image.

Reisenzein and Hofmann (1990) investigated the dimensions of cognitive appraisal in choice the usage of the repertory grid method. Studies with 44 university college students examined dimensions of cognitive value determinations in desire. In test 1, a simplified model of the repertory grid method was used to decide dimensions of

appraisal perceived as salient thru the use of the Ss. Proof turned into acquired for as a minimum 10 ability dimensions of cognitive appraisal; those associated with valence, causality/employer business enterprise, social dating factors, and temporal additives had been stated most often. Regardless of the reality that everyone dimensions have been similar to appraisal dimensions postulated via manner of preceding investigators, some of them have first-class been given marginal hobby; several proposed dimensions had been no longer supported. Have a look at 2 installed and similarly clarified the appraisal dimensions endorsed with the aid of manner of the use of have a have a observe 1.

Yih, et al. (2019) studied preference as a way: Appraisal, choice, and coping styles in the course of time. The literature on preference, pressure, and coping have no longer started out to merge and foster an information of version, from cognitive appraisal to desire to coping. Right here we tested relationships amongst the one's constructs in the course of a college semester. In have a look at 1, they surveyed 89 college students on their fee determinations and picks earlier than and after assessments in an introductory chemistry path. Perceived problem turns out to be greater earlier than checks, while accommodative coping capability changed into greater after receiving examination grades. In parallel with those changes in appraisal, fluctuations in task/willpower, tranquillity, and anxiety/fear occurred all through time. They extended those findings in observe 2 thru additionally assessing coping among 119 university students in an introductory psychology route. Willpower correlated with using rendezvous-associated coping techniques, even as sadness/resignation changed into related to reduced rendezvous-related coping. The winning studies clarify how appraisal, choice, and coping unfold and relate to

each specific in the course of time, at the same time as additionally supplying particular profiles of appraisal and coping for extraordinary horrible and excessive fine options.

Methodology
This study adopts correlational survey research. This research design was chosen because the study was designed to elicit the relationship between the variables understudy. The consumers who patronize the top ten (10) fashion firms (source: www.port-harcourt.infoisinfo.ng) in Port Harcourt constituted the population of the study. The target population of the study is infinite (Unknown). Since the population of the study is infinite, Krejcie and Morgan, (1970) posited that when a population of a given study is above 1000000 a sample size of 384 can be used. The sample size of this study was taken as 384 consumers. Thus, there is no application of any statistical formula in the determination of the sampling size. Sample refers to a subset of the population that the researcher wants to study (Field, 2005) therefore, the sampling technique that was adopted in this study is the simple random sampling. This enabled every consumer equal chance of being selected to participate in the study. A questionnaire was designed by the researcher based on the sexual advertising dimensions identified in earlier researches. The instrument was further subjected to reliability using Cronbach alpha to obtain a reliability index of 0.82 and 0.86 for section A and B, with average index of 0.84 which shows that the instrument is reliable based on data collected from 10 fashion brand customers from Port Harcourt. Data collected for the study were analyzed using descriptive statistics of mean and grand mean to answer research questions. Pearson Product Moment Correlation (PPMC) was used to test hypotheses 1 to 3 with the aid of the Statistical Package for Social Science (version 23).

Data Analysis

384 copies of the questionnaire was produced and distributed by the researcher in order to elicit information from the customers of the selected fashion firms in Port Harcourt. However, only 372 properly filled and returned their questionnaire, hence, 372 responses was coded and used for the analysis of this paper.

Table 1 Gender Distribution of Respondent

Gender	Number	Percentage
Male	174	46.8
Female	198	53.2
Total	372	100.0

Source: Research Survey (2022)

From the above table 1 it is identified that the study respondents are composed of 174 male respondents, which represents 46.8% of sample size and 198 female respondents which represents 53.2% of sample size. A significant gender disparity is observed, but this disparity is minimal as no gender falls below 40% representation. But overall, the study observed more female respondents than male respondent.

Table 2   Age Distribution of Respondents

Age	Number	Percentage
≤25 Years Old	21	5.65
26 –35 Years Old	103	27.69
36 – 45 Years Old	160	43.0
46–55 Years Old	56	15.1
56– 65 Years Old	20	5.4
≥66 Years Old	12	3.2
Total	**372**	**100.0**

Source: Research Survey (2023)

From Table 2 above, it is able to be visible that, of the 372 sample respondents, 21 respondents, representing 5.65% of general samples have been located to be between the age variety of 25 years or below. While 103 respondents, who represent 27.69% of the respondents are between the ages of 26 to 35 years. 160 respondents who are among the age variety of 36 to 45 years. 56 respondents have been visible to be among the age bracket of 46 to 55 years, as 20 respondents have been visible to be among the age group of 56 to 65 years, whilst simplest 12 respondents have been between the age of 66 years and above. Overall, the research showd that respondents are largely among the age of 26 to 45 or younger, which indicates a very younger respondents.

Testing of Hypotheses

Hypothesis One: There is no significant relationship between brand authenticity and impulsive purchase behaviour of fashion firms in Port Harcourt

Table 3: Summary of statistics on the relationship between brand authenticity and impulsive purchase behaviour of fashion firms in Port Harcourt

Correlations

		Brand Authenticity	Impulsive Purchase Behaviour
Brand Authenticity	Pearson Correlation	1	.956**
	Sig. (2-tailed)		.000
	N	372	372
Impulsive Purchase Behaviour	Pearson Correlation	.956**	1
	Sig. (2-tailed)	.000	
	N	372	372

**. Correlation is significant at the 0.01 level (2-tailed).

The result from Table 3 shows the summary of correlation on the relationship brand authenticity and impulsive purchase behaviour of fashion firms in Port Harcourt. It shows that brand authenticity has significant relationship with impulsive purchase behaviour of fashion firms in Port Harcourt. The R-value of 0.956 shows a very strong relationship between brand authenticity and impulsive purchase behaviour of fashion firms in Port Harcourt (r= 0.956, p=.000). The null hypothesis one was therefore rejected at .05 level of significance.

Research Question Two: What is the relationship between brand authenticity and routine purchase behavior of fashion firms in Port Harcourt?

Hypothesis Two: There is no significant relationship between brand authenticity and routine purchase behaviour of fashion firms in Port Harcourt.

Table 4: Summary of statistics on the relationship between brand authenticity and routine purchase behaviour of fashion firms in Port Harcourt

Correlations

		Brand Authenticity	Routine Purchase Behaviour
Brand Authenticity	Pearson Correlation	1	.862**
	Sig. (2-tailed)		.000
	N	372	372
Routine Purchase Behaviour	Pearson Correlation	.862**	1
	Sig. (2-tailed)	.000	
	N	372	372

**. Correlation is significant at the 0.01 level (2-tailed).

The result from Table 4 shows the summary of correlation on the relationship between brand authenticity and routine purchase behaviour of fashion firms in Port Harcourt. It shows that brand authenticity has significant relationship with routine purchase behaviour of fashion firms in Port Harcourt. The R-value of 0.862 shows a very strong relationship between brand authenticity and routine purchase behaviour of fashion firms in Port Harcourt and significant (r= 0.862, p=.000). The null hypothesis two was therefore rejected at .05 level of significance.

Hypothesis Three: There is no significant relationship between brand personality and

impulsive purchase behaviour of fashion firms in Port Harcourt.

Table 5: Summary of statistics on the relationship between brand personality and impulsive purchase behaviour of fashion firms in Port Harcourt

Correlations

		Brand Personality	Impulsive Purchase Behaviour
Brand Personality	Pearson Correlation	1	.416**
	Sig. (2-tailed)		.000
	N	372	372
Impulsive Purchase Behaviour	Pearson Correlation	.416**	1
	Sig. (2-tailed)	.000	
	N	372	372

**. Correlation is significant at the 0.01 level (2-tailed).

The result from Table 5 shows the summary of correlation on the relationship between brand personality and impulsive purchase behaviour of fashion firms in Port Harcourt. It shows that brand personality has significant relationship with impulsive purchase behaviour of fashion firms in Port Harcourt. The R-value of 0.416 shows a moderately strong relationship between brand personality and impulsive purchase
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behaviour of fashion firms in Port Harcourt (r= 0.416, p=.000). The null hypothesis three was therefore rejected at .05 level of significance.

Hypothesis Four: There is no significant relationship between brand personality and routine purchase behaviour of fashion firms in Port Harcourt

Table 6: Summary of statistics on the relationship between brand personality and routine purchase behaviour of fashion firms in Port Harcourt.

Correlations

		Brand Personality	Routine Purchase Behaviour
Brand Personality	Pearson Correlation	1	.668**
	Sig. (2-tailed)		.000
	N	372	372
Routine Purchase Behaviour	Pearson Correlation	.668**	1
	Sig. (2-tailed)	.000	
	N	372	372

**. Correlation is significant at the 0.01 level (2-tailed).

The result from Table 6 shows the summary of correlation on the relationship between brand personality and routine purchase behaviour of fashion firms in Port Harcourt. It shows that brand personality has significant relationship with routine purchase behaviour of fashion firms in Port

Harcourt. The R-value of 0.668 shows a strong relationship between brand personality and routine purchase behaviour of fashion firms in Port Harcourt and significant (r= 0.668, p=.000). The null hypothesis four was therefore rejected at .05 level of significance.

Conclusion

Emotions affect consumers in various ways from the moment when a consumer thinks of the need for a particular product, does research related to it, buying a product, and finally, the post-purchase behaviour. All these depend on the emotions that the consumer carries towards a particular brand. It was evident that people show more interest in buying those products whose manufacturers or organisations have corporate social responsibility, hoping that the particular brand's products and services could be beneficial to both consumers and the society. Post-consumption behaviour is also the result of the emotions that consumers carry throughout the process of buying. Only customer satisfaction could bring positive emotions in consumers, resulting in positive behaviour, mostly in the form of word-of-mouth. To touch consumers' emotions, marketers need to select the correct target market by conducting proper market research, as it would help both the brand and the consumers. Trust is the emotion that consumers show towards a brand, and it is the reason why people prefer only that particular brand over time. Marketers should be careful while incorporating these emotions, as negative emotions will impact consumers more strongly and result in bad publicity through word-of-mouth. In conclusion, emotional branding significantly impacts consumer purchase behaviour of fashion firms in Port Harcourt. When brands establish an emotional connection with consumers, it can lead to increased brand loyalty, positive word-of-mouth, and higher engagement. Emotional branding triggers feelings that create memorable experiences, fostering a sense of identity and personal connection.

Recommendations

Following the findings of the analysis, here are some precise recommendations for fashion brands in Port Harcourt:

- Investigate the specific emotions that resonate most with the target audience of fashion brands. Analyze how emotions like nostalgia, aspiration, or self-expression influence consumers' attachment to the brand and their purchase decisions.
- Examine the consistency of emotional branding across various touchpoints, including advertisements, social media, and in-store experiences. Assess how a cohesive emotional narrative enhances consumer trust and loyalty.
- Recognize the cultural nuances that shape emotional responses. Research how cultural differences influence the emotional connection consumers feel towards fashion brands and tailor emotional strategies accordingly.
- Evaluate the effectiveness of storytelling in conveying brand emotions. Investigate how narrative elements in marketing campaigns influence consumer perceptions and willingness to make purchases.

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THE ROLE OF EMPLOYEE MOTIVATION, AND COLLECTIVE BARGAINING IN POST COVID-19 PUBLIC SECTOR PRODUCTIVITY IN NIGERIA.

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Abstract

This research work is carried out to investigate the relationship between employee motivation and collective bargaining in public sector productivity. Using simple random sampling, a sample size of 130 was drawn from the 200 nursing staff of the nursing directorate. Using the table of random numbers, A stratified random sample of 200 staff comprising of all the staff of the directorate of nursing services was drawn from the 600 personnel of the Ministry of Health, Bayelsa State Civil Service. Multiple regression statistical technique was used for analysis with SPSS to test tenability of each postulated null hypothesis at 0.05 alpha. Results showed significant correlation and prediction of public sector productivity with the predictor variables; accounting for the variance in productivity and performance. Thus, employee motivation and collective bargaining could contribute in boosting the performance and productivity of the public sector.

Keywords: Employee motivation, collective bargaining, multiple prediction design, public sector productivity.

Introduction

It has become increasingly uncommon to find a health worker who will not have one complaints or the other to render as regard the nature of work, or condition of service and welfare, making them to have more personal reservation to the nature of their work. They are either traumatised by the fear of diseases, or afraid of the infection as a result of the death of a loved one due to one disease ailment. This stigma has lead to reduction in their productivity in general, and has necessitated this research work. Public sector and corporations had their fair share of the problem which has resulted to loss of jobs and reduction of work force. The growth and development of a country's economy is centered on the efficient utilisation of its scarce resources (human and material) as these natural resources are called factors of production by simple economics, they includes, land, labour capital and entrepreneur, these factors must be managed effectively and efficiently by the entrepreneur. Given the natural resources that are available for man to utilize, the level of production obtained is going to be achieved by how much the personnel put in, thus the skills and welfare of labour that is going to work should be paramount.

The opening word of smith's (1961) wealth of a nation, talks about the annual labour of every nation, and smith contend that it is the produce of this labour that which constitutes a nation's opulence. Marx (1979) also made it clear in his works when he said that:

"Labour is, in the first place, a process in which both man and nature participate, and in which a man of his own accord starts, regulates, and controls the materials re-actions between himself and nature. He

opposes himself to nature as one of her own forces, setting in motion arms and legs head and hands, the natural forces of his body, in order to appropriate Nature's productions in a form adapted to his own - wants. By thus acting on the external world and changing it, he at the same time changes his own nature. He develops his slumbering powers and compels them to act in obedience to his way".

This extract from Marx sums it all that the entire national income is the product of labour. It is at this point evident that among the factors of production, labour requires greater and more careful management since an efficient management of labour leads to an optimal growth of national income. This scenario well set out looks obvious, but one wonders why in real day to day economic planning labour is so neglected. The solution to this puzzle lies in the history of the development of society. Stalin (1973) points out in his book, Dialectical and Historical Materialism.

"The history of development of society is above all the history of the development of production, the history of methods of production which succeeds each other in the course of centuries, the history of the development of productive forces and people's relations of production. Hence the history of social development is at the same time the history of the producers of material values themselves, the history of the labouring masses who carry on the production of material values necessary for the existence of society".

Industrial and labour relations, like every other discipline in the social science, is a historical manifestation of the industrialization process hence it has a history behind it. It arose out of the problems created by rapid population growth and urban crowding; industrialization added its own special overlay. The industrial system expanded without plan or pattern, offering new opportunities for goods, but simultaneously generating social distress. The condition of the working man and the attempts to alleviate his distress and to protest the structure of society that had permitted such conditions to develop coupled with the attitude and reactions of the employers of labour and government to this protest led to the origin of industrial and labour relations. This paper is aimed at highlighting the potentialities of employee motivation, collective bargaining as a tool for organisational productivity and industrial harmony and possibly suggest a credible alternative, in deploying these Bargaining tool, a system devoid of the adversary will emerge through collective bargaining effort and thereby enthroning productivity through consultations resulting to mutual gain in the process.

Conceptual clarification
Public sectors productivity simply put is the quality of being able to produce the required goods and services.

Employee Motivation
Human Resource especially for public/private business plays a crucial role in the success of the business. At the hospital, people render medical services to the people and to achieve excellent service delivery/production. Motivation of staff can be used as tool for increasing productivity and to have more patronage and subsequently more profit, the growth of any organisation depends on the efficiency and productivity of the individual employee, which will lead to the organisational performance, many employee have performed low in their organization because many organisation has refused to grant employee the needed motivation, welfare and needed attention.

A positive attitude is also needed by the employee for businesses to thrive well, this will encourage employee to do more,

attitude is a disposition which is gotten from cognitive experiences as such employee need to develop psychological disposition just like every other learning processes, Nwankwo (2018) states, "attune your mind to study by being psychologically disposed to read or study at that moment" this state of mind also apply to employees in the health care system as well as other profession.

Motivation is defined by the world web online dictionary app as, (1) The psychological feature that arouses an organism to action toward a desired goal; the reason for the action; that which gives purpose and direction to behaviour. (2) The condition of being. (3) The act of motivating; providing incentive. From the above three definitions as it concerns this study, it is clear that motivation has to do with; an act of arousing employees' Emotion, Feeling, Behaviour and Attitude, etc, in other for him to put in the best services for the organisation to achieve a desired goals, aimed at maximising organisational productivity.

Motivation is the force within an individual which drives them physically and psychologically to pursue one or more goals in fulfilling their needs or expectation. For employee to put in their best, it is only right for them to have the best positive attitude to work, attitude is an enduring structure of beliefs that predispose individuals to behave in certain ways, (anastasi, 1988; hodgetts, 1980; kerlinger, 1986) in joshua (2012). Numerous studies have proved that productivity of workers is directly related to motivation. Workers who are highly motivated will put maximum efforts because of self-fulfilment from doing so, and resulting in high productivity according to Journal of Geospatial Engineering (2003).

The ultimate product in the health industries exhibits professional features after being added concrete ingredients of training and then offered as a service. To this end, the quality of service offered as a whole has been used as a competition element in the market by such facilities, within this sector where human serves human, quality as a whole offered by service providers is assured by the human resources that have decided to be in such service delivery.

The challenges for top managers here is the creation of a context with which employee feel motivated and act in order to achieve the goals of the organization (Lundberg Gudmundson and Andersson, (2009). Moreover, it may be witnessed that any organisation or industry who fail to recognized the importance of motivated is bound to fail to make the best use of intellectual capital they possess in such a case, Ensuring the effectiveness of this factor in productivity can only be attainable if needs and expectation of the worker are met according to (Ibrahim, 2013). Therefore, getting the optimum benefit from the knowledge and competence of the human resources in organisation such as health providers in public establishment depends on how psychological and material need of the workers, who constitute the intellectual capital are analyzed, met and eventually how they are motivated.

Achievement of organizational goals public establishment such as health sectors requires cooperation among members but the inherent differences in competence to achieving the desired goals lies in the competence and willingness of the employee to accept the hazards at work and the competition for limited resources coupled with complex relationships and a high degree of task dependence could lead to unproductively.

Collective Bargaining
Collective bargaining is the negotiation and administration of a written contract

between labour and management concerning wage, working Conditions and other aspects of work environment (Alugbuo 2007) Hacket (1979) sees it as an agreement concerning pay and conditions settled between trade unions on one hand and employer or employer associations on the other. Collective bargaining is therefore a process of meeting presenting demand as regards working conditions and wages between employers and employees with the aim of arriving at a conclusive end. Collective bargaining has been described as an alternative to strike and lock outs and also a civilized way of maintaining organizational peace (Bello and Kinge 2014). Through collective bargaining, employer gain an insight into the problems and aspirations of workers. It therefore means that these differences between trade unions and management could only be resolved through Negotiation which is part of collective bargaining and only through this medium can Organizational harmony be attained.

Collective bargaining is a historical phenomenon; it is the pursuit of perceived self-interests through collective action. The term collective bargaining is an embodiment of two sociological terms-collectivism and bargaining. It is almost impossible to think of a significant occupational group, profession, segment of the commercial or industrial world, or a phase of governmental activity, or indeed almost any other form of human endeavour that does not involve some form of collectivity through which individuals relate themselves to the broader society or environment. All forms of collectivism involve some loss of individual freedom, individual advantage, in order to advance the collective interests of the whole. It is also a process through which conflict between two or more parties can be resolved through some form of mutual acceptable understanding or accommodation (Okonkwo, 1982).

Contract negotiation is probably the most visible activity in industrial relations. It is the process by which the employer (could be private or government) and the union, as representative of the employees, meets to define or redefine the basic terms and conditions of their interdependence. The presence of the parties at the bargaining table implies interdependence through a common interest. It also implies the existence of conflict between the parties. Without common interest there is nothing to negotiate for; without conflict, nothing to negotiate about. Where workers are dissatisfied with what the market or their employer suggests is an adequate return for their services, they often seek to form common cause to improve their situation. Through unionization they compel those employing their service to give them a voice in the determination of their terms and condition of work.

Mokersie and Walton (1965) observe that all bargaining is not like the one we have discussed, that all bargaining does not involve conflicting interest or the allocation of a fixed amount of resources. Most collective bargaining negotiations do involve this type of bargaining in part, such as in wage determination. This is called distributive bargaining. Other forms of bargaining are integrative bargaining and attitudinal structuring and intra organizational bargaining.

Bargaining per se refers to a process between two parties, the intent of which is to reach an accommodation regarding a disputed issue. Bargaining may be serious or spurious. But in this paper we are concerned only with bargaining in good faith, which implies that each party would rather concede something to the other than fail to reach agreement at all. Bargaining may be explicit or implicit. Explicit bargaining means negotiation that is the parties engage in direct trading and in offering demand, arguments, and

concessions. Implicit bargaining entails "positioning". It may occur without direct communication between the parties, as for example when a group makes a public attack on an adversary in order to obtain a future concession. A group's development of a line for purposes of manoeuvring constitutes implicit bargaining. The shape and outcome of a bargaining process are determined by a number of factors:

(i) the power resources of the bargainers:
(ii) the formulation of issue and; skill in the use of strategy.

Collective bargaining therefore can be broadly defined as the process by which groups of organized workers and those desiring their services seek to resolve their differences through reason, the threat of economic conflict or actual conflict. As a result of collective bargaining, more and more issues are subject to joint determination and management's unilateral decision making power is being reduced accordingly.

Prospects of Collective Bargaining From the foregoing, one would be tempted to conclude that the government has no place in collective bargaining. This is far from the truth. The fact is that the government's approach is pertanalistic and probably does not understand the consequences of its action. The obvious fact is that the government is one of the actors in the industrial relations system and as the term Collective Bargaining expresses, it suggest the engagement of the Collective members of the system namely Labour, Management and the Government since these make up the three decision makers in the economy.

Collective Bargaining in the real sense of the term suggests a situation where the participants stand on equal footing that is to say that the social power of Labour must be comparable to that of the employer and government representatives. This method has been considered of tremendous importance, because conflicting parties are more likely to respect the agreement they reached by themselves, than that which is imposed on them. The approach that is envisaged here takes the form of a tripartite system in which accredited representatives of workers, employers and governments are represented at the bargaining table. The tripartite system promotes the economic interest not only of the sides in industry but also of the nation as whole because the growing participation of government in business activities which had hitherto been in private hands, the indigenization policy, the increasing pressure of inflation and thus the growing need for an income policy are all consideration that bear directly on the Collective Bargaining Process.

The most interesting aspect of this system is that this proposal has the important advantage of assuring legitimacy in the contract settlement; that is to say that the agreement thus reached at the tripartite bargaining sessions will receive government blessing and will not be altered or rejected by any of the triad because their well informed officials consummated the agreement, and the government is also likely to be satisfied because it will know that the agreement has been reached in the spirit of its income policy (Fashoyin, 1980).

Operational definitions
Motivation was operationally defined as the intense drive, zeal, willingness, power, and the actual expression, application or demonstration of the requisite efforts in most successful execution of specific desirable task as measured by the Motivation Inventory.

Employee motivation was defined operationally as the extent to which an employee was able to put in his or her best to yield maximum productivity.

Collective bargaining was defined as the process by which group of organised

workers and those desiring their services seek to resolve their differences through reasons, the threat of economic conflict or actual conflict.

Organisational productivity was defined as the quality of being able to produce the required goods and services.

Statement of the problem

The Nigerian public sector is faced with mirage of labour problems, there is clarion call to redress the mind set of Nigerian work force and improve work condition for efficiency and productivity. Things don't happen without a cause or absolutely in total isolation of associated factors. The reduction in labour force and slow growth due to labour issues and work condition is a curse for concern, this research work tend to correlate the effects of employee motivation and collective bargaining on public sector productivity in the Nigerian economy. The level of productivity is dependent upon or associated with a number of psychological, sociological and environmental factors embedded in the predictor variable. The psychological factors could include attitude of employee to work, environmental factor which includes poor work condition and work environment, occupational health and safety. social factor includes motivation and personal training and development, In this investigation, the effects of the elements that serve as predictor variables are use to correlate with the criterion variable (public sector productivity) the extent to which these constructs actually correlate with and probably predict productivity and employee performance in an organisation has not been conclusively established empirically, these thereby made this work very necessary.

Purpose of study

This study examine the ways to improve public sector productivity and enhance industrial harmony leveraged on welfare services such as employee motivation and collective bargaining. The study aims to find a lasting remedy to decline in workforce of the public sectors in Nigeria using employee motivation and collective bargaining tool as predictor variables and possibly giving recommendation for improvement and sustenance. Its main objective is to find out the level of relationships between motivations, collective bargaining on public sector productivity.

Research Questions

The following three research questions guided the study.
i. What is the relationship between employee motivation and public sectors productivity
ii. What is the relationship between collective bargaining and public sectors productivity?
iii. What is the extent to which employee motivation and collective bargaining jointly predict public sectors productivity?

Hypotheses Postulation

The tenability of three null hypotheses were tested at 0.05 level of significance as specified by Kpolovie (2011b).
i. Significant relationship does not exist between employee motivation, and public sectors productivity
ii. Significant relationship does not exist between collective bargaining and public sectors productivity?
iii. Employee motivation and collective bargaining together do not jointly predict organisational productivity.

Methodology

Multiple prediction design was applied to ascertain the magnitude of relationship and prediction that employee motivation and collective bargaining has individually or collectively on public sector productivity. According to Kpolovie (2010), multiple prediction design is a higher order correlation research design that extends the

least-squares association principle to the study of relationship between one dependent variable and two or more independent variables. It is the bivariate product-moment correlation between a criterion variable organisational productivity and some combination of a set of predictor variables ((employee motivation/training, and collective bargaining) in a most meaningful, reliable and valid manner that allows for establishment of coefficient of determination of the variance in the criterion variable from the combined variance of the predictor variables. A stratified random sample 200 was drawn with the aid of table of random numbers from the estemated 600 employee in the ministry of health Bayelsa state civil service as at January 2021. The sample size of 130 subjects was selected from the 200 employee of the nursing directorate of the ministry using simple random sampling (balloting). This also satisfy the minimum sample size recommended by Taro Yamen's formulae given

$$S = N\frac{N}{1+N(a)^2}$$ where S = sample size, N – population size, a = level of significance which is 0.05 Kpolovie (2018: 21).

The instrument for data collection in this research was the employee motivation, and collective bargaining scale. (EMACBS). The instrument which was developed by the researcher had three parts. Part A comprise of 8 items made up of personal data. Part B comprise of section (i) and (ii) which is made up of 14 questions each, making a total of 38 items, section (i) with 14 items measures respondents' view of the effect of employee motivation with 0.79 Cronback coefficient alpha reliability and 0.89 internal consistency evidence of construct validity. Section (ii) with 14 items measures respondents view on

collective bargaining has 0.82 reliability and 0.87 construct validity via internal consistency source. Each item in the instrument was structured in the modified Likert scale format of Strongly Agree, Agree, Disagree and Strongly Disagree. The (EMACBS) was administered to the civil servants. attendance data were collected from the office of the Director human resource of the ministry, attendance in effect project productivity, thus attendance data was converted to a quantitative data and scores were given according to percentages based on number of days an employee was present at work, the percentages were scored depending on the number of days an employee was present and the percentages, calculated thus. 88 – 100 is scored 9 points. 77 - 87% and above is scored 8 points. 66 - 76% is scored 7 points. 55 – 65% is scored 6 points. 44 - 54% is scored 5 points, 33 – 43% is scored 4 points. 22 - 32% is scored 3 points. 11 – 21% is scored 2 points. 0 – 10% is scored 1 points. Multiple regression statistical technique was used for data analysis with the aid of IBM SPSS Version 23 to answer the research questions and test tenability of each postulated null hypothesis at 0.05 alpha.

Instrumentation
A **self-report inventories**, made from the predictor variables (employee motivation and collective bargaining) were developed, validated and used for gathering the data. The self-report inventories had 9 Biodata items designed with yes or no questions meant to capture respondents personal information and a total of 28 items designed to capture respondents opinion on motivation and collective bargaining were scored on a 1 to 5 scale points: strongly agreed, agree, undecided, disagree, strongly disagree.

Results
The results are as presented in the following Tables below.

Descriptive Statistics

	Mean	Std. Deviation	N
PUBSECPRO	24.3385	14.33733	130
MOTIVATION	47.6846	17.42494	130
COLLBARG	49.2846	16.37934	130

Correlations

		ORGPRO	MOTIVATION	COLLBARG
Pearson Correlation	PUBSECPRO	1.000	-.370	.204
	MOTIVATION	-.370	1.000	-.724
	COLLBARG	.204	-.724	1.000
Sig. (1-tailed)	PUBSECPRO	.	.000	.010
	MOTIVATION	.000	.	.000
	COLLBARG	.010	.000	.
N	PUBSECPRO	130	130	130
	MOTIVATION	130	130	130
	COLLBARG	130	130	130

Table of Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	48.399	9.180		5.272	.000
	MOTIVATION	-.384	.098	-.466	-3.919	.000
	COLLBARG	-.117	.104	-.134	-1.122	.264

a. Dependent Variable: PUBSECPRO

Descriptive Statistics
The Mean and Std. Deviation are provided here for each of the two variables. The N is 130.
The Mean and Std. Deviation are respectively
24.385 and 14.33733 for Public sector Productivity,
47.6846 and 17.42494 for employee motivation
49.2846 and 16.37934 for Collective Bargaining

The descriptive statistics above provided in this section are answers to the three research questions.

Correlations
The Correlations table of the Output is a display of Pearson Correlation Coefficient for each of the possible 3 bivariate correlations of the 3 variables:
i. Public sector Productivity and motivation $r = .-370$, $p < .01$.
ii. Public sector Productivity and collective bargaining, $r = .204$, $p < .01$.
iii. Employee Motivation and collective bargaining, $r = .724$, $p < .01$.

These correlation coefficients are answers to their corresponding research questions.

The correlation coefficients serve as additional descriptive information on the complex interrelationships that exist among the three variables under investigation. If the study had merely been for purposes of establishing the bivariate linear relationships between the variables of interest, conclusions could have been drawn from the magnitude and nature of the associations between the variables that each of the bivariate correlations is statistically significant at .01, with moderate to very large **effect sizes**. But the concern of the investigation goes far beyond provision of the bivariate correlation coefficients between the variables to squarely deal with the extent to which Organisational Productivity can be predicted jointly by the two predictor variables, and partially by each of the two independent variables – employee motivation and collective bargaining;

Testing for Significance of each Predictor

The first column (Model) that has the individual predictors listed; and the last three columns in the Coefficients table that respectively provide Standardized Coefficients Beta, t and Sig. ($p$value) are for testing each of the independent variables to know whether it significantly predicts the dependent variable. Testing of the omnibus Multiple Regression model for significance, is not left out in the Coefficients table. Let me very quickly list these tests of significance and take the right decision on each, whether it is significantly predicting the criterion (Research Productivity) or not. The degrees of freedom for each of the t-tests in multiple regression are the number of participants (N) minus the number of predictors (P) minus one (1). That is, df = N – P – 1.

1. Constant is used for testing the omnibus Multiple Regression model, and it has a Standardized Coefficient Beta of .846 (as indicated for the multiple regression R), t of 5.386 and Sig. of .000 (read as less than .0005). Since the Sig. (.000) is less than the .01 alpha, the first null hypothesis that "when taken together, employee motivation and collective bargaining do not significantly predict the research productivity of faculty" is rejected. All the two independent variables collectively predict organisational Productivity significantly
[β = .381, t(127) = 5.386, p <.01, $R2$ = .145].

2. Employee motivation has a Standardized Coefficient Beta (β) of .-466, a t of -3.919, and Sig. Of .000. The Sig. (.000) is less than .05 alpha. Therefore, the second null hypothesis that "employee motivation does not significantly predict the organisational productivity when the other independent variables are controlled for statistically" is rejected. Employee motivation alone, without the influence of any of the other predictors, does significantly predict Organisational Productivity **[β = .-466, t(127) = -3.919, p > .05].**

3. Collective Bargaining has a Standardized Coefficient Beta (β) of .-134, a t of -1.122, and Sig. of .000.
The Sig. (.000) is lower than .05 alpha. Therefore, the third null hypothesis that "Collective bargaining does not single-handedly predict the organisational productivity significantly" is rejected. Collective Bargaining unilaterally (without the influence of any of the other predictors) significantly predicts Organisational Productivity **[β = .-134, t(127) = -1.122, p < .05].**

In summary
The findings of this investigation are that:

1. Employee motivation and Public sector productivity are significantly correlated positively.
2. Collective bargaining correlates significantly with Public sector productivity.
3. Employee motivation and Collective bargaining jointly predict Organisational productivity significantly. This means that Government and Organisation can improve the services and productivity of the public sector using collective bargaining and motivation in the future occurrences of a disease outbreak in Nigeria.

Discussion of findings

The highlights of the data analyzed revealed how relevant employee motivation, collective bargaining individually and collectively influence public sector productivity. From the three research questions that were posed in the study. The research questions which seek to confirm the relationship between employee motivation and public sectors productivity had the mean 24.385 and 14.33733 for Public sector Productivity, while that which seek to find out the relationship between collective bargaining and public sectors productivity had the means 47.6846 and 17.42494 for employee motivation

And lastly the question which seek to find out the extent to which employee motivation and collective bargaining jointly predict public sector productivity had the means 47.6846 and 17.42494 for employee motivation. This means employee motivation and collective bargaining has significance influence in public sector productivity.

Also the study indicated that the null hypotheses which states there is no significant relationship between employee motivation, and public sectors productivity do not predict public sector productivity

The hypothesis, which states that there is no significant relationship between collective bargaining and public sectors productivity? do not predict public sector productivity

Lastly the hypothesis which states there is no significant relationship between Employee motivation and collective bargaining individually and jointly predict organisational productivity is rejected as the correlation coefficient is statistically significant at 0.05 alpha. Part **c** of **Tab. 1** portrays multiple regression (R) of .381, regression square (R2) of .145, adjusted R2 of .132 and standard error of the estimate of 13.35990. It equally shows the change statistics that R2 change is .145 which means that the predictors (employee motivation and collective bargaining) jointly accounts for 21.6% of the variance in the criterion variable (organisational productivity) and this prediction is statistically significant ($p < .05$) at 2 and 127 degrees of freedom (df). With the information here, the three research question has been answered and the three null hypothesis rejected as there is overwhelming preponderance of evidence that employee motivation and collective bargaining significantly predict industrial harmony/organisational productivity, accounting for as much as 21.6% of the variance in the criterion.

Conclusion

The case of Public sector in Nigeria reveals that collective bargaining as a tool of settling industrial conflict has not been effectively used. thus has left many organisation (public and private) in a poor state. It is a fact that collective bargaining as a tool will contribute meaningfully to Public sector productivity and improve the national GDP. Most economy unproductivity would have easily been resolved through collective bargaining and would not have been left to degenerate to strikes and work stoppages leading to low productivity and also having a negative effect on the nation's economy.

Recommendations

The outcome of the investigation informed these recommendations for the academia, policy makers,as well as concerned citizens for policy action and for further studies. Based on the findings of the study, The researchers recommend that employee motivation is an effective tool in enhancing performance in public sector productivity, such tool should be engaged In every level of the public sector. It is also recommended that, the collective bargaining tool should be employed in dispute resolution among employee and employer as well as individuals and government. The data analysed recommend that government and every employer of labour should engage in collective bargaining and employee motivation simultaneously in resolving any form of dispute as well as improving employee performance, which would help many private and public organizations to maintain high productivity. These negotiations should start in time and should not be allowed to degenerate. from the literature review, so many strategies are available to Public sector managers for the effective management of conflict, managers can use their wealth of experience and training to deal with Public sector unproductivity when the need arise.

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COMPUTATIONAL ANALYSIS OF THE TIME SPENT ON THE INTERNET AND SELF-STUDY VERSUS THE ACADEMIC PERFORMANCE OF STUDENTS IN MATHEMATICS

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Abstract

This study investigated the impact of the time spent on the internet and self-study on the academic performance of students in mathematics. The study was guided by three research questions and three corresponding hypotheses that stemmed from its core objectives. The research cohort consisted of 51 students from the mathematics department. Data collection was carried out using regression analysis that explored the relationship between internet usage and self-study in relation to the academic performance of these mathematics students. The analysis employed both a simple linear regression model (OLS) and multiple linear regression models. Estimation of model parameters was facilitated through the use of statistical software. To assess the connection between the dependent and independent variables, the Pearson Product Moment was employed. The findings of this study indicated that the time students spent on the internet and their self-study efforts showed a weak association with academic performance, with p-values exceeding 0.05. Consequently, it is recommended that students be encouraged to utilize the internet for educational purposes, as it has the potential to yield positive improvements in their academic achievements.

Keywords: Self-study, Internet, Academic performance, Regression, model.

Introduction

The Internet World Statistics in 2020 estimated global internet growth from 2000 to 2020 to be 1267 percent. Nigeria has 126.78 million internet users, with smartphones accounting for 74% of web traffic and personal computers accounting for 24%. Nigeria ranks 6th in the world and first in Africa in terms of internet growth, with a 252 percent increase. In this era of information technology, the internet emerges as a valuable asset, serving not only the business world but also holding considerable importance from an educational standpoint. It plays a crucial role in enhancing students' skills and capabilities, benefiting both their academic endeavors and future professional lives. Students rely on the internet as a central hub for conducting research across various fields of study, evident in their use of online resources for assignments, presentations, research projects, and exam preparations. One would expect that with the popular usage of Android-powered and internet-enabled mobile phones, students' academic performance in higher education would improve substantially. However, as a result of contradicting findings in recent studies in this area, the widespread usage of the internet by students is creating some concern. The typical guideline for college study recommends that students allocate approximately 2-3 hours of study for every hour they spend in a classroom. Considering that many students enroll in 15-credit courses, this translates to roughly 15 hours of classroom instruction each week. This means that students should spend about 30 hours of study time and 15 hours in class each week. These 45 hours equate to full-time work, which is why a

student is referred to as a full-time student. Many college students study for more than 4-5 hours a week (some spend significantly more, but they are in the few). Based on survey data, the majority of college students spend approximately 10-13 hours studying each week, which translates to less than 2 hours daily. In contrast, only a small fraction, around 11% of students, invest well over 25 hours weekly in their studies. This reveals a notable contrast between the actual study hours (10-13 hours) and the ideal scenario, where students are expected to allocate more than 30 hours per week to their studies.

Schools and universities will inevitably confront two prominent trends: a decrease in students dedicating time to studying and an increase in their internet usage. Resorting to a short-term strategy of reducing academic standards, essentially rewarding minimal effort and performance, is not a sustainable solution and can lead to long-term negative consequences. Instead, a more constructive approach involves conducting empirical studies to gauge the extent to which these trends might adversely impact students' academic performance. Utilizing the findings from such studies, institutions can then enhance their academic programs to effectively address these issues.

While personal factors like motivation and ability are well-established influencers of academic achievement, there exists a notable research gap concerning the effects of students' time allocation to various activities, such as independent study and internet usage, on their academic success. This scarcity of research may stem from the prevailing belief that dedicating more time to independent study enhances academic performance while increased internet usage hinders it. Another plausible reason for the lack of empirical exploration in this domain is the intricate nature of these interactions when compared to more straightforward factors like student motivation and ability. To bridge this gap, it is advisable for educational institutions to impart awareness to students regarding the potential negative consequences associated with excessive leisurely internet use on their academic progress. This suggestion aligns with the insights of Bragdon and Dowler in 2016. Additionally, the research carried out by Turel and Toraman (2015) revealed that with enhanced academic performance among students, there was a corresponding decline in their average level of internet addiction. This finding underscores the connection between internet addiction and academic achievements. The body of research in this field collectively suggests that while internet usage can positively influence academic performance, its excessive and unregulated use may indeed hinder students' academic achievements (Ellore et al., 2014; Torres-Diaz et al., 2016).

Regarding students' internet access and usage in Nigeria, Olatokun (2008) observed that a notable proportion of students regard the internet as a more convenient and valuable resource compared to their school libraries. This research indicates that students perceive the internet as a valuable repository of general knowledge, and this perception fosters the development of better reading habits and, subsequently, results in enhanced academic performance. Siraj et al. (2015) provided evidence that students consider the internet as an additional educational instrument that helps them achieve academic success. Ogedebe (2012) concurred with this perspective, highlighting that a significant majority of students employ the internet to access pertinent academic materials, implying that it functions as a means of enhancing their studies. Sahin et al. (2010) extensively examined how university students utilize internet resources in the context of their coursework, highlighting the crucial significance of reliable online resources.

This importance becomes particularly evident in advanced courses where a comprehensive review of literature is imperative. Kim (2011) identified the use of the internet for educational purposes as a characteristic that is closely associated with the academic success of adolescents. Furthermore, Aderanti and Adedotun (2015) found that the origin and accessibility of information might have a significant impact on the educational achievement of secondary students.

Despite the significant emphasis paid to the relationship between internet usage and learning success, Olatokun (2008) contends that pupils in secondary school utilize the internet mostly for entertainment rather than instructional goals. His research findings indicate that students primarily engage in online activities related to communication, entertainment, and leisure, which encompass activities like sending and receiving emails, participating in online chats, using instant messaging, gaming, downloading music videos, and reading online newspapers. In a similar vein, Sahin et al. (2010) observed that university students regularly incorporate email and online forum/chat platforms into their daily routines but do not extensively integrate these into their academic pursuits. Ngoumandjoka (2012) found that the internet is primarily employed for recreational activities rather than for educational purposes. Singh et al. (2013) emphasized students' considerable usage of the internet in a similar research, although in fact, it is mostly focused toward non-academic pursuits such as email communication, gaming, and social networking involvement. This prevalent habit has caused interruptions in their learning schedules. These disparate findings highlight the ongoing debate in empirical research about the influence of internet usage on students' academic achievement.

Despite widespread concerns regarding excessive internet usage, some studies have suggested that high levels of internet use may lead to improved academic outcomes, as it paves way for access into a wealth of information (Siraj et al., 2015). In a more recent study conducted by Yebowaah in 2018, the research explored the influence of internet utilization on senior high school students in Wa Municipality, Ghana. The study concluded that the diverse ways in which students employ the internet do not significantly affect their academic performance. Similarly, Adegoke (2013) conducted a study showing that a student's socioeconomic background plays a substantial role in their academic success, while internet use alone does not significantly contribute to academic achievement. However, when these two factors were considered together, they did have a significant impact on students' academic performance.

The primary objectives of this study are to explore whether the amount of time students dedicate to internet usage improves their academic performance. Additionally, it seeks to establish the connection between study hours and students' academic achievements and to examine how study time and internet usage collectively impact the academic performance of students.

Research Questions

1 To what extent does time students spend on the internet relate to their academic performance?
2. Is there a relationship between time spent studying outside of class and academic performance of students?
3. Is there a relationship between time spent on the internet, stud time, and the academic performance of students?

Research Hypotheses

H_{01}: There is no significant relationship between time spent on the internet and the academic performance of students.

H_{02}: There is no significant relationship between time spent studying and academic performance of students.

H_{03}: There is no significant relationship between time spent on the internet, study time, and academic performance of students.

Materials and Methods

Nature and Source of Study Data

The study relied on secondary statistical data, which encompassed students' cumulative grade point averages (CGPA), the amount of time devoted to studying, and their internet usage. These data were extracted from a survey conducted via a proforma in the Department of Mathematics/Statistics at Ignatius Ajuru University of Education, Port Harcourt.

Method of Data Analysis

The simple regression and multiple linear regression models were used for the data analysis. The estimation of the model parameters were done using the ordinary least square (OLS) method with the help of Minitab statistical package.

Model Specification

Consider the regression models of the form

$y = f(x)$

$$y = \alpha_0 + \alpha_1 x + \varepsilon_i = (x'x)^{-1} x'y$$

$y = f(x_1, x_2)$ (1)

$$Y_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \varepsilon_i \qquad (2)$$

$$= (x'x)^{-1} x'y$$

Equations (1) and (2) are simple and multiple linear regression model respectively and the size errors are outlined as follows:

$$\delta_i = \bar{X}_1 - X_1 \text{ and } \delta_j = \bar{X}_2 - X_2 \qquad (3)$$

where,

$\bar{X}_1$ = The anticipated values for the time spent on the internet and $\bar{X}_2$ = The estimated values for hours spent on study.

Given that there are two explanatory variables, it is confirmed that X_1 and X_2 represent the genuine values of these explanatory variables.

Thus

$$X_1 = \bar{X}_1 - \delta_1, \; X_2 = \bar{X}_2 - \delta_j \qquad (4)$$

The model mentioned above might initially resemble a typical regression model with predictor variables represented as $\bar{X}_{i1}$ and $\bar{X}_{i2}$, along with errors $(\varepsilon_1 - \beta_1\delta_1 - \beta_2\delta_j$. However, it's important to note that this is not always the case. The explanatory variables consist of observations that are random variables, and they exhibit a correlation with the error term $(\varepsilon_1 - \beta_1\delta_1 - \beta_2\delta_j)$. In the context of this research, supplementary variables known to be linked with the explanatory variables (referred to as instrumental variables) are incorporated, with the exception of any influence on the scale of errors. The inclusion of instrumental variables allows

us to obtain reliable estimates for the regression parameters.

Table1: Model Specification

Variable	Model	Description	Mathematical Formulation
Regression Models	A	Simple Regression 2	$y_i = \beta_0 + \beta_1 x_2 + \varepsilon_i$
	B	Multiple Regression	$y_i = \omega_0 + \omega_1 x_1 + \omega_2 x_2 + \varepsilon_i$

The summary presented in Table 1 offers a comprehensive outline of the models that will be employed in the research to derive essential estimates for the independent parameters.

Regression Model

The matrix 'X' containing the explanatory variables has the following format:

$$X = \begin{bmatrix} 1 & X_{11} & X_{12} \\ 1 & X_{21} & X_{22} \\ \vdots & \vdots & \vdots \\ 1 & X_{n1} & X_{n2} \end{bmatrix} \tag{5}$$

Y and β are of the form:

$$Y = \begin{bmatrix} y_1 \\ y_2 \\ \vdots \\ y_n \end{bmatrix}, \ \beta = \begin{bmatrix} \beta_0 \\ \beta_1 \\ \vdots \\ \beta_n \end{bmatrix}$$

where

$$x'x = \begin{bmatrix} n & \Sigma x_1 & \Sigma x_2 \\ \Sigma x_1 & \Sigma x_1^2 & \Sigma x_1 x_2 \\ \Sigma x_2 & \Sigma x_1 x_2 & \Sigma x_2^2 \end{bmatrix} \tag{6}$$

$$x'y = \begin{bmatrix} \Sigma y \\ \Sigma x_1 y \\ \Sigma x_2 y \end{bmatrix} \tag{7}$$

The model can be represented in matrix form as follows:

$$x'y = \begin{bmatrix} \Sigma y \\ \Sigma x_1 y \\ \Sigma x_2 y \end{bmatrix} = \begin{bmatrix} n & \Sigma x_1 & \Sigma x_2 \\ \Sigma x_1 & \Sigma x_1^2 & \Sigma x_1 x_2 \\ \Sigma x_2 & \Sigma x_1 x_2 & \Sigma x_2^2 \end{bmatrix} \begin{bmatrix} \beta_0 \\ \beta_1 \\ \beta_2 \end{bmatrix}$$

$$\begin{bmatrix} \beta_0 \\ \beta_1 \\ \beta_2 \end{bmatrix} = (x'x)^{-1} x'y = \begin{bmatrix} n & \Sigma x_1 & \Sigma x_2 \\ \Sigma x_1 & \Sigma x_1^2 & \Sigma x_1 x_2 \\ \Sigma x_2 & \Sigma x_1 x_2 & \Sigma x_2^2 \end{bmatrix}^{-1} \begin{bmatrix} \Sigma y \\ \Sigma x_1 y \\ \Sigma x_2 y \end{bmatrix}$$

and $v(\hat{\beta}_{iv}) = MSE(x'x)^{-1} x'y$ \hfill (8)

When the value of n is an odd number, it's possible to omit the middle observation. While this approach maintains constant estimators, it does tend to result in higher variance in those estimators.

Model Selection Criteria
The model selection criteria include are given below:

Akaike Information Criteria (AIC)
Akaike (1974) as seen in Victor-Edema and Geeorge (20019) devised a technique known as the Akaike Information Criteria (AIC). The formulation of this method is as follows:

$$AIC = n \ln\left[\frac{SSE}{n}\right] + 2(k) \tag{9}$$

where;
n = Sample size
k = Number of parameter and
SSE = Sum of square error.

Schwarz Bayesian Information Criterion (BIC)
Craven and Wahba (1978) introduced a technique known as the Schwarz (BIC) criteria. The formulation of this method is presented as follows:

$$BIC = n \ln\left[\frac{SSE}{n}\right] + k \ln(n) \tag{10}$$

If there are a minimum of eight observations available, the numerical value of Schwarz's BIC (Bayesian Information Criterion) will decrease, as indicated by Ramanathan in 1995.

Coefficient of Determination (R^2)
The statistical parameter R^2 holds a crucial role in decision-making and drawing statistical conclusions. It serves as a method for assessing the influence or contribution of one or more variables relative to others. This process is typically denoted as follows:

$$R^2 = \frac{SSR}{SST} \tag{11}$$

where;
SSR= Sum of square Residual
SST= Sum of Square Total

Results and Discussion
Research Question 1: To what extent does time students spent on the internet relate to academic performance of students?

H$_{01}$: There is no significant relationship between time spent on the internet and academic performance of students.

Table 2a: Linear Regression Summary of the Relationship between Times Spent on the Internet and Academic Performance of Students

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.110[a]	.012	-.008	.78644	1.600

a. Predictors: (Constant), Time Spent On Internet; b. Dependent Variable: CGPA

Table 2a shows that time spent on the internet weakly relate to academic performance of students with Pearson Product Moment Correlation Coefficient (r = 0.110). The adjusted R^2 = 0.012, implying that only 1.2% of the variation in time spent on the internet can be accounted for by variations in academic performance of students. The remaining 98.8% is due to other variables not included in this model.

Table 2b: ANOVA Associated with Linear Regression

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.369	1	.369	.596	.444[b]
	Residual	30.306	49	.618		
	Total	30.675	50			

a. Dependent Variable: CGPA, b. Predictors: (Constant), Time Spent on Internet

The data presented in Table 2b indicates that there is no substantial correlation between the amount of time students invest in internet use and their academic performance (F=0.596, Df= 1, 49, p =0.444). Given that the p-value exceeds 0.05, it suggests that the relationship is weakly positive but lacks statistical significance at the 0.05 significance level, thus leading to the retention of H_{01}.

Table 2c: Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.369	.216		15.624	.000
	Time Spent On Internet	.031	.040	.110	.772	.444

a. Dependent Variable: CGPA

Table 2c shows that for every 1SD increase in time spent on the internet, there is a corresponding decrease of 0.110 SD in the academic performance of students. This decrease is high and significant. This result shows that the time spent on the internet does not significantly predicts academic performance of students.

Research Question 2: Is there relationship between times spent studying outside of class and academic performance of students?

H_{02}: There is no significant relationship between times spent studying and academic performance of students.

Table 3a: Linear Regression Summary of the Relationship between Times Spent Studying and Academic Performance of Students

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.073[a]	.005	-.015	.78909	1.623

a. Predictors: (Constant), Time Spent to Study b. Dependent Variable: CGPA

Table 3a shows that time spent studying weakly relate to academic performance of students with PPMC Coefficient (r=0.073). The adjusted $R^2 = 0.005$, implying that only 0.5% of the variation in time spent studying can be accounted for by variations in academic performance of students. The remaining 99.5% is due to other variables not included in this model.

Table 3b: ANOVA Associated with Linear Regression

ANOVA[a]

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.164	1	.164	.264	.610[b]
	Residual	30.510	49	.623		
	Total	30.675	50			

a. Dependent Variable: CGPA; b. Predictors: (Constant), Time Spent to Study

According to the data presented in Table 3b, there is no notable correlation between the amount of time students devote to studying and their academic performance (F=0.264, Df= 1, 49, p =0. 610). As the p-value exceeds 0.05, it signifies that the connection is weakly positive and lacks statistical significance at the 0.05 significance level, hence leading to the retention of H_{02}.

Table 3c: Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.411	.226		15.108	.000
	Time Spent to Study	.031	.061	.073	.514	.610

a. Dependent Variable: CGPA

Table 3c shows that for every 1SD increase in time spent studying, there is a corresponding decrease of 0.073SD in the academic performance of students. This decrease is high and significant. This result shows that the time spent studying does not significantly predicts academic performance of students.

Research Question 3: Is there a relationship between time spent on the internet, studying time, and the academic performance of students?

H_{03}: There is no significant relationship between time spent on the internet, studying time, and the academic performance of students.

Table 4a: Multiple Regression Summary of the Relationship between Times Spent on Internet, Studying and Academic Performance of Students.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.134[a]	.018	-.023	.79218	1.620

a. Predictors: (Constant), Time Spent to Study , Time Spent on Internet, b. Dependent Variable: CGPA

Table 4a shows that the time spent on the internet and studying combined weakly relates to the academic performance of students with PPMC Coefficient (r = 0.134). The adjusted R^2 = 0.018, implying that 1.8% of the variation in academic performance of students can be accounted for by variations in the time spent on the internet and studying. The remaining 98.2% is due to other variables not included in this model.

Table 4b: ANOVA Associated with Multiple Regression

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.553	2	.276	.440	.646[b]
	Residual	30.122	48	.628		
	Total	30.675	50			

a. Dependent Variable: CGPA, b. Predictors: (Constant), Time Spent to Study , Time Spent on Internet

Table 4b shows that the combined relationship gave F = 0.440, Df = 2, 48, p = 0.646. Since the p-value is greater than 0.05, it implies that the relationship is not significant at 0.05 level of significance, therefore H_{03} is retained.

Table 4c: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.258	.299		10.913	.000
	Time Spent on Internet	.032	.041	.113	.786	.436
	Time Spent to Study	.033	.061	.077	.541	.591

a. Dependent Variable: CGPA

According to the data in Table 4c, when you consider the combined impact of internet usage and study hours, a 1-standard deviation (1SD) increase in internet time corresponds to a small, non-significant decrease of 0.113 standard deviations in the academic performance of students. Similarly, a 1SD increase in study time leads to a small, non-significant decrease of 0.077 standard deviations in students' academic performance. In essence, this outcome indicates that while internet time can be seen as a weak positive predictor for students' academic performance, this prediction lacks statistical significance. Likewise, study time also serves as a predictor, albeit a weak and statistically insignificant one, of students' academic performance.

Discussions
The primary objective of this investigation is to explore the connection between the time students give to internet usage and

their academic performance. This was initially examined through research question one and further substantiated through the testing of hypothesis one. The outcomes, as presented in both Table 2a and Table 2b, revealed that there exists no substantial correlation between the time spent on the internet and the academic achievements of students. This was established using the Pearson Product Moment Correlation Coefficient (PPMC), where the result yielded a value of $r=0.110$, $F=0.596$, $Df=1, 49$, and $p>.05$. In simpler terms, this suggests that the amount of time students spend on the internet is only weakly associated with their academic performance. The fact that the p-value exceeds the significance level of $\alpha=0.05$ implies that this relationship lacks statistical significance at the $\alpha=0.05$ threshold, and, as a result, the null hypothesis (H_{01}) is upheld.

The investigation considered the connection between the hours students spend in studying and their academic achievements, as examined by research question two and corroborated by the testing of hypothesis two. The outcomes, as displayed in both Table 3a and Table 3b, revealed that there is no substantial correlation between the time allocated to studying and the academic performance of students. This conclusion was reached using the PPMC Coefficient, where the results indicated an r-value of 0.073, F-value of 0.264, $Df=1, 49$, and $p>.05$. In simpler terms, this signifies that the time spent on studying exhibits a weak relationship with students' academic performance. Since the p-value surpasses the significance level of $\alpha=0.05$, it implies that this relationship does not hold statistical significance at the $\alpha=0.05$ threshold. Consequently, the null hypothesis (H_{02}) remains valid.

The study sought to evaluate the link between students' use of the internet, study

time, and academic achievement, as addressed by research question three and supported by hypothesis three testing. The findings presented in both Table 4a and Table 4b indicated that there is no significant connection between the time students spend on the internet, their study hours, and their academic achievements. This submission was made using the PPM coefficient, which resulted in an r-value of 0.134, an F-value of 0.440, $Df=2, 48$, and a p-value exceeding 0.05. In simpler terms, this suggests that the combined impact of internet usage and study hours has only a weak correlation with students' academic performance. As the p-value surpasses the significance level of $\alpha=0.05$, it indicates that this relationship lacks statistical significance at the $\alpha=0.05$ threshold, and thus, hypothesis H_{03} is upheld.

The present findings of this study are consistent with those of Yebowaah (2018), who revealed that students' usage of the internet had no substantial influence on their performance in school.

Conclusion
This research delved into the computational analysis of how the amount of time individuals dedicate to online activities and self-study affects their academic achievements in the field of mathematics. The study gathered statistical information, specifically cumulative grade point averages (CGPA), the number of hours allocated to personal study, and the duration spent on the internet. These data were collected through a structured proforma administered to students enrolled in the Department of Mathematics. To better understand the relationship, three distinct regression models were estimated. One model sought to express CGPA solely in terms of internet usage, another focused on study hours, and the third model combined all three variables in question. In all three models, it was discovered that there is only a weak link between internet

use, self-study, and academic success. In light of these findings, it is recommended that students be encouraged to employ the internet as a tool for self-study, with the aim of enhancing their academic achievements.

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EMPLOYEE KNOWLEDGE OF WORK AND PERFORMANCE OF PRIMARY HEALTHCARE CENTRES IN IKWERE LGA, RIVERS STATE.

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Abstract
The study examined employee knowledge of work and performance of Primary Healthcare Centres in Ikwere LGA, Rivers State. The objective of the study was to examine the relationship between dimensions employee knowledge of work (problem solving skills, communication skills and knowledge to the corporate culture) and measures of performance such as level of immunization coverage, awareness created in communities and partnership with agencies of Primary Healthcare Centre in Ikwere LGA, Rivers State. The population of the study consisted of fifteen (15) Primary Healthcare Centres in Ikwerre L.G.A. Five (5) top level medical personnel were purposively selected of each from the Fifteen (15) Primary Healthcare Centres in Ikwere LGA. Thus, the sample of the study was Fifteen (15) Primary Healthcare Centres in Ikwere LGA with Seventy-Five (75) respondents. Sixty (60) copies of the entire validated questionnaire retrieved and used. Pearson Product Moment Correlation Coefficient was used to test hypotheses. It was found that there is a significant positive relationship between dimensions of employee knowledge of work and measures of performance of Primary Healthcare Centres in Ikwere LGA. It was concluded that Primary Healthcare Centres management who are willing to tackle the issue of low level of immunization coverage and equivalent through the employment relevant skills, stand chances of attaining better organizational performance. The study recommends that management of Primary Healthcare Centre should imbibe corporate norms and values that will encourage hard work which will favour both the workers and the organization.

Introduction
The survival of every organization beacons on the level of performance of their workers. This is because when employees put in their best in ensuring that their organizational goals and set objectives are attained definitely boast their level of productivity, service delivery, competitiveness as well as performance (Albrecht, 2013). Furthermore, Akani in Albrecht (2013) has opined that the performance of organization (healthcare centres) is usually assessed in terms of the achievement of economic objectives. These objectives can be long term, such as sustainable growth and development, or short term, such as the stabilization of the economy in response to sudden and unpredictable events, called economic shocks. Performance of a firm is a function of its success in producing benefits for its owners in particular, through product innovation and the efficient use of resources. From the above discussion, performance of healthcare centres is operationally defined as how well a healthcare centres functions and the extent to which set objectives and targets are met

through level of immunization coverage, awareness created in communities and partnership with donor agencies.

Since human cannot do without illness, it is pertinent to equally device a means of ensuring that these illness are tackled spontaneously. Tackling of these diseases could arise through proper immunization. However, immunization is a way to protect people from dangerous illnesses. Immunization is the cornerstone of public health (Gammino, *et al,* 2014). It is a way to protect people from infectious diseases. One of the measures of performance in the healthcare centres is the level at which immunization or vaccination rendered by this healthcare centres covers the adequate location. Operationally, level of immunization coverage as the first measure of this study refers to the rate at which drugs are administrated by medical practitioners to specific area of the public. Since primary healthcare centres are usually established for the wellbeing of the host communities, it becomes pertinent that health awareness should be created. Thus, awareness created in communities as the second measure of this study is seen as the sensitization of the public about health and health related issues to enable them avert sickness or live healthy. Community health awareness are designed to influence public knowledge, attitudes, and behaviors, yet achieving these goals and influencing the public is no simple matter (Odum, 2016). There is not a direct relationship between the messages that are sent to people and the reactions these people have to the messages. In addition to interpreting messages in very unique ways, people respond differently to the messages that they receive.

The last measure of performance as used in this study is partnership with donor agencies.
Within the context of this study, it is conceptualized as collaboration between and among the healthcare centres, individual and other civil society organizations for adequate performance so as to improve the wellbeing of citizens. It equally depicts the coming together or collaboration between civil society organizations, religious organizations, government institutions and even private individual who perceived a gap in the public place and thus, voluntarily in agreement with the health centres provides such service to the members of the public either at low cost or at no cost (Mathew, 2017).

Knowledge to work of an employee has to do with the level of competence of worker while doing his or her job. Competencies focus on how results are achieved rather than merely the end result. In this manner they bridge the gap between performance management and employee development and are an integral component of personal development plans. Thus, it is necessary for employee to gain relevant knowledge to their job (Grant, 2016). Therefore, employee knowledge of work in this study is defined is w orker's competence and understanding of a set of responsibilities specific to a job as well as the ongoing capacity to stay abreast of changes in job function.

Statement of Problem
It seems that Primary Healthcare Centres in Ikwere Local Government Area of Rivers State, Nigeria suffer low level of performance which manifest through unavailability of drugs/working materials, incompetent staff, poor salary structure and lack of transportation allowance (Bubas, 2018). These has affected the operations of Primary Healthcare Centres as it negatively affects level of immunization coverage, awareness created in communities and partnership with donor agencies.

Even when the aforementioned factors are provided in most primary healthcare

centres, it equally seems that employees working in this organization lack competency in discharging their core responsibility as assigned by their superior (Rickheit & Hans, 2018). This give credence to ask level of employees' knowledge of their work. We do not know the level of employees' competency in problem solving, communication and knowledge of the corporate culture. Thus, this study seeks to investigate.

Mark, et al. (2022) examined the impact of job knowledge in the cognitive ability performance relationship. George (2011) examined the performance of health workers in decentralized services in Uganda. The findings revealed that the performance of health workers is generally affected by health systems and work environment related factors. The findings indicated that health workers are skilled, competent, and generally have positive attitudes and behaviours towards their clients.

Main (2022) examined workplace inclusion and performance of healthcare centres in Port Harcourt. It was found that dimensions of workplace inclusion (de-tribalization, gender inclusion and information justice) have a significant positive relationship with measures of performance such as vaccination, community health awareness and level of partnership of healthcare centres in Port Harcourt. Michael (2021) examined the influence of employee background check and performance of primary health centres in Etche Local Government Area. The results showed that dimensions of employee background check such as educational certificate check, employee history check, and social media profile check have significant positive influence on the performance of primary health centres in terms of vaccination, community health awareness/education and level of partnership. However, none of the aforementioned studies examined the relationship between employee knowledge of work and performance specifically in Primary Healthcare Centres in Ikwere LGA, Rivers State adopting the same dimensions and measures as used in the current study. There is need therefore to close this knowledge gap.

Objectives of the Study
The purpose of this study was to examine the relationship between employee knowledge of work and performance of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State, Nigeria. The specific objectives of the study were to:
1. Determine the extent of relationship between problem solving skills and level of immunization coverage of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.
2. Ascertain the extent of relationship between communication skills and awareness created in communities of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.
3. Examine the extent of relationship between knowledge of the corporate culture and partnership with donor agencies of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.

Research Hypotheses
The following null hypotheses were formulated and tested:
Ho_1: There is no significant relationship between problem solving skills and level of immunization coverage of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.

$H0_2$: There is no significant relationship between communication skills and awareness created in communities of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.

H0₃: There is no significant relationship between knowledge of the corporate culture and partnership with donor agencies of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.

Concept of Employee Knowledge of Work

Employee knowledge of work is defined as worker's competence and understanding of a set of responsibilities specific to a job as well as the ongoing capacity to stay abreast of changes in job function. So to say, it demonstrate employee's job relevant experience And essential skills such as work practice, policies, procedures, resources, clients and technical information as well as the relationship of work to the organizational mission (Zack in Paz & Bueno, 2017). Interestingly, employee knowledge to work could be closely associated with employee job competence. According to the European Commission (2017), competency is a combination of knowledge, skills and attitudes appropriate to the context. Competencies focus on how results are achieved rather than merely the end result. In this manner they bridge the gap between performance management and employee development and are an integral component of personal development plans.

Employee job competence is the combination of observable and measurable knowledge, skills, abilities and personal attributes that contribute to enhanced employee performance and ultimately result in organizational success and favourable competitiveness. Competencies do not establish baseline performance levels; rather they are used to raise the bar on employee performance (Bubas, 2018).

Dimensions of Knowledge to Work
Problem Solving Skills

Organizations rely on people who can assess several kinds of situations and calmly identify solutions. Problem-solving skills are traits that enable you to do that.

While problem-solving skills are valued by employers, they are also highly useful in other areas of life like relationship building and day-to-day decision making. Problem-solving skills help you determine the source of a problem and find an effective solution (Zack in Bill, 2020).

However, problems are unavoidable in the organization regardless of the nature of activities being undertaken therein. This is because organization is a social setting, operating in a social environment and controlled by social beings which are socially insatiable. The dissatisfactory nature of these social forces constitutes an endless cause of problem for organizations. The destructive nature of these problems heralded the need for them to be properly resolved (England and Wales, 2020). Solving of problems within an organization is majorly the responsibility of the employees in that organization. Every employee is responsible for the problems in that organization inasmuch as the problems can be resolve internally.

Thus, problem solving skill is defined in this study as the abilities of an employee to identify challenges, brainstorm and analyze answers as well as implement the best solution. Problem-solving is a calculated and deliberate mental process that involves discovering, analyzing and solving organizational problems (Bill, 2020). The ultimate goal of problem-solving is to overcome obstacles and finding solutions to problems, especially by using a scientific or analytical approach. It is a vital everyday skill needed for personal and professional life (Institute of Chartered Accountants in England and Wales, 2020). A good problem solving skill is a pivotal employment prerequisite that shows employee's competencies like logic, creativity, resilience, imagination, lateral thinking, diligence and determination. It is an essential skill for all employees serving in any capacity, those with good problem-

solving skills are a valuable and trusted asset in their team, they are the people who think of new ideas, better ways of doing things, make it easier for people to understand things or help save customers time and money. They are proactive thinkers who like to get things done and can help you progress more quickly and boost career opportunities. When employers talk about problem-solving skills, they are often referring to the ability to handle difficult or unexpected situations in the workplace as well as complex business challenges.

Communication Skills

Communication skill is a complex construct that has been widely debated in the communication field. McCroskey (1984) initiated this debate when he discussed competence in terms of skills, performance, and effectiveness. These arguments then inspired Brian Spitzberg to develop a precise definition, which suggests that communication skill comprises three interdependent constructs: knowledge, competence, and motivation. In other words, communication skill refers to an individual's knowledge, skill, and motivation to accomplish a particular goal (Allen. 2017). These are interdependent constructs, meaning that all three are needed to achieve communication skill. For example, an individual may possess the knowledge needed to accomplish a goal, but lack the skill or ability to do so. Likewise, an individual may be motivated to achieve a particular goal, but may as well lack the necessary skill to do so.

The term communication skill refers to both the tacit knowledge of a language and the ability to use it effectively (Nordquist, 2019). The concept of communicative skill grew out of resistance to the concept of linguistic competence introduced by Noam Chomsky.

Most scholars now consider linguistic competence to be a part of communicative competence. Communication skill refers to the knowledge of effective and appropriate communication patterns and the ability to use and adapt that knowledge in various contexts (Cooley & Roach, 2014). Going further, Rickheit and Hans (2018) defined communication skill as the ability to interact well with others. He explains, the term "well' refers to "accuracy, clarity, comprehensibility, coherence, expertise, effectiveness and appropriateness". A much more complete operationalization is provided by Young *et al.* (2014) when he suggested that communication competence is best understood as "a situational ability to set realistic and appropriate goals and to maximize their achievement by using knowledge of self, other, context, and communication theory to generate adaptive communication performances".

From the foregoing, communication skill is defined in this work as the ability to relate seamlessly with superiors, subordinates and patients in speech and writing in a way that fosters group cohesion. Communication skill is measured by determining if, and to what degree, the goals of interaction are achieved. As earlier emphasized, the function of communication is to maximize the achievement of "shared meaning." Van-Lehn (2017) emphasizes three interdependent themes: control, responsibility, and foresight; and argues that to be competent, we must "not only 'know' and 'know how,' we must also 'do' and 'know that we did'". He defines communication skill as "the degree to which individuals perceive they have satisfied their goals in a given social situation without jeopardizing their ability or opportunity to pursue their other subjectively more important goals".

Knowledge of the Corporate Culture
Corporate culture is a set of shared assumptions that guide what happens in

organizations by defining appropriate behavior for various situations. It affects the way employees and teams interact with each other in an organization, with clients, and with stakeholders. Schrod (2016) said that corporate culture influences how much employees identify their organization. Also, corporate culture is a deeply embedded set of values and be that determine to a great extent and how employees react to various situations. But if a corporate's culture cannot promote merit and efficiency, it can prove to be a drag on business productivity. This is the reason why corporate culture is shaped in such a way that it enhances business growth as it directs behaviors of both management and employees.

Nevertheless, knowledge of the corporate culture is operationally defined as the employees' awareness about the norms and values held by their corporation which shapes decisions, behavioral pattern and relationships around the workplace. Explicitly, the decisions taken by management on issues and the way employees and as well management relate amongst themselves, are guided by the corporate culture operating in such work environment. According to North (2015), culture also includes the firm's vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits. Simply stated, organizational culture is "the way things are done around an organization" (O'Donohue & Torugsa, 2015). Culture gives a group its uniqueness and differentiates it from other groups. Employees in a group share and must have the basic knowledge of their organizational values, beliefs and assumptions about what is wrong and right, effective and ineffective (Nikandrou in O'Donohue & Torugsa, 2015). In spite of the methodological and conceptual approach, all studies agreed on one point: similar cultural backgrounds produce similar thinking and behavioral patterns, which are distinct for each culture. Impressions about people and their culture,

however, are not static (Bhaskaran & Sukumaran, in O'Donohue & Torugsa, 2015). corporate culture may influence how much employees identify with their organization (Schrodt, 2016).

Concept of Performance
The concept of performance has gained increasing attention in recent decades, being pervasive in almost all spheres of the human activity. Performance is a subjective perception of reality, which explains the multitude of critical reflections on the concept and its measuring instruments. The multitude of studies at international level in the field of performance is due to the financial crisis that swept the economy globally, which has led to a continuing need of improvement in the area of performance of organizations (Ion & Criveanu, 2016). Didier (2012) believes that the performance consists in "achieving the goals that were given to you in convergence of enterprise orientations". In his opinion, performance is not a mere finding of an outcome, but rather it is the result of a comparison between the outcome and the objective. Unlike other authors, Didier considers that this concept is actually a comparison of the outcome and the objective. The author's definition is far from clear, as both outcomes and objectives vary, most often, from one field of activity to another. Most recently, there are a variety of definitions attributed to the concept of performance due to its subjective nature.

However, performance of healthcare centres is operationally defined as how well a healthcare centres functions and the extent to which set objectives and targets are met through level of immunization coverage, awareness created in communities and partnership with donor agencies. Michel cited in Ion and Criveanu (2016) characterizes the performance as future-oriented, designed to reflect particularities of each

organization/individual and is based on a causal model linking components and products. He defines a "successful" business as one that will achieve the goals set by the management coalition, not necessarily one that achieved them. Thus, performance is dependent as much of capability and future. Unlike other authors, Michel Lebas noted the difference between "a performance", "performance" and "being performant". "A performance" is subject generally to a measured result, higher than that provided for or arising from the previous results. "A performance" thus indicates always a positive connotation. "Performance" can be both positive and negative and relates to past results.

Patently, performance in primary healthcare centre is not an objective reality, waiting somewhere to be measured and assessed, but a socially constructed reality that exists in people's minds, if it exists somewhere. The definition of performance has led Folan, *et al.* (2017) to highlight three priorities or objectives of governance of performance: Performance should be analyzed by each entity within the limits of the environment in which they decide to operate. For example, a company's performance needs to be analyzed in the markets in which it operates and not those that are not relevant to its operations.

Measures of Performance
Level of Immunization Coverage
Since human cannot do without illness, it is pertinent to equally device a means of ensuring that these illness are tackled spontaneously. Tackling of these diseases could arise through proper immunization. However, immunization is a way to protect people from dangerous illnesses. Immunization is the cornerstone of public health. It is a way to protect people from infectious diseases. One of the measures of performance in the healthcare centres is the level at which immunization or vaccination rendered by this healthcare centres covers

the adequate location. Therefore, immunization could be called vaccination in this study. Vaccination is a simple, safe, and effective way of protecting people against harmful diseases, before they come into contact with them (Gammino, *etal,* 2014). It uses the human body's natural defenses to build resistance to specific infections and makes the immune system stronger. Vaccines train the immune system to create antibodies, just as it does when it's exposed to a disease. However, because vaccines contain only killed or weakened forms of germs like viruses or bacteria, they do not cause the disease or put individuals at risk of its complications.

Operationally, level of immunization coverage is the rate at which drugs are administrated by medical practitioners to specific area of the public. In the view of Melisa (2010) vaccination is the injection of a killed microbe in order to stimulate the immune system against the microbe, thereby preventing disease. Vaccinations, or immunizations, work by stimulating the immune system, the natural disease-fighting system of the body. The healthy immune system is able to recognize invading bacteria and viruses and produce substances (antibodies) to destroy or disable them. Vaccination prepare the immune system to ward off a disease. To only immunize against bacterial diseases, it is generally possible to use a small portion of the dead bacteria to stimulate the formation of antibodies against the whole bacteria.

Awareness Created in Communities
Community health awareness is defined by the World Health Organization (2015) as the sensitization of the public on the state of complete physical, mental and social wellbeing though not merely the absence of disease or infirmity. Jerome (2018) contends community health awareness is the translation which is known about health into desirable individual and community

behavioural patterns. Salisu (2018) noted that community health awareness addresses behavioural factors such as the vaccination of families and pets, thorough hand washing, safe sex and practicing good food hygiene. When people understand the risks of certain lifestyle choices, they know to start making changes. Communicable diseases are preventable, and as an organization, the aims to engage and empower the public to choose healthy behaviours and make changes to reduce the risk and spread of communicable diseases. Operationally, community health awareness is the sensitization of the public about health and health related issues to enable them avert sickness or live healthy. Community health awareness are designed to influence public knowledge, attitudes, and behaviors, yet achieving these goals and influencing the public is no simple matter. There is not a direct relationship between the messages that are sent to people and the reactions these people have to the messages. In addition to interpreting messages in very unique ways, people respond differently to the messages that they receive. For example, having drivers use their seatbelts when they drive might seem like a very straightforward public health goal (Odum, 2016). He added a very simple awareness might develop the message, "Wear your seatbelt when you drive!" For this message to influence the beliefs, attitudes, and values of all drivers, the educator planner must take many different communication variables into account.

Odum, (2016) posit that effective communication awareness must be strategically designed and implemented. In other words, they must use carefully designed messages that match the interests and abilities of the audience for which they are designed, and they must convey the messages via the communication channels that the target audience trusts and can easily access. A primary goal of the campaign is to influence the way the audience thinks about the health threat. If the target audience already believes this issue is very serious and of great relevance to their lives, this will lead the campaign planner to craft messages that will support these preconceptions. If, on the other hand, members of the target audience barely recognize the health threat and are not at all concerned about it, the campaign planner must design communication strategies that will raise the audience's consciousness and concern about the topic.

In this study therefore, partnership with donor agencies is conceptualized as collaboration between and among the healthcare centres, individual and other civil society organizations for adequate performance so as to improve the wellbeing of citizens. It equally depicts the coming together or collaboration between civil society organizations, religious organizations, government institutions and even private

Partnership with Donor Agencies
Partnership is a process in which autonomous or semi-autonomous actors interact through formal and informal negotiation, jointly creating rules and structures governing their relationships, and ways to act or decide on the issues that brought them together; it is a process involving shared norms and mutually beneficial interactions (Mathew 2017). Consequently, partnership is seen as the collaboration of organizations, institutions or individual to provides services or products in conjunction with the health centres to the public.

Partnership with donor agencies facilitate the smooth running of healthcare centres. It is commonly understood to mean the interactive relationship between a doctor or medical practitioners use medical facilities to improve health of patients. Nurses/patient, the former advising on

optimal strategies for improving or maintaining heath, and the latter following the advice and taking charge of his or her own health. Health partnerships may also include forums which meet periodically throughout the y ear with the broad role to agree on the vision, priorities and plans for programmes of health action (Akanu in Mathew, 2017).

In this study therefore, partnership with donor agencies is conceptualized as collaboration between and among the healthcare centres, individual and other civil society organizations for adequate performance so as to improve the wellbeing of citizens. It equally depicts the coming together or collaboration between civil society organizations, religious organizations, government institutions and even private individual who perceived a gap in the public place and thus, voluntarily in agreement with the health centres provides such service to the members of the public either at low cost or at no cost. However, partnership as a measure of performance of the health centres could be understood from the point at which the health centres demonstrates capacity to persuade members of the public or organizations for either funding or service collaboration (Mathew, 2017). An example of this collaboration is seen in when a medical foundation partner with either hospital or health centre to provide to the society services that are seen as problem to the public such as glaucoma, ulser, fibroid etc.

Theoretical Review
The study was anchored on Lewin and Edwards' Person-Environment Fit Theory. Lewin and Edwards' Person-Environment Fit Theory was popularized in 1962 as cited in Osita (2018). Person-Environment Fit Theory of psychological stress describes the interaction between the person and environment (P x E) as the key to comprehending people's cognitive,

emotional and behavioural reactions such as stress as well as operational productivity level. Two relevant assumptions of this theory are as follows:

1. A mismatch between a person and his work environment will lead to tension and uneasiness capable of hampering his level of productivity;

2. Worker's capabilities (experience or value) will determine the level of work pressure and how environmental press affects their output. This aspect of the theory amplifies the fact that a match on the ability of an employee to his or her work, determines his or her level of outcome.

The adoption of Person-Environment Fit Theory as the theoretical framework for the study is predicated majorly on the second assumption that states that "worker's capabilities (experience or value) will determine the level of work pressure and how environmental press affects their output". This implies that if there is an adequate match between employee's willingness and their knowledge to work, it contributes at a very high extent in ensuring better organizational performance. If there is a mismatch, it is assumed that there will be low level of performance.

Empirical Review
Mark, et al. (2022) examined the impact of job knowledge in the cognitive ability-performance relationship. The study compared the efficacy of a job knowledge test in predicting task performance and examined the mediating effect of job knowledge in the cognitive ability-performance relationship. Two hundred (200) undergraduates completed a test of cognitive ability and a written job knowledge test, and then performed a computer-generated truck dispatching simulation. Results demonstrated that job knowledge was a better predictor of task performance than was cognitive ability. Furthermore, the scores from the job

knowledge test mediated the effects of cognitive ability on task performance and explained significantly more of the variance in performance than did cognitive ability. These results expand our current understanding of job knowledge as a predictor of performance.

George (2011) examined the performance of health workers in decentralized services in Uganda. This study investigated the performance of health workers in the decentralized services in Uganda in order to develop a management framework that may be used to improve performance. The study followed a mixed research methodology and was descriptive. The survey design was used to collect quantitative data by means of a structured questionnaire. Qualitative data was collected using a semi-structured interview guide. The study population for the quantitative strand comprised 276 health workers including doctors, clinical officers, and professional nurses working in four districts: Kumi, Mbale, Sironko and Tororo. The health workers were selected using stratified random sampling. The population for qualitative strand was health services managers (N=21) from the same districts. The managers were selected purposively.

Quantitative data was analysed using SPSS version 18.0, while qualitative data was coded and analysed manually. The findings revealed that the performance of health workers is generally affected by health systems and work environment related factors.

The findings indicated that health workers are skilled, competent, and generally have positive attitudes and behaviours towards their clients. The study uncovered loop holes in performance management in the district health sectors. In most cases there is no target setting, no performance management planning, performance indicators are not clearly defined, and the

schedules for performance measurement are not always followed. There is limited career progression and lack of functional performance feedback and rewarding mechanisms. Although health workers are committed, there is widespread political interference and nepotism in the district health sector management. Overall, the researcher is optimistic that if the proposed performance management framework is implemented, the performance of health workers might improve.

Main (2022) examined workplace inclusion and performance of healthcare centres in Port Harcourt. The objective of the study was to examine the relationship between dimensions of workplace inclusion (de-tribalization, gender inclusion and information justice) and measures of performance such as vaccination, community health awareness and level of partnership of healthcare centres in Port Harcourt. Thus, the study was anchored on Social Identity Theory as its theoretical foundation. The study adopted the explanatory cross sectional survey research design, the population of the study was limited to thirty-three (33) public healthcare centres in Port Harcourt. Since the study is macro in nature and the population is not too large, the sample size consists of the entire population (thirty-three healthcare centres in Port Harcourt). However, the study adopts a census method of sampling. In terms of respondents, three (3) top level medical personnel were purposively selected from each from the thirty-three (33) healthcare centres in Port Harcourt. Thus, the sample of this study is thirty-three (33) healthcare centres in Port Harcourt with 99 respondents. After validation by the supervisor and two other experts in management, a total of ninety-nine (99) copies of the validated questionnaire were distributed to the targeted audience, the researcher was able to retrieved ninety (90) copies. The reliability of the instrument was ascertained

using test- retest SROCC (Spearman Rank Order Correlation Coefficient) which yielded a coefficient of 0.78. Mean and standard deviation was used for research questions analysis while Pearson Product Moment Correlation Coefficient was used to test hypotheses. It was found that dimensions of workplace inclusion (de-tribalization, gender inclusion and information justice) have a significant positive relationship with measures of performance such as vaccination, community health awareness and level of partnership of healthcare centres in Port Harcourt. Thus, it was concluded that Healthcare centres that neglect components of workplace inclusion, might face heavy challenges in maximizing the level of their performance. Consequently, it was recommended that administrator in healthcare centres should offer on-the-job training to their employees regardless of their gender to effect efficient and swift implementation of decisions and patient satisfaction.

Methodology
Research Design
The cross sectional explanatory survey research design was adopted for this study.
(i) the study was conducted across different Primary Healthcare Centres in Ikwere LGA
(ii) it also involves the test of hypotheses which is explanatory in nature.

Research Population
The population of the study consisted of fifteen (15) Primary Healthcare Centres in Ikwerre L.G.A. are purposively covered. Details of the population distribution are provided in the table below:

Table: Study Population

S/N	Names	Address
1.	Adanta Model Primary Health Centre	Adanta Isiokpo
2.	Ipo Model Primary Health Centre	Ipo 2
3.	Omademe Model Primary Health Centre	Omuechen
4.	Ozuaha Model Primary Health Centre	Omunah
5.	Igwuruta Model Primary Health Centre	Omunwei
6.	Aluu Model Primary Health Centre	Omuahonwo Boundary
7.	Omuoko Aluu (UPTH) Primary Health Centre	Omuoko Aluu
8.	Omupirikpi Infant Welfare Clinic	Omupirikpi Ikwere Local Government
9.	Elele Model Primary Health Centre	Omuorluma Elele
10.	Omerelu Model Primary Health Centre	Omukoroga Omerelu
11.	Apani Model Primary Health Centre	Olori Akpani
12.	Omuanwa Health Centre	Omueze Omuanwa
13.	Ubima Model Primary Health Centre	Ngbuogba Ubima
14.	Omagwa Federal Airport Authority Nigeria Clinic	Omuolo Umuagwa Ipo Road
15.	Omagwa Model Primary Health Centre	Okparagwa Port Harcourt- Owerri Road

Source: hfr.health.gov.ng

Instrumentation and Measurement
Structured questionnaire served as the instrument for data collection. The questionnaire was titled "employee knowledge of work and performance index (EKWPI). The questionnaire design was prepared in four (4) point rating scale format with the following response options Very High Extent (VHE) 4, High Extent (HE) 3, Moderate Extent (ME) 2, and Low Extent (LE) 1.

Validity of Instrument
The work adopted the face and content validity.

Reliability of Instrument
Reliability of instrument refers to consistency of the measuring instrument. Test-retest method was used. The response obtained from the respondents on the two occasions was correlated using SROCC (Spearman Rank Order Correlation Coefficient) which yielded a coefficient of 0.79.

Administration of the Instrument
A total of seventy-five (75) copies of the validated questionnaire were distributed to the targeted audience. Sixty (60) copies of the entire validated questionnaire was retrieved and used.

Method of Data Analysis
The test of hypotheses was done using Correlation Statistical tool such as Pearson Product Moment Correlation Coefficient. The formula is presented below:

$$\gamma = \frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{[n\Sigma X^2 - (\Sigma X)^2][n\Sigma Y^2 - (\Sigma Y)^2]}}$$

Where:
N= Total Number
X = Numbers of Data in Group A
Y= Numbers of Data in Group B
Σ = Summation
$\sqrt{}$ = Square Root

Decision Rule: Using a level of significance of 0.05 (confidence interval of 95%), when a calculated significant value is less than 0.05 the null hypothesis will be rejected, if otherwise, the null hypothesis will be accepted.

Tests of Hypotheses
Ho_1: There is no significant relationship between problem solving skills and level of immunization coverage of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.

Table 1: Relationship between Problem Solving Skills and Level of Immunization Coverage

S/N	X	Y	XY	X^2	Y^2
1.	13	12	156	169	144
2.	9	9	81	81	81
3.	5	6	30	25	36
4.	3	3	9	9	9
5.	12	12	144	144	144
6.	9	8	72	81	64
7.	6	6	36	36	36
8.	3	4	12	9	16
9.	11	12	132	121	144
10.	9	9	81	81	81
11.	6	7	42	36	49
12.	3	3	9	9	9
13.	11	12	132	121	144
14.	8	8	64	64	64
15.	7	6	42	49	36
16.	4	4	16	16	16
	ΣX= **119**	ΣY=**121**	ΣXY=**1058**	Σx^2= **1051**	ΣY^2=**1073**

Source: Field Survey, 2023.

$$\gamma = \frac{n\Sigma xy - \Sigma x\Sigma y}{\sqrt{[n\Sigma X^2-(\Sigma X)^2]\,[n\Sigma Y^2-(\Sigma Y)^2]}} \qquad = \frac{16 \times 1058 - 119 \times 121}{\sqrt{(16 \times 1051 - 119^2)(16 \times 1073 - 121^2)}}$$

$$\gamma = \frac{16928 - 14399}{\sqrt{(16816 - 14161)(17168 - 14641)}}$$

$$\frac{2529}{\sqrt{(2655)(2527)}} \qquad = \qquad \frac{2529}{\sqrt{6709185}}$$

$$\frac{2529}{\sqrt{2590.2094}}$$

$$\therefore \gamma = 0.976 \text{ (approx.)}$$

Table 4.5 shows r value of 0.976. Since the calculated r value of 0.976 is greater than the critical r value of 0.05, the null hypothesis which states that there is no significant relationship between problem solving skills and level of immunization coverage of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State was rejected while the alternate was accepted. This implies that there is a significant positive relationship between problem solving skills and level of immunization coverage of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.

H0₂: There is no significant relationship between communication skills and awareness created in communities of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.

Table 2: Relationship between Communication Skills and Awareness Created in Communities

S/N	X	Y	XY	X^2	Y^2
1.	12	13	156	144	169
2.	9	8	72	81	64
3.	6	6	36	36	36
4.	3	3	9	9	9
5.	13	13	169	169	169
6.	8	8	68	64	64
7.	6	7	42	36	49
8.	2	3	6	4	9
9.	12	12	144	144	144
10.	9	8	72	81	64
11.	5	6	30	25	36
12.	4	4	16	16	16
13.	13	13	169	169	169
14.	7	8	56	49	64
15.	6	6	36	36	36
16.	3	4	12	9	16
	Σx= **118**	ΣY= 122	ΣXY= 1093	**ΣX²= 1072**	ΣY²= **1114**

Source: Field Survey, 2023.

$$\gamma = \sqrt{\frac{n\Sigma xy - \Sigma x\Sigma y}{[n\Sigma X^2-(\Sigma X)^2][n\Sigma Y^2-(\Sigma Y)^2]}} = \sqrt{\frac{16 \times 1093 - 118 \times 122}{(16 \times 1072 - 118^2)(16 \times 1114 - 122^2)}}$$

$$\gamma = \sqrt{\frac{17488 - 14399}{(17152 - 13924)(17824 - 14882)}}$$

$$\sqrt{\frac{3089}{(3228)(2942)}} = \sqrt{\frac{3089}{9496776}}$$

$$\sqrt{\frac{3089}{3081.684}}$$

$$\therefore \gamma = 1.002 \ (\text{approx.})$$

Table 4.6 shows r value of 1.002. Since the calculated r value of 1.002 is greater than relationship between communication skills and awareness created in communities of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State was rejected while the alternate was accepted.

This implies that there is a significant positive relationship between communication skills and awareness created in communities of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.

H0₃: There is no significant relationship between knowledge of the corporate culture and partnership with donor agencies of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.

Table 3: Relationship Between Knowledge of The Corporate Culture and Partnership with Donor Agencies

S/N	X	Y	XY	X^2	Y^2
1	12	12	144	144	144
2	8	9	72	64	81
3	6	6	36	36	36
4	3	4	12	9	16
5	12	13	156	144	144
6	8	8	64	64	64
7	6	5	30	36	25
8	4	4	16	16	16
9	13	13	169	169	169
10	7	8	56	49	64
11	6	7	42	36	49
12	3	3	9	9	9
13	12	13	156	144	169
14	9	8	72	81	64
15	5	6	30	25	36
16	3	4	12	9	16
	ΣX- 117	ΣY- 123	ΣXY= 1076	ΣX^2= 1035	ΣY^2= 1102

Source: Field Survey, 2023.

$$\gamma = \frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{[n\Sigma X^2-(\Sigma X)^2][n\Sigma Y^2-(\Sigma Y)^2]}} = \frac{16 \times 1076 - 117 \times 123}{\sqrt{((16 \times 1035 - 117^2)(16 \times 1102 - 123^2))}}$$

$$\gamma = \frac{17216 - 14391}{\sqrt{(16560 - 13689)(17632 - 15129)}}$$

$$\frac{2825}{\sqrt{(2871)(2503)}} = \frac{2825}{\sqrt{7186113}}$$

$$\frac{2825}{\sqrt{2680.6926}}$$

$$\therefore \gamma = 1.054 \text{ (approx.)}$$

Table 4.7 shows r value of 1.054. Since the calculated r value of 1.054 is greater than the critical r value of 0.05, the null hypothesis which states that there is no significant relationship between knowledge of the corporate culture and partnership with donor agencies of Primary Healthcare Centres in Ikwere Local Government Area,

Rivers State was rejected while the alternate was accepted. This implies that there is a significant positive relationship between knowledge of the corporate culture and partnership with donor agencies of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.

Summary of Findings

Based on the analysis of data carried out, the following findings were made:
1. There is a significant positive relationship between problem solving skills and level of immunization coverage of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.
2. There is a significant positive relationship between communication skills and awareness created incommunities of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.
3. There is a significant positive relationship between communication skills and awareness created incommunities of Primary Healthcare Centres in Ikwere Local Government Area, Rivers State.

Conclusion

The study concluded that a significant positive relationship exists between dimensions of employee knowledge of work (problem solving skill, communication skills and knowledge to the corporate culture) and measures performance of Primary Healthcare Centres in Ikwere LGA in Rivers State such as level of immunization coverage, awareness created in communities and partnership with donor agencies. Primary Healthcare Centres management who are willing to tackle the issue of low level of immunization coverage and equivalent through the employment of relevant skills, stand chances of attaining better organizational performance.

Recommendations

Based on the findings, the following recommendations were made:
1. Management of Primary Healthcare Centre should equip their employees on how to engage in critical thinking to solve departmental problems.
2. Workers of Primary Healthcare Centre should encourage hitch free communication channels to help subordinates access patients and other personnel.
3. Management of Primary Healthcare Centre should imbibe corporate norms and values that will encourage hard work which will favour both the workers and the organization.

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UTILIZATION OF DIGITAL TECHNOLOGIES FOR EFFECTIVE SECURITY MANAGEMENT OF PUBLIC SENIOR SECONDARY SCHOOLS IN RIVERS STATE

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Abstract
This study investigated utilization of digital technologies for effective security management of public senior secondary schools in Rivers State. Three research questions and three hypotheses guided the study. The descriptive research design was adopted for the study. The population of the study comprised all 6,893 teachers in public senior secondary schools in Rivers State. The sample for the study was 500 teachers in public senior secondary schools in Rivers State. A Stratified random sampling technique was used for the study. The instrument for data collection was "Digital Strategies for Effective Security Management of Public Senior Secondary Schools Questionnaire ("DSESMPSSQ") and was subjected to face and content validity by three experts. Internal consistency reliability co-efficient index of 0.73 was obtained using Cronbach Alpha method. The research questions were answered using means, standard deviations, while the null hypotheses were tested using t-tests at 0.05 level of probability. The findings revealed that, to a low extent digital technologies like CCTV surveillance, biometric identification, and panic alarm system were used for the management of security in Senior secondary schools in Rivers State. The t-test revealed that there was significant difference in the mean ratings of male and female principals on the extent digital technologies like CCTV surveillance, biometric identification, and panic alarm system were utilized for the management of security in Senior Secondary Schools in Rivers State. It was recommended that principals should adopt the use of digital technologies for the management of security in Senior Secondary Schools in Rivers State. Besides, principals should be trained and re-trained with a view to helping them become conversant with the use of digital technologies for management of security in schools.

Keywords: Security, Digital, Technology, Secondary Schools, Management

Introduction
Education is very important to every nation of the world. It is important because the transmission of cultural heritage and technological advancement of any nation depends on it. Schools in the educational system are established to facilitate the formal implementation of educational policies and programmes in the society. The safety of lives and properties in the schools is expected to be guaranteed as provided in Section 33 of the Constitution of the Federal Republic of Nigeria as amended 2011. However, in recent times Nigerian schools at all levels have been besieged with violent attacks that ranges from kidnapping staff and students, molestation as well as destruction of facilities to outright bullying which usually claim lives and properties. For instance, the operation of the Boko haram sect in North Eastern Nigeria has left many scars

of woes. In April 2014, 276 girls of Government Secondary School Chibok, Bornu State were abducted in their hostel, and kidnapping of five lecturers at the University of Abuja staff quarters on 2nd November, 2021 (Onyiri & Walson, 2021).

These internationally well-published cases of school kidnapping brought a new dimension to Nigeria's insecurity challenge as many secondary schools and higher institutions attacks have been recorded thereafter. There are several cases of kidnapping and killing of students and teachers. It was reported that on February 17th 2020, 42 people including students, teachers and their families from Government Secondary School Jangebe, Zamfara State, were abducted (Eons, 2020); The Global Coalition to Protect Education from Attack (GCPEA, 2020) reported that on March 11th and 14th 2013, unidentified attackers set ablaze and burnt down Gwange I and III Primary School in Maiduguri City, Bornu State respectively; GCPEA (2020) also reported that on 23rd March, 2013, persons believed to be Boko Haram, burnt down three private schools in Biu town, Bornu State at night, while Iheamnachor (2015) reported that five secondary schools teachers were kidnapped in a school in Rivers State leaving the students and the people in the area in total fear and tension. These are serious threats in Nigerian schools.

Some schools are forced to close down, while others operate epileptic services because of fear of threats to human life. Recent statistics a according to Chukwu (2021), showed that about 2,295 teachers have been killed and 19,000 others displaced in Bornu, Yobe and Adamawa States between 2009 to 2018, while an estimate of 1,500 schools had been destroyed since 2014, with over 1,280 casualties among teachers and students (Adesulu, 2019). The rates of school dropout have increased on a daily basis. In the light of recent insecurity challenges in Nigerian schools, the safety of both teachers and students is worrisome. The effects of these attacks have exacerbated the fragile school system which is anti-ethical to sustainable national development.

Several human measures have been used to tackle this menace, yet there are still frequent attacks being experienced in the school environment. Efforts made by government and educational stakeholders to address these issues include: deployment of security forces to schools and implementation of policies aimed at enhancing a safe school environment for teaching and learning to thrive. Dede (2018) noted that if these incessant attacks are not proactively dealt with, it will portend a longer-term danger to quality of education, labour force, and human capital needed to drive a sustainable economy in Nigeria in the near future. The United Nations Children's Fund (UNICEF) had in April 2022 said insecurity had caused the closure of 11,536 schools in Nigeria since December 2020. According to UNICEF, the security challenges in Nigeria have affected the education of 1.3 million children in less than two years. The finding from the study by Paul (2015) revealed that, the nonchalant attitude of the Schools towards security, porous school, incompetent and unskilled guards, incomprehensive security policy; lack of awareness and manpower, and school as a soft target as factors responsible for insecurity in our schools. Some other causes of insecurity in Nigerian schools include: bad leadership in a country, diseases and poverty, lack of faith in everyone, being egotistical and greedy, and hatred and tribal strife. Simwa (2022) noted that insecurity in Nigeria is a significant reason why the growth and development of the country are affected. Even though the country is blessed, getting a lasting solution to this problem is still a major concern to the government and its citizens.

Lopez (2013) noted that for the last few years, citizens have been victims of robberies, which sometimes happen in daylight. Organized criminal gangs take over the streets of the country. People do not feel safe when walking on the roads. Corrupt government officials cannot provide help to Nigerians to fight these criminals. Terrorism in the country is not a new problem. Boko Haram and Niger Delta Avengers are two prominent terrorist organizations that cause the most damage to the country. The federal government keeps fighting with terrorists while Nigerian soldiers die every day for their country, yet insecurity continues to thrive

Insecurity threats instance have long spread to schools causing serious damage to the education system which calls for a state of emergency. The need to place on red-alert by state actors to devote adequate attention on digital measures towards ameliorating this menace becomes imperative. The urgent need to adopt digital strategies to manage security in Nigerian schools to ensure that safety of staff, students, and properties is guaranteed.

Insecurity is a state of fear from danger or threat. Insecurity is absence from freedom and resilience to potential harm caused by others. Insecurity is synonymous with feelings of being unsafe, absence from freedom and susceptible to dangerous attacks and infliction of physical bodily harm. Manga (2019) described insecurity as a state of fear of impending danger and actual experience of harmful activities that are destructive to lives and properties. Insecurity does not provide a safe climate for people to work for high productivity. Insecurity is an antithesis of security. The Oxford Advanced Learner's Dictionary (2015) defined insecurity as "a state of fear against attack, and danger, etc." In the words of Paul (2015), insecurity is a state of being subject to danger or injury, anxiety, fear, worry, uncertainty, and unsureness. Insecurity is generally perceived as human insecurity. It is the state of emotional unrest which flows from the opinion, that every-one forms about his unsafe state. In actual sense, insecurity could be seen as a great feeling of danger that something of value would be taken away from an individual, group or nation without their consent. Eugene (2001) also added that human insecurity involves such values as infringement of human rights, absence of good governance, inaccessibility to education and health care which limit individuals the opportunity and choice to meet their potentials. Those who suffer from insecurity may be persons and social groups, objects and institutions, ecosystems or any other entity or phenomenon vulnerable to unwanted threat to life. Insecurity infuses a situation where individuals are not safe or protected to carry their duties maximally. Therefore, in the conventional sense of the term, insecurity is a situation where a thing or a person is exposed to any danger, risk of physical or moral aggression, accident, theft or deterioration etc. in this context, insecurity is concerned with feelings of uncertainty, fear, anxiety, danger, injustice or threats to life which deter the implementation of policies and programmes in the education system.

The contrary is that the security of teachers and students would imply presence of factors in the environment that enhance peace and happiness so as to spur the teachers to effectively function in their duty posts. It therefore confirms that safe school environment rages peaceful co-existence, positive school climate, cordial interactions among leaders and teachers, teachers and principals, students and students, and teachers and students School security is a school environment that guarantees the safety of lives and properties of stake holders in the school. It is an environment that ensures peace of mind to staff and students that would spur them to function

effectively in the school. That was why Shuaibu (2015) submitted that a safe school is one that breeds peaceful, positive or cordial relationship among students, teachers and administration. School security is a safe school environment which encourages peaceful co-existence, positive school climate, cordial interactions among teachers and teachers, teachers and principals, students and students, and teachers and students for the overall benefit of the school system. The school environment in which teachers and students inhabit ought to be safe, friendly, calm and free from external and internal insecurity. It has been noted in Akintunde & Selzing-Musa (2016) that no matter the extent of efficiency and effectiveness in any educational administration, the school may not succeed in getting the cooperation of devoted teachers without security. Therefore, teachers' high productivity thrives in the atmosphere of peace, unity and security but in the environment of insecurity, teachers' productivity may be very low.

The situation in Nigerian schools of recent is characterized by insecurity where lives and properties are not protected and teachers and students work in fear of being harmed on a daily basis. On a daily basis the media has continued to highlight and discuss incessant cases of armed robbery, kidnapping, bombing, abductions, rape, cult activities in the school environment which have become regular occurrences and have characterized life in our schools (Onasanya, Richardson, & Tuson (2010). Instances abound where some states in the Northern part of Nigeria such as Yobe and Damaturu Metropolis have been invaded by Boko Haram – a terrorist Islamic group who refused to accept Western Education. Consequently, the activities of this group of terrorists have forced many children and teachers to flee from their schools and environments for safety in response to the law of nature which Okoli, (2013) argued

that the school environment's safety and security condition no doubt affects both teachers' and students' response to teaching and learning, as self-preservation is nature's first law. Every living thing has a tendency to preserve itself, as it responds to danger.

Insecurity makes people to work in an environment that is harmful and pose threat to lives. Insecurity is a threat to learning and the prevailing peace within and around the schools which often has ripple effects on effective teaching and learning and activities of such schools (Akintunde & Selzing-Musa, 2016). A state of insecurity is very disastrous and the effect it could have on the lives of individuals is tremendous. When insecurity is experienced in the school environment, it leads to low teachers' productivity and consequently poor students' performances. An emerging or subsisting threat to one's comfort, physical, psychological, emotional wellbeing and related others is tantamount to insecurity. Whenever and wherever people feel that they cannot be certain of not being harmed whether physically, psychologically or emotionally, there is insecurity.

Following the United Nation's Sustainable Development Goals (SDGs), government plans to invest in education to fill the skills gap in the economy by ensuring access to basic education for all, improve the quality of secondary and tertiary education, and encourage students to enroll in science and technology courses. However, the prevalence of school attacks in Nigeria reveals the dwindling capabilities of state actors to achieve sustainable development and national security (Okoli, 2013), however it is perceived that the use of technology mediated devices will ameliorate the scourge.

The need to adopt digital devices to manage security threat in Nigerian schools

has been reiterated by several authors (Acumba, (2019). Digital Technology refers to the tools, techniques, methods and systems that are developed through scientific and engineering knowledge to solve problems or improve existing processes in various fields. It encompasses a wide range of applications and tools, including hardware, software, and infrastructure, that are designed to enable the creation, processing, storing, and exchange of information or to perform specific tasks efficiently. According to the Chambers 21st Century Dictionary, digital technology is the practical use of scientific knowledge in industry and everyday life. According to Metiri (2019), digital technology is the application of scientific knowledge to the practical aims of human life or, as it is sometimes phrased, to the change and manipulation of human environment. Therefore, digital technology is the way we apply scientific knowledge for practical purposes. It includes machines (like computers) but also techniques and processes (like the way we produce computer chips). It might seem like all technology is only electronic, but that's just most modern technology. Some common technologies include: smart phones, computers, robots, internet, medical equipment, projectors, and cameras etc. The use of technology has greatly impacted human life, shaping the way we work, communicate, learn and live. In this context, technology refers to the application of digital technologies and procedures to check security threats in the school system in Nigeria.

The question which seems worrisome is to what extent are digital tools or devices available and utilized in the operation of educational organizations in Nigeria in the management of security as obtainable in developed countries as a trend in the global world. To effectively combat insecurity in Nigerian schools, the need to adopt the use of digital technologies is imperative.

Abdulkadir, Hassan, & Abdulrahman (2019) noted that in the 21st century and beyond, nation need to leverage technology in to strive and one area to utilize technology effectively is in the area of managing security. Results of a study by Lyrick (2015) showed that the crime prevention effect of the digital devices like CCTV was significant. The number of robberies and thefts in the areas with CCTV installed reduced by 47.4%, while the areas without CCTV showed practically no change in the number of crimes. Similarly, results revealed that the installation of CCTV cameras are very effective in crime prevention as it monitors and records the scenes 24/7 that can help in solving any reported crimes such as theft or robbery incident. He noted that countries that are secured have high global competiveness and are more likely to attract foreign investments, create job opportunities, and achieve economic growth. In contrast, countries with low global competiveness due to insecurity may face challenges in attracting investment and growing their economies. Perhaps low technological integration in the Nigerian educational system may have led to the persistent rate of insecurity in schools. The need to investigate the extent digital technological strategies is utilized for effective management of public senior secondary schools becomes inevitable.

The use of digital technology is one of the platforms that cannot be ignored, especially when it comes to insecurity were lots of technologies can be deployed to tackle, improve vigilance in our educational institutions. Basically digital technologies can be of great help in detected crimes as obtainable in developed countries of the world. When we look at Nigeria in particular, Samuel & Chukuma (2015) noted that Nigeria is a country that has a lot of issues that can contribute to the insecurity such as poverty, illiteracy, corruption, unemployment and so on. Any

country with any of the above indices at risk of increased level of violence or crimes like robbery, kidnapping, rape, and even terrorism.

The need to place on red-alert by state actors to devote adequate attention on digital measures towards managing security becomes imperative to create a safe environment in the school system. In contemporary society, technological growth is taking over as a formative influence in school administration in teaching and learning, and promoting security measures in school environments for peaceful co-existence. Perhaps the introduction of sophisticated digital security technologies would reduce the spate of insecurity in Nigerian schools. Though this position has been rebuffed by several studies due to none availability and use of digital tools. For instance, in a study conducted by Agbatogun (2006) on the utilization of Information and Communication Technologies for quality instruction in Colleges of Education in Nigeria showed that ICT facilities like: cable satellite, computer, display board, internet, opaque projectors, overhead projectors, radio cassette recorder, slide projector, video projectors, and video CD's are to a low extent available and utilized in Colleges of Education in Nigeria. These results were not different from that of Walson and Nwuke (2021) in another study on utilization of ICT in the administration of public senior secondary schools in Rivers State. It was found out that ICT facilities were to a low extent utilized in staff and students record management, admission, student results, instructional delivery, preparation of exams and school time table, and preparation of staff salaries. This was because it was not uncommon to find that educational institutions or establishments in Nigeria still keep records in files and filling cabinets where they accumulate dust. Many of these files are often eaten by rodents and pest which render them

irretrievable. Besides, Ahmed (2019) asserted that a great deal of routine administrative work in Nigerian educational institutions is still done manually. School officials go through the analogue process of registering students manually, maintaining records of students' performance, keeping inventory of supplies, and paying bills. He noted that the huge time spent on these manual exercises can be drastically reduced when the system is digitalized.

From the overview, it is apparent that a proper review of the subject is important to provide suggestions for a digitalized future in educational management in Nigeria in the management of security. This paper study therefore examines digital strategies for the management of security in public senior secondary schools in Rivers State to provide empirical evidence on the extent digital technologies are utilized for management of security in public senior secondary schools in Rivers State.

There are several technologies deplored to nip security threats in schools in advanced countries of the world. Acumba (2019) identified the following technological strategies to curb insecurity in Nigeria Schools. They are: use of CCTV camera, sensor network, biometric scanner, metal detectors, panic bottons, GPS tracking devices Access control system, Alarm system, and cyber security technologies like block chain, web security, and firewalls. However, this study will be de-limited to CCTV surveillance, biometric identification, and panic alarm system as digital strategies for the management of security in public senior secondary schools in Rivers State.

CCTV plays a significant role in protecting the public and assisting the police in the investigation of crime. The UK is one of the most watched countries in the world (Ekweogu, & Chime, 2020). It

is estimated that there are five million CCTV cameras in use today, and this number is likely to rise in the future (Lyrick, 2015). Even though the exact number of CCTV systems deployed in the UK is unclear, "the extent of CCTV coverage and the government's funding of new systems have increased dramatically over the last decade," yet there is little substantive research evidence to show that CCTV works (Haufe, 2014). Social perceptions and attitudes towards security have changed, and over time society has become increasingly security conscious. This change has also been a result of the mass media coverage on crime. People have changed their views as a result of terrorism, gun crime, child abductions, etc. And have adopted a more proactive role in ensuring their own safety. One way this has been achieved is through investment in CCTV systems. Security is now considered essential for the protection of both people (e.g., within businesses and for the general public) and their property. With the rise in crime in Nigeria especially in the North East and South-South where terrorism and kidnapping are issues disturbing the peace of the region. There is need for CCTV to be deployed to schools to check security threats.

Biometric identification scanners are devices, such as fingerprint or facial recognition scanners can be used to control access to certain areas of the school such as the main entrance of school gate, computer laboratories or administrative offices. This technology can help to prevent unauthorized access to sensitive areas. For effective use of biometric scanner, students and regular visitors' biometric information are collected for proper recognition by the scanner. Unidentified persons cannot gain access to the school premises as anyone entering the school must be identified. This technology or events unauthorized access to sensitive areas, such as computer rooms, laboratories, and administrative offices. Access control enable facilities to create

different zones, where only those with the appropriate credentials are granted access. In schools, this often comes in the form of key cards that are swiped through card readers. In the event of an emergency, this could allow educators to get students to a safe area using their credentials. This system could also be used to lock down portions of a building, aiding emergency responders in quarantining a specific part of the facility so that a problem doesn't spread.

Panic alarm systems are emergency alert devices that can be installed in strategic locations such as classrooms, offices or other areas in the school to allow individuals to quickly and discreetly call for help in case of emergency. In the event of an emergency, such as a security breach, a student or staff member can press the panic button which sends an immediate alert to the school security team or law enforcement agency. These days in the United Nations, more classrooms than ever are being outfitted with two-way communication systems that can be used to initiate emergency protocols or even just to reach administrative officials. There are compact panic alarm systems that can send out a school-wide alert within mere seconds, which then allows security staff to assess the situation and determine what threats there may be.

However, the extent to which these digital technological strategies are utilized to manage security in public senior secondary schools in Rivers State are yet to be empirically verified. The study intends to fill the gap.

Statement of the problem
The prevalence of insecurity at all levels of Nigerian educational system tends to pose serious threats to human lives and properties. Several human efforts have been made to curb this ugly menace with futile overtime. Although the 21st century is

driven by digital technologies to provide a paradigm shift from human to technological aparatus in the ways of during things in all life endeavors, yet the effective utilization of digital technological devices to ameliorate insecurity scourge in Nigerian as a third world country to provide a safe haven for implementation of policies and programmes in the education sector as obtainable in advanced countries of the world has not been examined in senior secondary schools particularly in Rivers State. Perhaps the use of digital technological devices like: CCTV surveillance, biometric identification, and panic alarm system measures as means to check the prevalence of insecurity in senior secondary schools in Rivers State will suffice. The problem of the study therefore is: to what extent will the use of digital technological strategies mitigate insecurity in senior secondary schools in Rivers State, Nigeria.

Purpose of the Study

The main aim of the study is to determine the extent digital technological are utilized to mitigate insecurity in senior secondary schools in Rivers State. Specifically, the study sought to:

1. Investigate the extent CCTV surveillance digital technological strategy is utilized for effective security management of public senior secondary schools in Rivers State

2. Examine the extent biometric identification as a digital technological strategy is utilized for effective security management of public senior secondary schools in Rivers State

3. Examine the extent panic alarm system as a digital technological strategy is utilized to mitigate insecurity in senior secondary schools in Rivers State. for effective security management of public senior secondary schools in Rivers State

Research Questions

The following research questions were posed to guide the study.

1. To what extent is CCTV surveillance as a digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State?

2. To what extent is biometric identification as a digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State?

3. To what extent is panic alarm system as a digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State?

Hypotheses

The following null hypotheses are formulated to be tested at 0.05 level of significance.

1. There is no significant difference in the mean ratings of male and female principals on the extent CCTV surveillance as digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State.

2. There is no significant difference in the mean ratings of male and female principals on the extent biometric identification as digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State.

3. There is no significant difference in the mean ratings of male and female principals on the extent panic alarm system as a technological strategy utilized for effective security management of public senior secondary schools in Rivers State.

Methodology

The study investigated the utilization of digital technological strategies for effective security management of public senior secondary schools in Rivers State. Three research questions and three hypotheses guided the study. A descriptive research design was adopted for the study. The population of the study was six thousand eight hundred and ninety three (6,893) teachers in public senior secondary schools in Rivers State. The sample of the study was five hundred (500) teachers of 316 males and 194 females determined using Krejcie and Morgan table. Stratified random sampling technique was adopted for the study to select the sample size. The instrument for data collection was the Digital Strategies for Effective Security Management of Public Senior Secondary Schools Questionnaire (DSESMPSSSQ). Face and content validity was done by three experts from the department Guidance and Counseling, and Educational Management all of Ignatius Ajuru University of Education, Rivers State. The reliability of the instrument was 0.73 determined using Cronbach Alpha. Mean and standard deviation scores were used to answer the research questions. The means were classified using real limits of numbers were 0.5-1.49 represented VLE; 1.50-2.49 for LE; 2.50-3.49 for HE; and 3.50-4.49 for VHE. Independent t-test was used to test the null hypotheses at 0.05 level of significance.

Results

Research Question One: To what extent is CCTV surveillance as a technological strategy utilized for effective security management of public senior secondary schools in Rivers State?

Table 1: Mean ratings of respondents on the extent CCTV surveillance as a technological strategy is utilized for effective security management of public senior secondary schools in Rivers State.

S/N	ITEMS	Male N=316		Female N=194		Mean Set		Decision
		Mean	STD	Mean	ST.D	Mean	STD	
1.	CCTV are provided in school environment to monitor the premises of the school	2.25	1.14	2.18	0.95	**2.12**	**1.05**	Low Extent
2.	CCTV are provided in school gates to monitor the entrants to the school	2.53	0.80	2.31	0.75	**1.42**	**0.78**	Low Extent
3.	CCTV are provided in school classes to monitor the activities in the classes	1.25	1.14	2.47	0.99	**2.11**	**1.07**	Low Extent
4.	CCTV are provided in school libraries to monitor the activities of users	1.63	0.60	2.58	0.66	**2.61**	**0.63**	Low Extent
5.	CCTV are provided in school pathways to monitor the movement of people in the school	1.53	0.79	2.32	0.82	**2.43**	**0.81**	Low Extent
N=500	**Grand Mean Set & STD**	**2.38**	**0.94**	**2.13**	**0.86**	**2.28**	**0.91**	**Low Extent**

Results in table 1 show the summary of mean and standard of respondents on the extent CCTV surveillance as a technological strategy are utilized for effective security management of public senior secondary schools in Rivers State. The results represent the respondents' opinion that items 1-5 with their respective means and standard deviations are below the criterion means. Meaning that all the 5 items are lowly rated with their individual mean less than the cumulative criterion mean of 2.50. From the table in item 1-5 that, to a low extent, CCTV are utilized in school environment, gates, classrooms, libraries and pathways to monitor daily activities. In summary, the grand mean set stood at 2.28(STD=0.91) indicating that the

respondents agreed to a low extent that CCTV surveillance as a technological strategy are to a low extent utilized for effective security management of public senior secondary schools in Rivers State.

Research Question Two: To what extent is biometric identification as a technological strategy utilized for effective security management of public senior secondary schools in Rivers State?

Table 2: Mean ratings of respondents on the extent biometric identification as a technological strategy is utilized for effective security management of public senior secondary schools in Rivers State.

S/N	ITEMS	Male N=319		Female N=194		Mean Set		Decision
		Mean	STD	Mean	STD	Mean	STD	
6	Biometric identification are provided in school assembly halls to identify real staff and students	2.09	0.91	2.11	1.24	**2.14**	**1.06**	Low Extent
7	Biometric identification are provided in school classes to identify real staff and students	2.41	0.96	2.19	0.99	**2.30**	**0.97**	Low Extent
8	Biometric identification are provided in school offices to identify real staff and students	2.09	0.95	2.41	1.24	**2.12**	**1.09**	Low Extent
9	Biometric identification are provided in school eateries to identify real staff and students	2.35	0.84	2.32	0.75	**2.59**	**0.79**	Low Extent
10	Biometric identification are provided in school laboratories to identify real staff and students	2.03	0.79	2.08	0.74	**2.06**	**0.77**	Low Extent
N=500	**Grand Mean Set & STD**	**2.23**	**0.89**	**2.18**	**1.05**	**2.43**	**0.97**	**Low Extent**

Results in table 2 show the summary of mean and standard of respondents on the extent biometric identification as a technological strategy are utilized for effective security management of public senior secondary schools in Rivers State. The results represent the respondents'

opinion that items 6-10 with their respective means and standard deviations are below the criterion means. Meaning that all the 5 items are lowly rated with their individual mean less than the cumulative criterion mean of 2.50. It is deduced from the table in item 6-10 that, to

a low extent, biometric identification are utilized in school environment, gates, classrooms, libraries and pathways to monitor daily activities. In summary, the grand mean set stood at 2.43(STD=0.97) indicating that the respondents agreed to a low extent that biometric identification as a technological strategy are to a low extent utilized for effective security management of public senior secondary schools in Rivers State.

Research Question Three: To what extent is panic alarm system as a technological strategy utilized for effective security management of public senior secondary schools in Rivers State?

Table 3: Mean ratings of respondents on the extent panic alarm system as a technological strategy is utilized for effective security management of public senior secondary schools in Rivers State.

S/N	ITEMS	Male N=316		Female N=194		Mean Set		Decision
		Mean	STD	Mean	STD	Mean	STD	
11	Panic alarm system are provided in school environment to give signals for any security threat in the premises of the school	2.09	0.91	2.11	1.24	**2.10**	**1.06**	Low Extent
12	Panic alarm system are provided in school gates to give signals for any security threat at the gates of the school	2.41	0.96	2.19	0.99	**2.30**	**0.97**	Low Extent
13	Panic alarm system are provided in school classrooms to give signals for any security threat at the classrooms	2.19	0.95	2.31	1.24	**2.34**	**1.09**	Low Extent
14	Panic alarm system are provided in school libraries to give signals for any security threat at the libraries	2.34	0.84	2.32	0.75	**2.39**	**0.79**	Low Extent
15	Panic alarm system are provided in school pathways to give signals for any security threat at the pathways	2.03	0.79	2.08	0.74	**2.36**	**0.77**	Low Extent
N=500	**Grand Mean Set & STD**	**2.15**	**0.89**	**2.06**	**1.05**	**2.37**	**0.92**	**Low Extent**

Results in table 3 show the summary of mean and standard of respondents on the extent panic alarm system as a technological strategy are utilized for effective security management of public senior secondary schools in Rivers State. The results represent the respondents' opinion that items 11-15 with their respective means and standard deviations are below the criterion means. This implies that all the 5 items are rated low with their means less than the criterion mean of 2.50. It is deduced from the table with items 11-15 that to a low extent, panic alarm system

are utilized in school environment, gates, classrooms, and pathways to monitor daily activities. In summary, the grand mean set stood at 2.37 (STD=0.92) indicating that the respondents agreed to a low extent that panic alarm system as a technological strategy are to a low extent utilized for effective security management of public senior secondary schools in Rivers State.

Hypothesis One: There is no significant difference in the mean ratings of male and female principals on the extent CCTV surveillance as digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State.

Table 4: T-test result on the extent CCTV surveillance as a technological strategy is utilized for effective security management of public senior secondary schools in Rivers State.

Gender	N	$\overline{X}$	SD	df	t	p	Decision
Male	316	2.38	0.54	498	2.050	0.011	**Ho₂ Rejected**
Female	194	2.13	0.35				**P>.05**

From the result presented in Table 4, it is revealed that male principals had a mean value of 2.38(STD=0.54), while the female had a mean value of 2.13 (STD=0.35). This result shows that the male principals strongly believe that CCTV surveillance as a technological strategy is utilized for effective security management of public senior secondary schools in Rivers State over their female counterparts. Further testing using independent sample t-test revealed that a t-value of 2.050 was obtained with a corresponding p-value of 0.011 which was greater than the chosen alpha value of 0.05. Therefore, null hypothesis one was rejected since p>0.05. This result indicates that there is significant difference between the mean rating of male and female principals on the extent CCTV surveillance as a technological strategy is utilized for effective security management of public senior secondary schools in Rivers State.

Hypothesis Two: There is no significant difference in the mean ratings of male and female principals on the extent biometric identification as digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State.

Table 5: T-test result on the extent biometric identification as a technological strategy is utilized for effective security management of public senior secondary schools in Rivers State.

Gender	N	$\overline{X}$	SD	DF	t	p	Decision
Male	316	2.23	0.46	248	3.003	0.017	**Ho₂ Rejected**
Female	194	2.18	0.34				**P>.05**

From the result presented in Table 5, it is revealed that male principals had a mean value of 2.23(STD = 0.46), while the female had a mean value of 2.18(STD = 0.34). This result shows that the male principals strongly believe that biometric identification as a technological strategy is utilized for effective security management

of public senior secondary schools in Rivers State over their female counterparts. Further testing using independent sample t-test revealed that a t-value of 3.003 was obtained with a corresponding p-value of 0.017 which was greater than the chosen alpha value of 0.05. Therefore, null hypothesis two was therefore rejected since p>0.05. This result therefore indicates that there is significant difference between the mean rating of male and female principals on the extent biometric identification as a technological strategy is utilized for effective security management of public senior secondary schools in Rivers State.

Hypothesis Three: There is no significant difference in the mean ratings of male and female principals on the extent panic alarm system as digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State.

Table 6: T-test result on the extent panic alarm system as a technological strategy is utilized for effective security management of public senior secondary schools in Rivers State.

Gender	N	$\overline{X}$	SD	DF	t	p	Decision
Male	104	2.15	0.58	248	2.448	0.012	Ho₃ **Rejected**
Female	146	2.06	0.69				**P>.05**

From the result presented in Table 6, it is revealed that male principals had a mean value of 2.15(STD = 0.58), while the female had a mean value of 2.06(STD=0.69). This result shows that the male principals strongly believe that panic alarm system as a technological strategy is utilized for effective security management of public senior secondary schools in Rivers State over their female counterparts. Further testing using independent sample t-test revealed that a t-value of 2.448 was obtained with a corresponding p-value of 0.012 which was greater than the chosen alpha value of 0.05 The null hypothesis three was therefore rejected since p>0.05. This result indicates that there is significant difference between the mean ratings of male and female principals on the extent panic alarm system as a technological strategy is utilized for effective security management of public senior secondary schools in Rivers State.

Discussion of Findings
Extent CCTV surveillance as digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State.
The findings in the research question in this regard showed that to a low extent male and female principals agree that CCTV surveillance as digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State. The test of the corresponding hypothesis revealed that there was significant difference between the mean rating of male and female principals on the extent CCTV surveillance as a technological strategy was utilized for effective security management of public senior secondary schools in Rivers State. These findings corroborates with that of Dike (2020) who investigated secondary school teachers' use of information and communication technology: implication for further development of ICT use in Nigerian secondary schools, and found that teachers in private secondary schools in Ibadan Oyo State have access to information and

communication technological tools except internet and electronic connection to the respondents various schools or teachers lack of information communication technology knowledge and skills. The study also revealed that there is availability of information communication technology equipment such as computer hardware, software and other consumables, but there is no technical support in the secondary schools under study. The findings of the study were that information and communication technology (ICT) tools to teaching and learning were not adequately available in secondary schools. In the same vein, the available ICT facilities in schools were underutilized. Considering the factors that hinder utilization of the available ICT tools in schools, the study revealed as follows that there were no functional computer laboratories in the schools. Secondly, that teachers lack interest in the use of ICTs. Poor power supply is also a hindrance and that teachers and students have phobia for ICT usage. High cost of ICT resources and students lack of ICT background training were some of the factors among others. It may imply that the low utilization of CCTV in secondary schools as an electronic device for effective security management of public senior secondary schools may not be far from the reality of high procurement cost and poor power supply experience in Nigeria. If CCTV are provided and used effectively, daily coverage are saved and recorded for reference purpose in case of any eventuality. New technologies in CCTV called Region of Interest (ROI) Encoding has been developed to resolve the issue by of providing the highest image quality on the areas or a scene or objects of most interest while reducing the quality level in uninteresting areas to provide the highest quality/lowest bandwidth results. There are many surveillance situations where there is ROI and background information in the same scene. This makes the use of CCTV

very effective and necessary for security management in secondary schools.

Extent biometric identification as digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State.
The findings in the research question in this regard showed that to a low extent, male and female principals agree that biometric identification as digital technological strategy are utilized for effective security management of public senior secondary schools in Rivers State. The test of the corresponding hypothesis revealed that there was significant difference between the mean rating of male and female principals on the extent biometric identification as a technological strategy was utilized for effective security management of public senior secondary schools in Rivers State. These findings did not corroborate with that of Sanjay, Robertas and Rytis (2018) who carried out a study on the impact of ICT on universities administrative services and management and found that university administrators significantly made use of ICT in the areas of staff Bio-data, loan application, staff medical record, employment record, retirement record. It is seen that ICT is rarely used for management of security as in found in this study. Similarly, a study by Ahmed (2009) on the use of ICT by administrators in private universities in Bangladesh sought to determine the areas of ICT that were commonly used by private universities showed that ICT was used for managing the administrative processes by almost all the private universities. According to the study, ICT were used in student enrolments, student record keeping, accounts, general administration, and library maintenance. It was mentioned that administrative staff insisted that ICT was suitable for administrative purposes and indicated that it was convenient, efficient and reliable. However it was applied in security management of the university. For

effective use of biometric scanner, students and regular visitors' biometric information are collected for proper recognition by the scanner. Unidentified persons cannot gain access to the school premises as anyone entering the school must be identified. This technology or events unauthorized access to sensitive areas, such as computer rooms, laboratories, and administrative offices. Access control enables facilities to create different zones, where only those with the appropriate credentials are granted access. In schools, this often comes in the form of key cards that are swiped through card readers. In the event of an emergency, this could allow educators to get students to a safe area using their credentials. This system could also be used to lock down portions of a building, aiding emergency responders in quarantining a specific part of the facility so that a problem doesn't spread.

Extent panic alarm system as digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State.
The findings in the research question in this regard showed that to a low extent male and female principals agree that panic alarm system as digital technological strategy utilized for effective security management of public senior secondary schools in Rivers State. The test of the corresponding hypothesis revealed that there was significant difference between the mean rating of male and female principals on the extent panic alarm system as a technological strategy was utilized for effective security management of public senior secondary schools in Rivers State. These findings corroborates with Agbatogun (2006) who investigated the areas of application of ICT by academic staff in Colleges of Education. The study was interested in investigating the areas of ICT that were commonly in use by the academic staffs of the college of education. The results showed that with global

technological wave that is affecting every sector and every aspect of Academics' life whether male or female, experienced or inexperienced, humanities, science or vocationally oriented need to struggle zealously to be computer literate in order to face the present educational challenges. The use of digital devices like panic alarm system is another way ICT can be utilized for the management of security in Nigerian schools which has received little or no impact. This could be one of the reasons why insecurity is prevalent in Nigerian schools without any measure to curb it. For instance, in the tracking and IOT space, top security gadgets like mini-cameras, spy pen and SOS wearable devices, wearable trackers, buzzer systems can be integrated and effectively deployed in school environments, accompanied by earnest usage, overseen by well trained and skilled personnel to monitor these systems; set up rules of engagement for each school and child (defined parameters that if violated would trigger an alarm and violators will be detected), identify signals of misdemeanor, and effective response to emergency situations will guarantee the safety of many children and prevent unhealthy situations.

Conclusion
Digital technological strategies such as CCTV surveillance, biometric identification, and panic alarm systems are rarely utilized in the management of security in senior secondary schools in Rivers State. The limited use of these devices may have made lives and properties in senior secondary schools on Rivers State vulnerable to security threats.

Recommendations
The following recommendations were made based on the findings of the study.
1. Digital strategies like CCTV surveillance should be provided and utilized effectively utilized for management of security in senior secondary schools in Rivers State.

2. Digital strategies like biometric identification should be provided and utilized effectively utilized for management of security in senior secondary schools in Rivers State.
3. Digital strategies like panic alarm system should be provided and utilized effectively utilized for management of security in senior secondary schools in Rivers State.

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