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AN ASSESSMENT OF GENDER DISCRIMINATION IN WORKPLACE AND ITS INFLUENCE ON WORKERS' PERFORMANCE: A LITERATURE REVIEW

BY

Rashida Adamu Oyoru

Department of Politics and Governance, Faculty of Management and Social Sciences, Kwara State University, Nigeria.
E-mail: rashida.adamu@kwasu.edu.ng

Abstract
The study examined the level of gender discrimination in workplace for women in Nigeria. The objective of the study is to review literature on how gender discrimination in workplace has influenced the performance of women in their workplace. The methodology adopted in this study is purely secondary data and content analysis was adopted to achieve the objective of the study. The study concluded that organization's success is largely influenced by a variety of elements, with the company's human resources ranking among the most important and that it is crucial that employers take good care of their staff members so they may give their all and work diligently to achieve the organization's goals. It was revealed that as long as employees feel as though their fundamental rights are being violated, gender discrimination will continue to be a problem that prevents them from reaching their full potential. The study recommended that it is important to regularly review anti-discrimination policies to determine how effective they are in actual use. This should be ensured in both private and public organizations, with a concentration on the former, to make sure that all enterprises are successfully executing the constitution's policies while being closely supervised.
Keywords: Gender discrimination, women, workplace, performance, Nigeria

Introduction

Organisations are established typically to maximize profits or to provide excellent services that will enhance people's quality of life in any area. Competent workers are necessary to accomplish these objectives. Employees are the heart of the organization without them the organization cannot reach organizational expectations (Shantha, 2019). Employers need to develop anti-discrimination strategies and create a work environment that is permissible and equitable (Bobek, Maček, Bradler & Horvat, 2018). Ineffective management generates unproductive businesses and a dysfunctional society overall, regardless of gender (Okoh, Ojoh, & Nosegbe, 2008). In this context, Nigeria's universities were built to meet the high-level labor needs of both governmental and commercial industries. Like any other sector, the capacity of Nigerian universities to attract a skilled work force-whether those personnel are men or women is essential to achieving their goals and objectives (Gberevbie, 2006). Regardless of gender, personnel can be divided into management/senior employees and others in an organization. To increase performance, the management and senior personnel are in charge of managing the entire business. These workers are more likely to discriminate against women since they set the direction through effective leadership to achieve the organization's overarching objectives (Ekore, 2008). The employee is the most valuable resource in the workplace to sustain in the world of business. Researchers have identified some symptoms regarding gender discrimination which include decrease the performance of the employees and isolation from the rest of the team, low self-esteem among employees and job stress (Dilrukshi & Ranasinghe, 2021).

Nigeria, like other African nations, has almost an equal proportion of men and women. For instance, Nigeria's estimated population is 213.4million as of 2021 with women making up 48.78 percent of the population, and men, making up 51.22 percent. If better performance is to be obtained in such an atmosphere, it is wrong to discriminate against women in leadership roles in companies, especially in Nigerian institutions (Olomola, 2008). Every society has a growing proportion of women. Both domestically and socially, they have a significant impact on the growth of their nation. Recently, there have been a significant increase in the number of women working. and this has been made

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possible through the entry of a sizable percentage of women into higher education, late marriage, rising costs of living, and ultimately government support for women's participation (Ganji & Joshi, 2020). Each nation's gross domestic product (GDP) is dominated by the service sector to the extent of over 50%. (Li, 2014 cited in Ganji & Joshi, 2020). As a substantial component of the broader corporate sector, universities have a significant influence on the economic growth of the nation. Women have a significant impact on the education sector, as they do in many other nations. Despite the fact that women make up the majority of the workforce, female university employees frequently experience prejudice. Regardless of their employment experience or academic record, women may encounter unfair or discriminatory behavior in regards to pay, perks, career progression possibilities, and work schedules (Woodhams et al., 2015). There is a link between gender and the wage system because woman generally earns less than men. Studies show that there is a significant gender gap due to state discrimination based on gender (Dilrukshi & Ranasinghe, 2021).

Due to patriarchal societies, sexual discrimination in the workplace is particularly common in various nations and localities. Gender discrimination against women at work persists despite campaigns and federal legislation to safeguard their rights and advantages (Dilrukshi & Ranasinghe, 2021). Gender inequality has serious ramifications for both the workers and the dignity of the workplace. For example, when university employees feel that their gender limits their career advancement, some of them may engage in harmful behaviors in protest or as retaliation against the system (Ambrose et al., 2013). These harmful habits may include stealing from university property, abusing emergency leave during busy times of the year, disregarding specific chores, and spending time on a variety of activities that jeopardize the institution's overall advancement. Emotional attachment to or communication with the institution they work for has an impact on the relationship between university employees' unhealthy conduct in the workplace and their sense of gender discrimination and unfair behavior (Balogun et al., 2016).

In many countries, sexual harassment and gender discrimination at work make it more difficult for women to advance in their careers, receive promotions, and be treated with respect by their employers. Gender discrimination is the act of treating current or prospective workers differently due to their gender, gender identity, or sexual orientation. Any one of these behaviors may be present in the context of hiring, firing, promotions, pay, benefits, or job classifications. According to the 2012 Gallup World Poll, males were twice as likely as women to hold "good occupations" in every region of the world (Marlar & Mendes, 2013). But in today's companies, sexual harassment and gender discrimination are usually covered up, leaving them vague and frequently very hard to establish. In South Asia and non-EU European countries, there are more than 20 percentage points fewer opportunities for women to find "good job" than there are for men. According to Alvaredo et al., (2013) the gender element has not received much attention in recent studies on top earnings. The aim of this research is to examine the sexual harassment and gender discrimination that female workers face in Nigerian universities.

Gender Discrimination

According to a study conducted in Sri Lanka which assessed the impact of gender discrimination on employee performance and the mediating role of occupational stress of executive-level employees in one of the public banks in Sri Lanka. The study found out that there is a negative impact of gender discrimination on employee performance with mediating occupational stress. Founded positive relationships between the hiring gender discrimination, the promotion gender discrimination, and the wage gender discrimination with occupational stress, as well as a negative relationship between occupational stress and employee performance (Dilrukshi & Ranasinghe, 2021). Zarb (2022) in his study assessed the under-representation of females within the labour market, particularly in managerial roles. The study sparked a local and global debate on whether women, mostly mothers, face negative discrimination. This study took place in Malta, which was characterised by a low unemployment figure, complemented by strong economic growth at the time, thus enabling a proper analysis of the possible presence of gender-based discrimination even when labour demand is high. The analysis of the study revealed that there is no statistically significant evidence that employers engage in discrimination at the call-back stage of the recruitment process. Furthermore, during this distribution period, no particular age class was favoured or discriminated against, a finding that contradicts the idea that young female workers are discriminated against due to their maternal responsibilities.

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According to the results of a study on the perception of gender discrimination among faculty members and the contributing elements, there is just one thing that is connected to management gender discrimination. The regression analysis test of the factors influencing the dependent variable reveals the significance of the effects of five variables, including the glass ceiling, personal gender stereotypes, drive for advancement, anxiety about personal success, and official gender stereotypes, on one's perception of gender discrimination (Baghestani, 2017). The respectability of the profession, the dress code, and possessing the necessary qualifications are said to be the three most significant motivators, according to a study titled "Gender Inequity Reasons and Its Impact on Staff Efficiency of Travel Agencies: The Case of Travel Agencies in Isfahan City." A severe gender gap was also seen in the statistics, which is a sign of machismo in the workplace Channar et al. (2011). Ganji and Joshi (2020) evaluated the issues faced by 446 Swedish women working in academic, medical, and industrial settings in a research titled "Assessing the Culture of the Women's Labor Organization." The findings of this study demonstrated that gender attitudes affect female employees in more masculine work environments more than those in more feminine work environments. Employee unhealthy habits and workplace discrimination are contentious issues that have not gotten much attention. Gender disparity has serious repercussions on employees as well as the respectability of the workplace. For instance, if university employees feel that their gender stops them from developing in their jobs, they may act unhealthily against the corporation by protesting or using retaliatory measures.

Workforce Discrimination and Its Impact

Employers who treat their employees unfairly on the grounds of their race, gender, nationality, sexual orientation, or age are considered to be discriminating against their workforce. Internal discrimination in organizations is the practice of treating employees unfairly based on their gender, age, race, or other qualities (Hasmath, 2015). According to Tesfaye (2011), treating people unfairly inside a company can be harmful and have a negative effect on a variety of factors, including performance, motivation, and satisfaction. Non-neoclassical group theories claim that this phenomenon, which frequently affects people of all racial and gender backgrounds equally, is the cause of unequal workplace conduct among employees. There is still an upsurge in racial and gender discrimination, according to recent employee polls (Triana et al., 2015). Positive results are anticipated from reducing prejudice through strict procedures at businesses. According to Boone-James et al. (2013), the researchers have looked at the fact that due to poor qualification levels, many employees do not understand their rights related diversity management. In order to ensure compliance with labor regulations, it is the responsibility of the human resource management to ensure there is no discrimination based on any grounds within the firm. This needs to be minimized both throughout the recruitment and selection process and during regular business operations. The performance of employees and workplace discrimination have been demonstrated to have a strong and adverse link. In their investigation into the effects of discrimination, Ensher et al. (2001) discovered a detrimental effect of workplace discrimination on employees' satisfaction, which further impairs their performance.

Gender Discrimination in Nigeria

Nigeria became an independent nation in 1960, and it became a republic in 1963. The population of the state is diverse, representing a variety of racial and religious beliefs as well as political ideologies. Despite the fact that workers, particularly women, frequently experience discrimination due to their gender, their religion, or the fact that the nation is patrilineal, the workplace environment in Nigeria does not represent the state's secular constitution. Gender discrimination prevents the employee from being appointed to positions of responsibility or leadership. Each person has unique talents and the ability to succeed, but in order to show their leadership potential and do their best work; they usually require a supportive work environment. Definition of gender discrimination: The intentional deprivation of a person's rights (political, family, social, and economic) that may have made them positively contribute to the growth of the organization and the society at large (Igwe, 2022). This is why, in both public and private enterprises, where it exists, gender discrimination is viewed as a phenomena that has detrimental effects on the growth of people and organizations (Olomola, 2008). The Federal Republic of Nigeria's 1999 Constitution declares that non-discrimination and gender equality are the cornerstones of society advancement and acknowledges the negative effects of gender discrimination. Section 42(1) of the same Constitution states that no citizen of Nigeria, regardless of community, ethnic group, or place of origin, sex, religion, or political stance, shall be subjected to any kind of

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discrimination for any reason. The discrimination against Nigerian women in any form is prohibited by the Nigerian constitution. According to Okegbola (2010), the Nigerian Constitution which displays a desire to uphold patriarchal customs, is the problem. This is due to the fact that the word "he" appears 235 times throughout the constitution, compared to just two instances of the term "women." In addition, the Federal Government of Nigeria (FGN) implemented a strategic employment policy that includes funding for gender sensitization training in both the public and private sectors to address the issue of gender discrimination. Through massive mobilization, these projects seek to break down old attitudes and preconceptions about women's labor and raise public awareness of the value of women's engagement in both the official and informal sectors. Nevertheless, despite the appointment of women to the position of permanent secretaries, all government initiatives at the federal, state, and local levels have been ineffective (starting in 2000 and in accordance with affirmative action). A cursory examination of the gender distribution of the workforce reveals that less than 14% of all executive positions are held by women in Nigeria, while 25% of federal public service employees are female (Igwe, 2022).

Women are allegedly employed largely in lower-status occupations despite having a greater population and higher educated credentials than men. It was argued, in a discussion of the causes and effects of gender discrimination against women in management, politics, and social affairs, that although the Federal Republic of Nigeria's 1999 Constitution guarantees equality and against discrimination between the sexes, in practice the gap between the two is quite large and appears to run parallel (Olomola, 2008). In Nigeria, whether in the public or private sector, promoting gender equality of men and women as a strategy for sustainable development is a worthwhile endeavor because research has proven that advancing any society's growth does not favor one gender over another. This is because the allocation of power between men and women in many contemporary countries frequently exhibits little to no gender difference. As of 2019, there were 9794 civil workers working in the local government areas of Oyo State; men made up 67.9% of those, while women made up 32.1%. (Report on staff screening and personnel verification for local government regions, 2019). All of these demonstrate the pervasiveness of gender discrimination, especially against women, in all spheres of life. Discrimination is generally illegal regardless of whether it is based on sex or gender or both sex and gender (Dilrukshi & Ranasinghe, 2021).

Assessment of Gender Discrimination on Job Performance

Gender biases also affect women's ability to advance within the organization, gender discrimination can also be observed in the performance evaluation feedback women and men receive, the factors contributing to women's relatively lower representation in senior leadership roles and the opportunities women receive for career development (Dilrukshi & Ranasinghe, 2021). Employee performance is one of the most crucial aspects to consider when assessing an organization's ability to accomplish its stated goals and fulfill its mission (Jain, 2008). Performance is simply defined as the "degree of work completion that constitutes an employee's employment." They referred to performance as the impacts or outcomes of a person's actions during a given time period (Shahzad, et al., 2010). It entails actions taken to accomplish organizational goals. The performance of an employee also serves as evidence of their level of adherence to job requirements. Performance is typically measured by production. To put it another way, someone's performance suffers when they put a lot of effort into a task but receive little in return. When referring to a job's performance, it's important to remember that it encompasses all of the abilities and tasks that employees used to carry out their responsibilities. Consistency, involvement, adaptability, and mission were identified by Denison and Mishra (1995) as the four characteristics of employee performance in organizational culture. These characteristics are also significant predictors of other efficiency criteria, such as employee satisfaction, quality, and overall performance.
According to research, in order to get the most out of employees' contributions to the success of their organizations, businesses need to manage their human resources well. Also mention that controlling and enhancing employee performance is crucial for accomplishing an organization's overall goals because it directly affects productivity and success (Agbalajobi, 2010). The level of performance of employees is affected by a number of variables, including pay raises, performance evaluation processes, job security, job satisfaction, opportunities for training and development, organizational structure, and others. A study by Truman, (2008) found that factors including extrinsic and intrinsic rewards, carefully worded job descriptions, and the detrimental effects of gender discrimination have no effect on worker performance. Paying employees for their labor is one way that companies and employees exchange

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services related to human capital. Promotions and other non-monetary exchange methods are also possible. A higher job level results from promotions. According to the justification presented above, women are more likely to earn fewer promotions and occupy lower job levels in exchange for the same labor services since they have less human capital (Truman, 2008). It was also found that achieving racial and gender equality and organizational justice are two notions that are closely associated. To improve attitude and performance, employers should make hiring decisions based on an individual's personal qualities (Irfan, et al. 2009). Equal employment opportunities and a discriminatory workplace are closely correlated with female employees' performance, perceived career progress, and comfort at work (Alanzi, 2009).

Taylor (2008) claims that evaluating employee performance is a means for figuring out whether or not employees are treated fairly and for demonstrating whether or not management is biased or impartial. Employees might not place a high level of priority on the current disparity between their efforts and rewards in the form of distributive justice because they think the company will most likely convert the current exchange association into a justifiable effort-reward ratio in the future (Hofstede, 1984). Job happiness, job performance, and attendance were all seen favorably by the justice system. Individuals who scored lower on power distance exhibited bigger impacts than those who scored higher on power distance, regardless of where they placed on the personality characteristics (Lam, et al. 2002). According to studies, it is the role of the leaders to establish an environment at the workplace that is fair, reciprocal, and meets the needs and expectations of everyone. This will result in improved employee performance and a more successful firm overall (Gadot, 2007). Furthermore, resolving employee grievances will result in subpar performance if line managers discriminate while doing so (Bramer, 2015). What is considered to be a more immediate cause is social closure brought on by discrimination against women or minorities? Once other factors have been taken into account, a source of workplace inequality is recorded in statistical residuals (Roscigno et al. 2007). Organizational traditions and norms have a big impact on how employees behave at work (Irfan et al. 2009). It may be possible to partially explain variations in the impacts of procedural justice (perceived fairness of the results employees obtain) and distributive justice by changes in workers' preferences for detailed incentive allocation criteria, such as equity vs equality (perceived fairness of the methods used to determine those results) (Lam, et al. 2002). It is important to note that if there is any form of discrimination against a person of any gender, it is to be expected that their emotional state will change, which typically affects both their performance and capacity to advance in the job.

The effectiveness of a company's workforce has a significant impact on its development (Jain, 2008). The definition of "performance" by Shahzad et al. (2010) states that "Performance refers to the consequences or impact of an individual's activities over a given time range." Employee performance in an organizational culture is characterized by consistency, engagement, adaptability, and mission. Additionally, these traits have a strong correlation with other efficiency metrics, including staff happiness, quality, and overall performance (Denison & Mishra, 1995). The idea of a gender performance can substantially assist in the creation and maintenance of gender identities and gendered power dynamics in the workplace. According to research by Khera (2010), in order to get the most out of employees' contributions to the success of their organizations, businesses need to manage their human resources well. According to Shahzads et al. (2010), managing and enhancing employee performance is crucial for accomplishing an organization's overall goals because it directly affects the success and productivity of the latter. Employee performance is influenced by a number of factors, including pay raises, performance evaluation systems, job security, job satisfaction, training and development opportunities, organizational structure, and others. On the other hand, a study by Qureshi, Zaman, and Shah (2010) found that there are no factors, such as intrinsic or extrinsic rewards, well defined job descriptions, or the adverse consequences of gender discrimination, that have an impact on employee performance. Employers and employees exchange human capital services in part through salary payments. Promotions and other non-monetary exchanges could also occur. Job levels increase as a result of promotions. Because they have less human capital, women should expect to receive fewer promotions and hold lower-level positions in exchange for the same labor services, according to the argument presented above. Organizational justice is primarily concerned with ensuring equitable treatment between different genders and races, according to Bramer, Andrew, and Rayton (2005). This conclusion is further supported by the fact that measuring employee performance strongly correlates with organizational justice. Employee selection should take individual disposition into consideration in order to improve employee attitude and performance (Alanzi, 2009). Equipped with equal employment opportunities and a welcoming

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workplace, female employees perform better, perceive their careers as growing, and feel more at ease at work (Irfan, Hussain and Yousaf, 2009).

Employee performance reviews, according to Taylor (2008), are a technique to check for fairness in management and show whether or not management is prejudiced. Employees may have low preference for the current disparity between their efforts and rewards in the form of distributive justice because they believe the organization will most likely convert the current disparity in the current exchange association into a justified effort-to-reward ratio in the future (Hofstede, 1984). Justice perception was positively connected with job satisfaction, job performance, and attendance regardless of one's position on the personality traits. Greater effects were seen in people with lower power distance scores than in people with higher power distance scores. Lam, Schaubroeck, and Aryee (2002). According to Gadot's (2007) research, it is the role of the leaders to foster an environment at work that is fair, reciprocal, and responsive to each individual's needs and expectations. This will boost employee productivity and the performance of the firm as a whole. According to Harris et al. (2008), resolving employee grievances by line managers in a discriminatory manner will result in subpar performance. Which cause is thought to be more directly responsible for social closure-discrimination against women or minorities? once other factors have been taken into account, an explanation for workplace discrepancies that is shown in statistical residuals (Roscigno, Garcia, and Bobbitt-Zeher, 2007). The customs and conventions of the organization greatly influence how employees conduct themselves at work (Irfan, Hussain and Yousaf, 2009). Differences in workers' preferences for meticulous reward allocation policies (such as equity versus equality) may help to partially explain differences in the effects of procedural justice (the perceived fairness of the results employees receive) and distributive justice (the perceived fairness of the processes used to determine those results), even though these are not the only factors influencing justice perceptions (Lam, Schaubroeck and Aryee, 2002). In Phillips, the Supreme Court ruled that both male and female parents should be held to the same standards, but that conflicting home responsibilities may have a greater impact on women's professional performance than on men's. Therefore, it is clear that, in contrast to the benefits instances, pregnancy and childrearing were problems the Court struggled to overcome (Lens, 2003). As a result, it is stated that a positive company culture and a welcoming work environment are necessary for creating an environment where female employees feel motivated and comfortable (Irfan, Hussain & Yousaf, 2009).

Conclusion and Recommendations

Organization's success is largely influenced by a variety of elements, with the company's human resources ranking among the most important. Because of this, it is crucial that employers take good care of their staff members so they may give their all and work diligently to achieve the organization's goals. As long as employees feel as though their fundamental rights are being violated, gender discrimination will continue to be a problem that prevents them from reaching their full potential. A country cannot grow without the full involvement of both genders. In line with the 2030 Agenda's fifth sustainable development goal, women must no longer face violence and discrimination and must have equitable access to all possibilities. The performance of employees would vary accordingly, and they would be more motivated and satisfied at work if there was a proper gender discrimination policy in place in the organizations. Due to decreased productivity and increased stress levels, discrimination of all kinds negatively impacts employees' levels of satisfaction and performance. The study therefore recommended the following:

i. It is important to regularly review anti-discrimination policies to determine how effective they are in actual use. This should be ensured in both private and public organizations, with a concentration on the former, to make sure that all enterprises are successfully executing the constitution's policies while being closely supervised.

ii. Employers should be informed about the advantages of gender equality for their business and encouraged to adopt these views so that the outdated beliefs that are currently held can be replaced with ones that promote the growth of employees and the business, rather than utilizing the labor of the workforce for the organization's own gain. In terms of gender equality, management is crucial. It is inevitable that the personnel at the other levels will adopt their perspective and dedication to promoting gender equality at work.

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iii. Management should be dedicated to taking every possible step to reduce gender inequity at work. The university system should conduct an investigation into and make any necessary corrections to the informal organizational culture, which includes tacitly anti-women behavior, rituals, and traditions. The university system should research the strategies that support women's advancement in the workforce so that they can be clearly defined. It should be aware of the advantages and disadvantages of an organization's programs and policies.

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STATE AND THE ECONOMY: A FOCUS ON OIL THEFT AND THE STATE RESPONSE

BY

Lambe Emmanuel Oyewole & Hassan Seyid Ishola
Department of Politics and Governance, Kwara State University, Nigeria.
Email: emmanuel.lambe60@gmail.com

Abstract
Overtime, the state seeks to protect itself, citizens, political structure, economic structure etc. from the thriving of some phenomenon which could be injurious to the prosperity of the state. Organized crimes seek to exist to promote and provide for the demand of illegal goods and services that have been prohibited by the state. Many insecurity phenomena rely on the employment of terror, fears, force etc. but organized crime relies majorly on maneuvering, and operating in the dark, systematic operations well regulated in secrecy and arranged to deliver to the society what the state kicks against. The oil theft organized crime has caused Nigeria Billions of dollars in loss due to the inability to meet its OPEC quota. The economy and finance of the country has been feeling the heat since 2014. Therefore, the research seeks to study the effect of the organized crimes of oil theft and the attendant effect it has on the national economy of Nigeria. The research employs the qualitative research methods and Theory of State Fragility. Findings shows that Organized crime presence in the polity of the country endangers the country's political integrity, social order and economic prosperity. Oil theft in Nigeria has milked the national economy of its profit. The various individual groups' operation is at the detriment of the collective good of the society. The environmental degradation, the pollution, financial crimes and money laundering etc. the research recommends the employment of modern technology to protect its oil pipelines channels is imperative and apt.

Keywords: Oil theft, organized crimes, organization, development.

Introduction

Since the inception of the modern state in the 16th, and the social contract of the leviathan. The state has tried to protect, promote and defend the state from the internal conflict of man to man relations and from external aggression. Overtime, the role of the state has continued to metamorphose to encompass sociality, economy intra and inter relation etc. The 19th century liberal put freedom at the heart of the state and the individuals at the heart of society. For them the point of the state was not to promote equality in fraternity or pursue the cause of a certain sect but ensure equal representation. It was to ensure the maximization of God's given talents. (Micklethwait, 2010). In the present day world order, security has been the heart of the matter of most states. Security envisages social prosperity, economic development, international relations and overarching state development. In and around the world security seems to be a backdrop impeding the development and prosperity of the state. The continuing cycle of violence, retaliation, war, terrorism and insurgency are the major security issues in the world security order. However, a problem have continued to cultivate itself, hiding and prospering in the dark. Organized crime is a local, state, national or international group of highly structured enterprises run by well regulated and systematic process of enriching themselves through illegal activity. Organized crime syndicates enrich themselves illegally on the plight of the society etc (United Nations Office on Drug and Crime, 2022).

Overtime, the state seeks to protect itself, citizens, political structure, economic structure etc. from the thriving of some phenomenon which could be injurious to the prosperity of the state. Organized crimes seek to exist to promote and provide for the demand of illegal goods and services that have been prohibited by a state. Many insecurity phenomena rely on the employment of terror, fears, force etc. but organized crime relies majorly on maneuvering, and operating in the dark, systematic operations well regulated in secrecy and arranged to deliver to the society what the state kicks against. Economic development is the core vision of all governments. However, not all businesses, goods and services will ensue development. Some businesses, actions, goods and services are injurious to the citizens, and at a long run to the survival of the state. The United States organized crime control act of 1970 defines organized crime as the unlawful activities of a highly organized, disciplined association. Organized crimes take place in the

political environment through racketeering, socially through drug peddling, financially through money laundering and economically through resource theft (UNODC, 2022). Organized crimes group generally could be piracy of product either medical products, copyrights, materials tangible and intangible, drug peddling, natural resources theft such as oil bunkering, illegal refinery, money laundering, illegal production and distribution of intellectual property of private individuals or government bodies, sales of arms and ammunition, human and animal trafficking for sex, rituals, forced labor etc. Presently organized crimes syndicates operate on international forums and have keyed into technology, globalization and also imperialism. Moreover, in government agencies, political leadership positions and economy organized crimes have penetrated and found a foot stool has godfathers, financiers, leaders etc. even religious bodies have not been spared from the organized crimes. Isezuo (2015) opined that organized crimes in historical databases thrived in the rural areas but in present day urban society also feels the heat. These groups invest in infrastructures to ensure the thriving of their business and operate in the political, economic and social order.

The safety and well-being of the citizens rests on the protection of the states' rights and powers over policy, equal sharing and benefiting of resources, the economy working for all etc. however with the presence of organized crime syndicates, national benefits become individuals' benefits, thriving on corruption and imbalance in development. In Nigeria the problem of organized crimes has entrapped national development. Organized crime has thrived in the theft of natural resources, money laundering and group profiteering over national development. Majorly Nigeria is facing a turmoil in its economy due to the downturn in its revenue accruing from its major source of national revenue, crude oil. The National economy of Nigeria is mono- cultural and built on the sales of crude oils for financing its overall national development. The oil theft and oil bunkering of pipelines cum the inability to reach its quota has reduced the national earnings while certain groups of individuals are self-enriching themselves from the theft of the national resources. (Mele kyari, 2022) According to NEITI 2023, Nigeria lost a whopping $1 billion to oil theft in the first quarter of the year. More since, 2009 to 2020 a total loss of $46 billion (#16.25 trillion) has been incurred due to oil theft (Vanguard news). Looking at the amount lost to oil theft, the funds could have been better used for projects for national good. Moreover, the environmental degradation, unethical procedures, and risk of life due to confrontations from security personnel also serves as a problem of the oil theft. Since 1960, Nigeria has struggled to have a constructive political structure that ensues National development, freedom and imperialism. The presence of a wide range of actors in the oil theft trade internally and internationally, the protection gotten by political elite in the military and governance provides the forum for the continuity of the trade. In addition, the increasing profiteering of crude oil products sales and the lack of government oversight in the supervision of the vast oil pipeline fields serve as incentives for Nigerian officials and members of the local population, organized crimes, and international buyers to partake in the sale of stolen petroleum products. The extensive poverty and increase in the dimensionality of the poverty plays a significant cause in the oil theft syndicates (Osibanjo, 2020). The research seeks to study the effect of the organized crimes of oil theft and the attendant effect it has on the national economy of Nigeria.

Theory of State Fragility

The theory gained prominence from the 1990s onwards and gained further traction after the 9/11 terrorist attacks. The theory was coined by various scholars in the International Development Association (IDA). A fragile state is a low income country characterized by a weak state capacity or weak state legitimacy leaving citizens vulnerable to a range of shocks. A fragile state is significantly susceptible to crisis in one or more of is sub systems. It is a state that is particularly vulnerable to internal and external shocks, and domestic and international conflicts. The fragile nature of the state, and the inability of the government to key into technological and advanced instruments in protecting its resources channel ensues fragility. The oil channels can be tampered upon without the knowledge of the government. More, corruption, equal sharing of benefits, the people poverty and environmental degradation has caused the local people to see the oil pipeline bunkering as a means of getting benefits from the sales of oil gotten from their lands. Whenever there's room for insecurity, insecurity thrives. The government's inability to protect its internal region encompasses one of the problems of oil theft. The porous borders, unmotivated security forces, political influences etc.

Concept of Good Governance

Governance is the heart of development in society. Governance is the act of administering politically, economically and politically. The political control of a society is the governance of the state. Etymologically speaking, the term ‘‘governance’’, is being used as a verb kybernin (infinitive) or kybernao (first person) which literally means ‘steering’, ‘guiding’, or ‘maneuvering a ship or a vehicle’. Governance is referred to as the political administration of policies for effective and meaningful development. Governance to the World Bank (1993) is a system through which ‘power is exercised in the management of a country’s political, economic and social resources for development’. The emphasis here, according to the World Bank, is ‘the use of power to control political and economic resources of the nation’. Thus, governance is about securing political power in order to control economic power for the purpose of a nation's development. Put differently, it is about using the nation's wealth for the benefit of the nation only. Governance has to do with the totality of governmental actions and activities that are geared or directed toward making and realizing effective economic policies (International Monetrary Fund, 2016). However in Nigeria and other third world society governance has been laden with some emphatic issues which therefore reduces its efficiency. Governance in cases have been able to lead to meaningful development and in some cases not being able to infer any meaningfulness. Good governance refers to the proper application of policies for societal development. Lambe (2023) opined that good governance envisages leadership, actions, rule of law, accountability and strategy for public policy.

Concept of Organized Crimes

The application of modern administration into crime is what we refer to as organized crimes. It is referred to as the principled planning, structuring and administration of illegal activity in the society for self-profiteering. It is a category of transnational, national or local group of highly professional enterprises providing goods and services which are illegal but in high demand in the society for profits. Organized crimes takes different forms which could be in the supply or providing of goods such as weapons and ammunition, illicit drugs, pirated production of some goods, money laundry etc. while supply of services which includes terrorism, hired thuggery, fear, rebel etc. Organized crime is inimical to the state and the needs of the masses but only beneficial to the groups that belong to the crime in society. Organized crime groups often engage in illegal services, goods and victimization of businesses by using extortion and fraudulent activities like bankruptcy fraud. Hijacking cargo trucks and ships, robbing goods, insurance fraud among others. In the same manner, they also victimize individuals by bank robbery, burglary, credit card fraud, jewelry theft, computer hacking, economic espionage, embezzlement, and securities fraud. Majorly organized crime syndicate operates in the dark, by evading law enforcement agency and supplying societal need either at a cheaper price or supplying the needs of illicit demands of society. Operations here are done in groups and specialization of functions are well structured. Various units exist in the enterprise each carrying out functions in a hierarchical manner, focusing on activity assigned to them and meeting the dark hidden demands of the society. It should be noted that not all criminal gangs or association are organized crimes. Some crime syndicates operate without organization and structuring (Lambe, 2023). Oil theft is a type of organized crimes operation which constitutes the illegal operation of and appropriation of refined or unrefined crude oil from the various multinational oil companies that are positioned in the country through the process of oil bunkering. This includes the theft, diversion, and smuggling of petroleum products. There are various procedures involved in this and an estimates of how much oil is stolen per day in Nigeria vary, the British think tank Chatham House reports that over 100,000 barrels of oil were estimated to be stolen per day. According to OPEC, Nigeria is estimated to produce over one and a half million barrels of oil per day however in the final sales the quantity reduces due to oil theft. Oil theft is a conscious and tactical process of diverting oil from the usual official channel to an offsite channel for illicit refining or sales. For profiteering in the name of ethnic nationalism, environmental conservatist, etc. Some locals partake in the technical process of illicit sales of crude oil channeled from oil companies’ pipeline (Punch, 2019).

Methods of Oil Theft

There are various methods used by the various players in the oil theft syndicates to facilitate there operation.

Hot-tapping: During the process of hot-tapping, an illegal secondary pipeline belonging to oil theft criminals is attached to a high-pressure primary pipeline belonging to a multinational corporation. After this breach is successful, oil is diverted from the primary pipeline into mobile oil bunkering facilities that are attached to the secondary pipeline. By gradually withdrawing small amounts of oil, the primary pipeline is able to function at an almost normal pressure

and can remain undetected by oil corporation officials. Hot-tapping is considered to be extremely dangerous and complex.

Cold-tapping: In the process of cold-tapping, a portion of a pipeline is blown up and a secondary pipeline is attached to the shut-down primary pipeline. After the primary pipeline is repaired, the existence of the secondary pipeline's access to the oil flow is unknown since the overall pipeline pressure will not fluctuate. Cold-tapping is considered to be less dangerous.

Terminal and vehicle transportation theft: Although oil theft is common during the initial stages of the oil production process, theft is rampant at the port terminals where crude and refined oil products await shipment to international locations and during the transportation of oil products from corporate facilities. In export terminal theft, administrative collusion and security force corruption facilitate the siphoning of oil shipment reserves into criminal fuel trucks. In turn, these fuel trucks are used to transport illegal oil products for sale in neighboring African countries where the price for oil is substantially higher than the subsidized rates in Nigeria. Since oil corporations do not have oil meters at the source of production and since they are only present at export facilities, there is a lack of oversight into managing the initial value of oil that was produced by the multinational oil corporations.

Actors Involved in Oil Theft

The bunkering of oil through various mechanism in the Niger Delta region is a collaborative process in which various thinkers and political analyst have come to agree that no single individual can successfully pull such height without international and intra political and security support. The complex trade relations between the various actors in the oil bunkering is what makes them organized and hidden from public. The complex interrelationship takes place between the local citizens who participate actively, passively and supporting and also the security agencies both military, police and civil defense and the buyers/traders. More, the sales of stolen crude oil happens internally and internationally. So internal bodies buy these stolen crude, refine and then sell them at local markets or neighboring countries.(Punch, 2023)

1. Security agencies: The military administration saw the introduction of the military officials into oil offshore and onshore. Though the relevance of the military has been reduced to only military function but still the military still plays an active role in the Niger Delta region. Overtime, corruption, and bribery has deviated the security agencies into escorting and aiding the oil theft and trade. Money plays a major role in the military personnel and task force minds. Placement and transfer to the Niger Delta regions are seen as juicy positions for self-enrichment, and those willing to play the piper for the higher ups are placed in these regions. In addition to providing security for the illegal trade, the Nigerian navy is frequently active in seizing transportation vessels that are suspected of containing stolen petroleum products. However, in these operations, Nigerian security forces have often been accused of facilitating the disappearance of captured vessels and the appropriated sale of seized products to foreign markets.(Wikipedia 2022) Similarly to facilitating the oil theft trade, Nigerian military officials often pursue oil bunkering allegations against fellow servicemen as means of absorbing sectors of the oil trade and strengthening individual positions in the region. For example, in 2007, the former Chief of Naval Staff (CNS) Ganiyu Adekeye reported that a large group of retired military officials were suspected of facilitating the disappearance of captured vessels. Although there is credible evidence for a variety of participants in the illegal oil trade in Nigeria, the Nigerian government's lack of prosecution before Buhari's administration suggests that corruption is extensive and high-reaching.

2. Militancy and armed groups: Several gangs of locals exist in the Niger Delta areas. Disgruntled youth who feel the nation is surviving and they benefit nothing from the oil which is gotten to them, therefore take up arms and employ the use of terror and force to take “what rightfully belongs to the community”. The militant groups to some thinkers and the former President of Nigeria Olusegun Obasanjo sees the Military as a tool used by political actors to ensue crises and conflicts in the region. These conflicts give room for an increased bunkering activity and loose security. Moreover, due to the impoverishment in the society and spread of political distrust and marginalization recruitment into gangs takes place with ease. These militant individuals are the closest to the community and know the in and out of the society so this makes theft and movement of the stolen oil to point of sales easy. These individuals even make roads and infrastructures for the ease of their business. These more, serve as armed escorts for the property of the political elite or function as the sabotage mechanism that is necessary for cold-tapping operations. A prime example of militant organizations and their role in political violence is the contemporary existence of the Niger Delta Avengers. Currently, the Buhari administration has pursued anti-corruption policies and has undertaken a variety of

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indictments and probing of Nigeria's political elite for their involvement in the oil theft trade. However, the organized structure, money laundering attempts by this elite has been able to scale out and fight back also. Previous government use of maritime security to complement the national security agency by Goodluck Jonathan was at first was canceled by the Buhari administration and probing of the Ekpemupolo on forty counts of financial fraud but it led to the hiding of the maritime boss. However this led to the attendant effect of a series of attacks on oil pipelines and a resulting effect of the decrease in the oil output of the country from 2.2 million barrels per day to 1.4 million barrels per day. As a consequence of the high influx of oil pipeline sabotage in the Niger Delta, oil spills have "devastated mangroves, contaminated soil and groundwater, destroyed the fish habitat, and posed a serious threat to public health."(Punch, 2023)

3. Political and international influences
Organized crimes are usually structured in a way that leaders of the crimes are not known or easily related with the crime actions. Oil theft involves the use of technical instruments and procedures that ordinary citizens in the local area cannot afford. The logistics involved in carrying out oil theft are provided and engineered by higher ups influences. The setting of the hot tapping and cold tapings are done by technicians and engineers, not just ordinary citizens. The influence of the higher ups assists and support the ground workers in the carrying out the ground operations of hot tapping or cold tapping the crude oil pipelines, and also cross border sales of these crude oil.

4. People in Local Community: The locals at the sites of explorations who are of close proximity either to the site of exploration or pipelines channels. These citizens facilitate the theft and sales of these stolen crude oil or it's by-product either by involvance, aiding or abetting. Through the use of small scale hot and cold tapping equipment, local means of refining and transporting out of the forest to the point of sales the locals one way or the other play a role in either turning a blind eye or aiding and abetting. More so, given the simple construction of bush refineries and their placement in isolated locations, all efforts by the Joint Task Force to mitigate the illegal refinement of oil products have largely been unsuccessful due to lack of cooperation from the locals who have more intelligent information about the forest but chooses to keep silent due to hatred for the government, the corruption tendencies of security agencies, government and political actors more so.

Causes of oil theft in Nigeria

1. Political influences: the political actors involved in organized crimes create an environment to safeguard their business. The political influences make provision for protections, covering up and facilitations of the oil theft. The locals do not work alone and the major profiteering from the oil theft shows that the local individuals are just the labor force and not the major players the organized crimes. Political unwillingness plays a significant role in the insincerity in the stopping of the oil thefts.

2. The military era: during the military era, certain activities has been well enacted since then. Most of the pipelines, nooks and crannies of the society were drawn by the military administration. Therefore, these sets of individuals have been able to create loopholes for their profiteering. The mechanisms established since then are still operational. The years of Military rules have given some syndicates an already established base and structure which are hidden to present day administration eyes.

3. Neo colonialism and foreign players: the presence of some mechanism used in refining stolen oils and the diversion of the crude oil from officials shows technicality and funds which the locals do not have to pull up; therefore, the presence of higher ups who teach, train and facilitate these oil thefts. The logistics more so used in the facilitation of the oil theft operation shows the presence of foreign players who help in the facilitation of these activities.

4. Fragile security architecture: the security nature of a society gives room for crime to thrive in the open or to hide in the dark. However due to the porous border, lack of updated security mechanism, low performance of the security agencies and corruption. The security network in Nigeria is outdated and not enough to protect the borders, oil installations and other facilities in the open areas, borders and in the savannah forest. This fragile security nature gives

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room for insecurity and thriving of the easy movement of stolen oil products, the Naval officers and the ground Security of the NSCDC, Police etc. have not been forthcoming.

5. Low technology and modern tools: The new order of technology has made life easier for those who have keyed into it. Nigeria in its oil exploration and oil pipelines have not adequately keyed in to modern technology of protecting its oil pipelines. Oil production has been adequate however, at the point of transporting Nigeria has not been able to successfully protect the oil pipelines. The pipelines are being redirected, hot tapped and even redirected and the country has not been able to key into modern technology to use in determining leakages and diversion. From 2014 to 2023 the oil supply has been following a downturn due to this thefts yearly.

6. Porosity of the border: Apart from the porous nature of the land borders, the water lines border like the lagoons, creeks and rivers are heavily and advantageously used by criminals to facilitate cross-border crimes, such as Firearms trafficking, human trafficking, narcotics/drugs trafficking, oil bunkering, money laundering, armed robbery, among others (Ikoh, 2013,p.35). The high environmental factors are not used as an advantage in Nigeria. The land mass, water resources etc are a disadvantage to the country rather than a positive. The inability to account for what goes in and out of our border plays a major role in facilitating the continuous oil theft.

Impact of Oil Theft on the Political Economy of Nigeria

While transnational organized crime is a global threat, its effects are felt locally. When organized crime takes root it can destabilize countries and entire regions, thereby undermining development assistance in those areas. Organized crime groups can also work with local criminals, leading to an increase in corruption, extortion, racketeering and violence, as well as a range of other more sophisticated crimes at the local level. As typical of most developing countries that are victims of the resource curse, the Dutch disease plays out in Nigeria's economy. Since its involvement in oil exportation, there has been near collapse of the non-oil sectors and in particular, the agricultural sector, which in the past contributed the bulk of Nigeria's export earnings (Otaha, 2012). Crude oil theft has had a substantial and detrimental impact on the Nigerian economy. The magnitude of this impact is reflected in revenue losses, environmental degradation, and hindrances to economic development. Illicit activities, such as pipeline vandalism and oil bunkering, result in significant revenue losses for the government, affecting budgetary allocations for critical sectors (Obansa, 2015). Additionally, the environmental consequences, including oil spills and ecosystem damage, pose long-term challenges, impacting agriculture and local livelihoods (Ite, Ibok, & Ekpenyong, 2017). Addressing the issue is crucial for mitigating these adverse effects on Nigeria's economic stability and sustainability.
The financial impact of oil theft on a state's capacity is significant. The government's economic resources are immediately lowered by the revenue losses from illegal activity, making it more difficult for it to finance social programmes, infrastructure improvements, and other necessities (Obansa, 2015). The state's ability to successfully rule and provide for its population is weakened by this. The state's capacity to enforce laws and regulations is further undermined by the illegal economy driven by oil theft, which can exacerbate corruption and erode institutional integrity (Ite, Ibok, & Ekpenyong, 2017). Resolving oil theft is essential to maintaining and bolstering the economic base required for strong governmental capacity.

More, to its impact on revenue, oil theft in Niger delta has led most of the prominent MNCs operating in Nigeria including Shell, Chevron and ENI to exit from many of their onshore ventures (Bloomberg, 2013). ENI in particular had initially planned a complete pull out from the country before it later reneged on its intention (Ventures Africa, 2014). It is believed that this development, even though some of these companies have commenced new operations offshore (Bloomberg, 2013), may bring about massive job cuts in the country (Daily Trust, 2014), thereby demonstrating the volatility of the mineral-dependent economy. The job cuts ensuing from dramatic change in operations of MNCs can therefore lead to an increase in rate of unemployment and a possible decrease in income available to households**.** The reason why good governance is adversely affected is that organized criminals have infiltrators into politics. They view governance mainly as their survival and enrichment to the alienation of the citizenry from the political systems rather than national development. They have disregarded the rule of law and perverted bureaucratic procedures to cause socio-economic stagnation. Organized criminal groups in their inordinate ambition to control the government entrench corruption to entice public officials to enrich themselves or close friends

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unlawfully through the misuse of public power. Organized criminal usually destroyed state institutions, ingrain corruption to weaken the rule of law and other government institutions. This is because some of the law enforcement agents and security institutions are co-opted into organized crime and become violent agents of an equally imperious status and prosecute criminals selectively to protect their cherished establishment. They are so organized that among them are some political groups who control the state and resources from foreign donors, to provide security and development for themselves. The existence of organized crime, in Nigeria, affects good governance as perpetrators infiltrate politics to undermine effective government policies and efficient business to protect their interests. Corrupt public officials in the executive, law enforcement, and judicial institution are sought by organized crime groups so that their criminal activities on the black market can be protected against being investigated and prosecuted. With this situation, nepotism, poverty, and corruption become a growing phenomenon as civil service bureaucracies and law enforcement agents are politicized (Shaw & Reitano, 2016). Organized crime has increasingly become the source of funds by terrorists and insurgents to generate money for acquiring logistical support to carry out their violent acts. The ability of the groups to fund terrorist activities is connected to the miniaturization of information and communication technology, particularly electronic banking. The communication system also makes it easy for terrorist organizations who engage in criminal activities such as kidnapping for ransom, human smuggling and illicit finance, and their links to terrorism to be successfully discharged (Campball, 2014). Nigeria in the first half of 2023 has lost 10 billion dollars to oil theft. Loss of revenue may be seen as a negative impact; however, it may also lead to diversification of Nigeria's economy. Loss of revenue may lead the government to pay more attention to non-extractive industries and embark on taxation programs that are appropriately monitored. Already, there are slight indications of this effort based on a news report that non-oil sectors were the main drivers of Nigeria's economic growth in recent times (This Day, 2014). Although this development has not been directly linked to loss of revenue from oil theft in the Niger Delta, the IMF in its report on the growth of the non-oil sector in Nigeria notes that oil's contribution to the GDP has shrunk by 1.3% (Oxford Business Group, 2014).

Conclusion

Nigeria is a country blessed with so many resources however it seems the resources curse has continued to play an impeding factor in its growth paradigm and polity. Nigeria's political lineage has seen the rise and fall of leadership and administration which has placed the development of the nations at its heart, but overtime parasitic leeches have continued to suck on its finances and resources. Organized crime presence in the polity of the country endangers the country's political integrity, social order and economic prosperity. Oil theft in Nigeria has milked the national economy of its profit. The various individual groups' operation is at the detriment of the collective good of the society. The environmental degradation, the pollution, low quality refined by products, financial crimes and money laundering etc. Organized crimes plays an impeding role in the developmental paradigm of the state and this has overtime thrived due to lack of sincerity from the government and its security agencies, the impoverishment and fragility of the state, the corruptions and illegal enrichments of some political office holders whilst impoverishing the host society. Neo colonialism has over time influenced various politics, social and economic phenomenon in third world countries and Nigeria has not been spared.

Recommendations

To achieve development and a break away from the resources curse and resource theft. The government firstly needs to in sincerity decide to end the menace of oil theft in the country. Oil theft and organized crimes are unprecedented events which are present in the society. The failure to plan invariably leads to the plan to fail. The government plays the major role if the menace is to end. Nigeria makes the most of its revenue from Oil therefore, the government not protecting its most vital assets shows insincerity. The Saudi Aramco, the Venezuela oil corporation and other world leading oil firms have successfully updated their technological instruments to be able to monitor oil pipelines channels and assess leakages and theft along the channels. Nigeria needs to invest heavily on the protection of its oil channels. The application of modern tools and technology to protect its oil pipelines is imperative and apt. The security nature of the country is porous and below average. The security of a nation ensues its sovereignty over conducts in and out of its territorial borders. The inability to control events in the country due to the fragile security nature of the state shows the weakness and quality of a countries security architecture. The financial in and outflow windows are porous

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such as the border of the country are porous, the government needs to investigate and close down unethical financial windows used in the laundering, transfer and exchange of money between the oil thieves and the buyers. The thriving of the easy exchange of goods and services for money allows for the prosperity of the crimes.

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INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) CAPACITY BUILDING FOR TEACHERS AND SCHOOL EFFECTIVENESS

By

[1]Ahmed Hussein Oloyin & [2]Ahmed Hassan Oloyin
[1]Nigerian Educational Research and Development Council (NERDC), SHEDA, FCT, ABUJA

[2]School of Secondary Education (Science), Department of Mathematics Education, Federal College of Education (Technical), Asaba, Delta State
Email: husseinahmed63@yahoo.com

Abstract
The study sought to find out the effective strategies for ICT capacity building for teachers in secondary schools in Moro Local Government Area of Kwara State. The research design for the study was descriptive research design. Randm sampling technique was used to select 10 out of 24 senior secondary schools in the area of study. Stratified random sampling was used to select 10 teachers from each of the sampled school making 100 respondents. Three research questions were raised to guide the study. Self-designed instrument tagged "Teachers' Capacity Building through Information and Communication Technology and School effectiveness" (TCBICTSE) was used as instrument for data collection. The research questions were answered using mean, and any mean score equal to or higher than 2.5 implied agreed to the item, and lower than 2.5 implied disagreed to the items. The instrument was validated by three experts in the field of Curriculum, and Test and Measurement. The reliability of 0.87 was obtained using Cronbach Alpha. Findings of the study revealed that Information and Communication Technologies (ICTs) is not being fully utilized in the study area, and that there are some strategies to be put in place to ensure effective ICT capacity building for teachers to be ICT compliance. It was recommended among others that intensive training of teachers on Information and Communication Technologies (ICTs) should be carried out periodically to enable teacher to be ICT compliance, Provision of ICT facilities to teachers and encourage them to use it for instructional delivery.
Keywords: Capacity Building, Information and Communication Technology, Secondary Schools, Effectiveness

Introduction

Information and Communication Technologies (ICTs) have the potential to alter greatly how schools are run and how students learn. To achieve this, a dedicated manager or school head put in place should be able to articulate and mobilize staff to achieve relevant technology goals. The role of technology in education is rapidly becoming one of the most important and widely discussed issues in contemporary Nigerian education scene. According to Onfah, Onfah and Owodunni (2022), technology simply means electronic tools applications in everyday activities. Information and Communication Technologies (ICTs) is a fusion of information technology and communication technology. Information and Communication Technologies (ICTs) refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT) but focuses primarily on communication technologies. This includes the internet, wireless networks, cell phones, and other communication mediums (Ezeanyaeji and Mgbeafulike, 2020).

According to Sukanta (2012), Information and Communication Technologies (ICTs) is the varied collection of technological gear and resources which are made use of to communicate. They are also made use to generate, distribute, collect, and administer information. Shan (2013) posited that Information and Communication Technologies (ICTs) includes computers, the internet, and electronic delivery systems such as radios, televisions, and projectors among others, and is widely used in education sector. Kent and Facer (2014) indicated that school is an important environment in which students participate in a wide range of computer activities while the home serves as a complimentary site for regular engagement in a narrower set of computer activities. Federal Republic of Nigeria (2014) stated that in recognition of the prominent role of Information and Technology (IT) in advancing knowledge and skills necessary for effective functioning in a knowledge-based world, Government shall provide adequate infrastructure and develop capacity for effective utilization of Information Technology (IT). Esu (2018) opined that

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capacity building requires new strategies for instructional delivery process, increased roles from stakeholders (teachers, government, school administrators and communities) in providing more access to information and experience through global networks and pools of knowledge. Effective use of ICT in schools guarantees more access to information and experiences in the new era of digitalization. This implies that there is an important link between education and ICT in a knowledge society to meet challenges of the 21st century. Adamu (2016) posited that the link between the two is that utilization of modern ICT in education potentially enhances the effectiveness and efficiency of teaching and therefore provides a notion with a proof of well trained and skilled labour to meet the demand of both the public and the private sectors.

According to Ugwu and Oboegbulem (2011), capacity building in Information and Communication Technologies (ICT) refers to the strategies, roles, practices and skills through which the staff personnel are helped to develop competency in the use of ICT for effective administration of schools. Bello (2016), school effectiveness involves several components such as administration, functioning, leadership behaviours, teachers' morale, level of trust, culture and climate, parenral involvement, community support, teachers' commitment, loyalty and satisfaction of teachers through various capacity building prgrammes. Therefore, a school is considered to be effective when it continuously improves its success history through effective teaching which reflects positively on students' academic performance, and general administration of school. One of the ways teachers in which this can be achieved is for the teachers to be ICT compliance. This will enable them to acquire relevant skills and competence for teaching and learning. Emenike (2013) believed that application of ICT in teaching and learning will enhance instructional delivery, reduce occupational stress and increase students/ academic performance. Amaefule (2019) asserted that the application of ICT in education has made the traditional application of paper obsolete. He added that the computer facilities have greatly improved the process of information, organization and management, as assess and retrieval of books or information is now a matter of seconds with a click of application or keyboard. Additionally, the world is dynamic, and moving towards digitalization, and so education sector need to be dynamic, and key in so as to meet up with international best practices. Therefore, every sector, education inclusive needs to be ICT compliance in order to carry out their operations effectively. A preliminary visit to most of the schools in Moro Local Government Secondary Schools in Kwara State revealed that ICT facilities are not available in most of the schools, and that the staff personnel do not have their own personal ICT facilities. Based on this, they are not vast in the use of ICT, and as such hindering them from carrying out their pedagogical roles effectively. Where there are few ICT facilities, no personnel to handle such facilities. This study therefore, aimed at evaluating teachers' capacity building through information and communication technologies (ICTs) and school effectiveness in Moro Local Government Area of Kwara State.

Purpose of the Study

The main purpose of the study is to determine the relationship between teachers' capacity building through Information and Communication Technologies (ICTs) and school effectiveness in Moro Local Government Area of Kwara State. Specifically, the objectives were to:

1. Determine the strategies that are appropriate for ICT capacity building for teachers in senior secondary schools in Moro Local Government Area for school effectiveness.
2. Determine the constraints to effective use of ICT in instructional delivery in senior secondary schools in Moro Local Government Area of Kwara State.
3. Suggest ways of improving effective usage of Information and Communication Technologies (ICTs) by teachers in Moro Local Government Area for school effectiveness.

Research Questions

The following research questions were raised to guide the study:

1. What are the appropriate ICT capacity building strategies for teachers in senior secondary schools in Moro Local Government Area of Kwara State for school effectiveness?
2. What are the constraints to effective use of ICT in instructional delivery in senior secondary schools in Moro Local Government Area of Kwara State?
3. What are the ways of improving the effective usage of Information Communication Technologies (ICTs) by secondary schools' teachers in Moro Local Government Area for school effectiveness?

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Methodology

The study adopted descriptive survey research design. A sample of 100 teachers were drawn from 10 public senior secondary schools in Moro Local Government Area, Kwara State. Stratified random sampling technique was used to select 10 out of 24 senior secondary schools in the area of study. The instrument used for data collection was a questionnaire tagged "Information and Communication Technology Training and School Effectiveness Questionnaire" (ICTTSEQ). The instrument was structured on a four-point scale, with options provided as Strongly Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD). The instrument was validated by three (3) experts in curriculum and measurement and evaluation. It was subjected to test-re-test reliability, and the reliability index of .87 was obtained using Cronbach Alpha. Data gathered were analyzed using mean for each item of the questionnaire. Any mean score above 2.5 indicate agreed, while less than 2.5 indicate disagreed.

Results

Research Question 1:
What are the appropriate ICT capacity building strategies for teachers in senior secondary schools in Moro Local Government Area for school effectiveness?

Table 1: Mean Responses of Teachers on ICT Capacity Building Strategies

S.N	Items	SA	A	D	SD	X
1	Provision of computers with internet facilities in schools inform of laboratories.	47 (188)	30 (90)	13 (26)	10 (10)	3.14
2	Training of staff personnel on knowledge of operating	49 (196)	31 (93)	15 (30)	5 (5)	3.24
3	Training of staff on the use of scanners, digital projectors and printing.	32 (128)	29 (87)	25 (50)	14 (14)	2.79
4	training of staff on the use of disc storage devices e. g. flash drive, CD Rom.	44 (176)	35 (105)	13 (26)	8 (8)	3.15
5	Training of staff on the use of application Software e. g. word processors, spread sheet.	29 (116)	32 (96)	25 (50)	14 (14)	2.76
6	Training staff on the use of communication Applications e. g. e-mail programmes and Internet browser.	40 (160)	25 (75)	27 (54)	8 (8)	2.97
7	Provision of regular power supply in schools.	52 (208)	38 (114)	7 (14)	3 (3)	3.39
8	Introducing online learning like zoom, Google meet, online module etc.	28 (112)	30 (90)	25 (50)	17 (17)	2.69
9	Training of staff on the use of online Applications for learning.	25 (100)	32 (96)	29 (58)	14 (14)	2.68
10	Training of staff on exploring devices and folder management.	27 (108)	33 (99)	27 (54)	13 (13)	2.74
11	Strengthening the security situation of the schools.	24 (96)	35 (105)	23 (46)	18 (18)	2.65
.12	Opportunity from the government to the Staff for possession of individual laptops With internet connectivity.	45 (180)	29 (87)	18 (36)	8 (8)	3.11

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N=100, GRAND MEAN=2.94
Table 1 above shows that respondents agreed to all twelve (12) items, with the highest and lowest means of 3.39 and 2.74 respectively. This implies that respondents agreed to all items on the strategies for ICT capacity building.

Research Question 2:
What are the constraints to effective use of ICT in instructional delivery in senior secondary schools in Moro Local Government Area of Kwara State?

Table 2: Mean Responses of Teachers on Effective use of ICT in Instructional Delivery

S/N	Items	SA	A	D	SD	X
1	Unequipped ICT labs and Substandard ICT Facilities.	59 (236)	24 (72)	11 (22)	6 (6)	3.36
2	Lack of technical know-how in Manipulating CAI Packages.	48 (192)	33 (99)	11 (22)	8 (8)	3.21
3	Lack of interest in the use of ICT facilities by some teachers.	35 (140)	27 (81)	26 (52)	12 (12)	2.55
4	Epileptic power supply which hinders usage of CAI.	54 (216)	27 (81)	13 (36)	6 (6)	3.39
5	Lack of internet facilities in schools.	58 (232)	29 (87)	8 (16)	5 (5)	3.34
6	Lack of access to computer by the teachers and students.	39 (156)	23 (69)	18 (36)	21 (21)	2.82
7	High cost of resources required to design and develop CAI packages for instructional delivery.	40 (160)	24 (72)	21 (42)	15 (15)	2.89
8	Lack of technical support staff to handle ICT facilities.	45 (180)	27 (81)	13 (26)	15 (15)	3.02
9	Inadequate funding for procurement of CAI packages and maintenance of computer system.	41 (164)	25 (75)	21 (42)	13 (13)	2.94
10	Lack of training for teachers on use of CAI for instructional delivery.	33 (132)	35 (105)	21 (42)	11 (11)	2.90

Table 2 above shows that respondents agreed to all ten (10) items, with highest and lowest means of 3.39 and 2.55 respectively. The grand mean of 3.04 is an indication that respondents agreed that there challenges in the use of ICT in instructional delivery in senior secondary schools in Moro Local Government Area secondary schools.

Research Question 3:
What are the ways of improving the effective usage of Information Communication Technologies (ICTs) by secondary schools' teachers in Moro Local Government Area for school effectiveness?

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Table 3: Mean Responses of Teachers on Ways to Improve Usage of ICT

S/N	Items	SA	A	D	SD	X
1	provision of standby generator to cushion the effect of interrupted power supply	55 (220)	27 (81)	13 (26)	5 (5)	3,32
2	training an retraining of teachers on ICT skills required for adoption of CAI in the classroom	43 (172)	24 (72)	23 (46)	10 (10)	3.00
3	Provision of computer facilities for teaching and learning by government, NGO, PTA or school management.	52 (208)	25 (75)	18 (36)	5 (5)	3.12
4	Employment of technical support staff that will provide technical support for applications of CAI.	49 (196)	30 (90)	13 (26)	8 (8)	3.20
5	Provision of funds for the design and development of CAI packages.	25 (100)	31 (93)	30 (60)	14 (14)	2.67
6	Providing teachers with incentives to encourage them in teaching with CAI packages.	24 (96)	38 (114)	29 (58)	9 (9)	2.71
7	Granting teachers and students frequent access to computer laboratories and facilities.	42 (168)	28 (84)	21 (42)	9 (9)	3.03
8	Provision of free internet facilities for Applications by teachers and students by management.	23 (92)	38 (114)	25 (50)	14 (14)	2.70

Table 3 above shows that respondents also agreed to all eight (8) items with the highest and lowest mean of 3.32 and 2.67 respectively, with the grand mean of 2.97. this indicated that respondents agreed to all items aimed at finding ways to improve the usage of ICT by secondary school teachers in Moro Local Government Area secondary schools.

Discussion

The findings of the study on research question one showed that respondents agreed to all twelve (12) items. The item with the highest means in descending order are: provision of regular power supply in schools, training of teachers on knowledge of operating computer, training of staff on the use of disc storage devices e.g. flash drives, CD Rom, provision of computer with internet facilities in schools among others. All other items in the cluster also have their mean above 2.5. This indicated that majority of the respondents agreed with the statements. This is in agreement with the findings of Ugwu and Oboegbulem (2011a) that some strategies should be adopted for building ICT capacity of staff personnel in post primary schools. Some of these strategies according to Ugwu and Oboegbullem (2011b) include: provision of computer and internet facilities to schools, training of staff personnel on knowledge of operating windows n among others.

The findings of the study on research question two showed that respondents agreed to all ten (10) items. The items with the highest mean in descending order include: epileptic power supply which hinder usage CAI, unequipped ICT lab and substandard ICT facilities, lack of technical know-how in operating Cal packages, lack of technical support staff among others. This also indicated that majority of the respondents agreed with the statements. This is n tandem with the findings of Orifah, Orifah and Owodunni (2022) that senior secondary school teachers are faced with with challenges in the process of CAI in instructional delivery process. Among the constraints identified in the study of Orifah, Orifah and Owodunni (2022) include poor competency level of teachers in manipulating CAI packages, irregular power supply for application of CAI packages, inadequate computer facilities in classroom and laboratories

among others. The findings of the study on research question three showed that respondents agreed to all eight (8) items. The items with the highest means in descending order include; provision of standby generator to cushion the effect of interrupted power supply, employment of technical support staff that will provide technical support for the the application of CAI, provision of computer facilities for teaching and learning by stakeholders, granting teachers and students frequent access to computer laboratories and facilities among others. This finding is in line with Ogwu (2011b) and Olorundare (2016) that adequate and functional ICT equipment and facilities be supplied to schools by the Nigerian government in order to encourage teachers and students to maximize full potential of CAI.

Conclusion

Information and Communication Technologies (ICTs) is not being fully utilized by teachers for instructional delivery in the area of study. Teachers willing to use ICT are faced with many challenges. Therefore, there is need to fully integrate ICT in instructional delivery for school effectiveness. Thus, the strategies for building ICT capacity of teachers in secondary schools in Moro Local Government Area should be adopted, and all the challenges hindering effective usage of ICT in instructional delivery should be tackled head-on in order to attain international best practice in education.

Recommendations

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

1. Intensive training of teachers on Information and Communication Technologies (ICTs) should be carried out periodically to enable teacher to be ICT compliance.
2. Provision of ICT facilities to teachers and encourage them to use it for instructional delivery.
3. Regular power supply to schools for uninterrupted computer operation system.
4. Workshops and seminars should be frequently organized for teachers on ICT in order to be abreast of new happenings in the education industry.
5. Issues relating to challenges in effective use of ICT in schools should be addressed by stakeholders.

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PERCEIVED INFLUENCE OF SUPERVISION ON PRIMARY SCHOOL TEACHERS' PRODUCTIVITY IN IFELODUN LOCAL GOVERNMENT AREA OF KWARA, NIGERIA

BY

Usman Tunde Saadu & Ramat Teniola Na'allah
Department of Early Childhood and Primary Education, Faculty of Education, Kwara State University, Malete.
Email: usman.saadu@kwasu.edu.ng

Abstract

This study examined the perceived influence of supervision on primary school teacher productivity in Ifelodun Local Government Area of Ilorin, Kwara State, Nigeria. Two research questions and two hypotheses were formulated to guide the study. The research questions focused on the perceived influence of both internal and external supervision on teacher productivity. The hypotheses tested the significance of the perceived influence of internal and external supervision on teacher productivity. The study employed a descriptive survey design and collected data from 200 teachers using a structured questionnaire. The data collected were analyzed using descriptive statistics such as mean, standard deviation, and percentages. Inferential statistics, including Linear Regression, were utilized to test the hypotheses at a significance level of 0.05. Results showed that internal supervision significantly influenced teacher productivity, with items related to school principal's classroom visits, scheme of work achievement, and professional development receiving positive responses. External supervision also had a significant influence on teacher productivity, as indicated by responses related to routine inspections by education authorities and its motivational impact on teachers. The findings suggest that both internal and external supervision play crucial roles in enhancing teacher productivity in primary schools. The study emphasizes the importance of effective supervision in improving teaching practices, instructional materials, and overall teacher performance. This research contributes to understanding the dynamics of supervision's impact on teacher productivity and highlights the need for continuous monitoring and support mechanisms within the education system. The study concludes that supervision, both internal and external, positively affects primary school teacher productivity, with implications for policy and practice in the education sector.

Keywords: Internal Supervision, External Supervision, Teacher productivity

Introduction

The Nigerian education system is facing an increasing array of complex challenges. There is a growing concern that the quality of education is declining across various aspects. The blame for this decline in educational standards and moral values is placed on various entities including students, teachers, parents, and the general public. Some argue that these issues arise due to the nature of widespread changes taking place. Many people point fingers at teachers for the problems in schools. They assert that today's teachers are not as committed and devoted to education as their predecessors. In response, teachers tend to shift blame towards parents and students. Furthermore, they criticize the government for providing inadequate working conditions and insufficient physical facilities in certain parts of the education system. This research project, however, seeks not to assign blame to educational policies or the system itself. Nonetheless, it is essential to reconsider the notion that children, parents, teachers, and subpar educational facilities are solely responsible for the diminishing quality of education in the country. The researcher contends that the true root cause lies in the lack of effective educational supervision, particularly at the primary school level. Alongside this issue of educational supervision, the researcher identifies corruption and a lack of integrity among education stakeholders as another significant factor contributing to the decline in education quality. Two undeniable facts concerning education in the nation are evident: a limited number of people recognize the value and importance of education in national development, and even fewer are aware of the true extent of the deteriorating quality of education, specifically in selected schools within the Ifelodun Local Government Area.

Education forms the cornerstone of a nation's development, equipping individuals with the tools to navigate the world. The joy that parents experience when their children receive a quality education is immeasurable (Eregie & Ogiamen, 2017). As outlined in the Nigeria National Policy on Education (2004), specific educational goals, aims, and objectives

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must be achieved. Consequently, it falls upon educational administrators to oversee and monitor the activities of classroom teachers, ensuring alignment with these set goals and objectives. Educational 'supervision,' in this context, is defined as the systematic application of supervisory principles to address educational challenges and strive for sustainable achievement. Similarly, school supervision is a dynamic process that involves guiding teachers and students to enhance the teaching and learning environment for achieving educational goals. Effectively, the role of supervision is integral to school administration. This includes offering guidance, support, and direction to teachers and students to foster improvement. School supervisors play a crucial role in enhancing classroom instruction, thereby increasing teacher competence, student motivation, and overall educational success.

For teachers to develop professionally and successfully, learning opportunities such as reflection, dialogue, and collaboration are crucial. School supervision provides consistent support and encouragement, ultimately enhancing instructional practices. Thus, the significance of supervision as a managerial tool cannot be underestimated within the education context. When executed effectively, it is expected to elevate teachers' productivity positively. Nkang (2012) emphasizes that thorough supervision is vital for the effective execution of even the best-designed programs within a structured establishment. Teaching and learning success hinge on efficient school supervision for both teachers and students. Various supervision techniques, including classroom visitation, observation, demonstration, and evaluation, play a pivotal role in internal supervision, contributing to improved educational outcomes. The study also delves into whether traditional supervision methods, classroom visitations, and conference supervision contribute to heightened teacher productivity in primary schools within Ifelodun Local Government Area in Kwara State. This investigation is prompted by concerns over teachers' attitudes, poor student performance in internal and external exams, declining enrollment in certain courses, and students' inadequate backgrounds impacting their secondary school performance. These challenges underscore the need for addressing school supervision, which this research aims to tackle comprehensively. This form of supervision is conducted by internal school supervisors, such as the principal, headmaster/mistress, their assistants, or heads of departments. It's often referred to as "within school supervision." The principal, as a leader of the teacher group within the school system, plays a pivotal role in interacting with teachers to enhance the student learning experience through supervision. This process is part of the various methods through which school administrators strive to achieve acceptable performance standards and outcomes. It serves as a quality control tool within the school system, focusing on achieving the appropriate expectations of the educational system (Dittimiya, 2019).

The role of principals is to facilitate the implementation of diverse learning programs aimed at enhancing the learning environment. All teachers, regardless of their experience level, require support in executing instructional programs effectively. Therefore, principals, as school leaders, need to provide this necessary assistance to teachers, actively participating in the implementation of instructional programs by overseeing classroom activities. A competent principal should dedicate themselves to supervising the teaching-learning process within their school. The internal supervisor, typically the principal, oversees the activities of teachers and other school workers, ensuring alignment with accepted educational principles and practices. This oversight involves evaluating department heads and teachers, checking their lesson plans and teaching notes, ensuring regular classroom attendance, addressing absenteeism, rewarding diligent teachers, taking action against those who are not proactive, assigning administrative responsibilities, and encouraging proper conduct. The principal also provides the resources needed for effective task execution and fosters an environment conducive to experimentation. All these factors contribute to the overall standard of education. Teachers also supervise their students through various teaching activities, including assignments, evening study sessions, extracurricular activities like sports and debates, and monitoring attendance. These activities collectively contribute to enhancing the education quality. The perceived influence of supervision on primary school teacher productivity in Ifelodun Local Government Area of Kwara State is a topic that sought to address a critical concern in the educational landscape. As primary education forms the foundation of a child's learning journey, the effectiveness of teaching within this context is of paramount importance. However, there is a need to investigate and understand the extent to which supervision, both internal and external, affects the productivity and performance of primary school teachers in the specified region. This study aims to identify potential gaps, challenges, and areas of improvement in the supervision practices in place, ultimately contributing to the enhancement of teacher productivity and, consequently, the quality of primary education in Ifelodun Local Government Area.

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Literature Review

Sule (2013) examined the effect of the principal's supervisory demonstration strategy on teachers' job performance in Cross River State, Nigeria. The study involved 660 teachers and 3,300 senior secondary school students randomly selected from 232 secondary schools. The data collection utilized questionnaires related to instructional supervisory strategies and job performance. Analysis, employing one-way analysis of variance (ANOVA), revealed that the principal's demonstration strategy did not significantly impact teachers' job performance. A recommendation was made to the Ministry of Education to organize regular supervision using more robust strategies like classroom visitation, inspection, conferencing, record keeping, and administrative workshops. Arong and Ogbadu (2012) highlighted that the declining quality of education is primarily an administrative issue. They analyzed the causes of declining quality in Nigeria's Dekina Local Government Area, emphasizing the significance of educational inspection and supervision. They argued that effective inspection and supervision are critical to maintaining and enhancing education quality, while inadequate supervision contributes to declining quality. Variables such as teacher qualifications, student attitudes, library facilities, parental involvement, government priorities, and integrity among educational stakeholders were investigated in both primary and secondary schools. The findings confirmed the presence of these variables impacting education quality. Nakpodia (2014) assessed the relationship between teachers' work performance in secondary schools in Delta State and principals' aptitude for maintaining effective supervision. The study involved 300 teachers (3.4%) and 30 principals (6.1%) out of a larger population. The results demonstrated a significant dependency of teachers' performance on the principals' ability to conduct effective supervision, highlighting the importance of discipline, record keeping, and teaching aids. The study recommended that principals adopt reasonable supervisory behavior to enhance classroom teaching. Ogbomida (2013) explored the connection between principals' instructional supervisory role performance and teachers' motivation in Ekiti Central Senatorial District, Nigeria. The study indicated a significant relationship between principals' instructional supervisory role performance and teachers' motivation. Experience of principals in performing instructional supervisory roles also correlated positively with teacher motivation. The study concluded that principals' attention to instructional supervision significantly influences staff motivation. It further recommended seminars, conferences, workshops, and improved teacher welfare.

Arthur-Dickson (2011) investigated the state of teaching and learning supervision in Public Junior High Schools in the Sekyere East District of the Ashanti Region. The study identified challenges faced by supervisors, and the analysis revealed various hindrances to effective supervision, including inadequate supply of fuel for supervisors' motorbikes, lack of maintenance, delays in reimbursement, and teacher transfers. Recommendations included training supervisors, considering teaching experience and academic qualifications when appointing headmasters, and addressing logistical and administrative challenges. In summary, these studies collectively contribute to understanding the influence of different forms of school supervision on teacher productivity, shedding light on the challenges and potential solutions related to supervision practices.

Research Questions

The following research questions were stated to guide this study on the perceived influence of supervision on primary school teacher productivity in Ifelodun Local Government Area of Ilorin, Kwara State;

1. What is the perceived influence of external supervision on teachers' productivity in primary schools in Ifelodun Local Government Area of Ilorin, Kwara State?
2. What is the perceived influence of internal supervision on teachers' productivity in primary schools in Ifelodun Local Government Area of Ilorin, Kwara State?

Research Hypotheses

The following null hypotheses were formulated.

H_{O1}: There is no significant perceived influence of internal supervision on teachers' productivity in primary schools in Ifelodun Local Government Area of Ilorin, Kwara State.

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H_{02}: There is no significant perceived influence of external supervision on teachers' productivity in primary schools in Ifelodun Local Government Area of Ilorin, Kwara State.

Methodology

The study adopted a descriptive survey design. This choice was because a survey research design facilitates the collection and analysis of data from a sizable number of cases, as noted by Ndiyo (2015). As per Sambo's definition (2015), a survey research design involves the study of a group of individuals or items through data collection and analysis from a representative subset of that group. Population, as defined by Hat (2012), refers to a comprehensive group sharing common characteristics of interest to the researcher. The population for this study encompassed teachers from both private and public primary schools in Ilorin West Local Government Area of Kwara State. Ilorin West Local Government Area comprises a total of seven thousand four hundred and fifty-seven teachers, spanning both public and private schools. The sample size consisted of 200 teachers, in accordance with the guidance of the research advisor. The researcher employed simple random sampling techniques to ensure equal opportunities for selection. This involved selecting twenty-five (25) schools using dip-hat method. In each selected school, 8 teachers were randomly selected regardless of their gender, age, and class. The total number of 200 primary school teachers participated in this study. The research questionnaire, designed by the researcher, served as the instrument for data collection. Titled "Perceived Influence of Supervision on Primary School Teacher Productivity (PISPS), the questionnaire comprised two sections (Sections A & B). Section A focused on personal respondent information, while Section B, central to the study, contained items aimed at assessing the influence of supervision on primary school teacher productivity. Respondents expressed their responses as follows: SA - Strongly Agree, A - Agree, D - Disagree, SD - Strongly Disagree. The collected data underwent analysis using frequency counts for demographic data. Mean and standard deviation were employed to analyze research questions, while the Linear Regression was used to test the null hypothesis at a 0.05 level of significance. If the observed probability value of the t-test equaled or was less than the predetermined value (0.05), the null hypothesis was rejected; otherwise, it was retained. Mean scores of 2.50 and above indicated agreement, whereas scores of 2.49 and below denoted disagreement.

Results

Table 1: Distribution of respondents-based gender

Gender	**Frequency**	**Percentage (%)**
Male	83	41.5
Female	117	58.5
Total	**200**	**100**

Table 1 shows the distribution of respondents based on gender. Eighty-three (83) of the respondents representing 41.5% were male while one hundred and seventeen (117) of the respondents representing 58.5% were female Thus, it was indicated that the female respondents were more in number than male

Research Question One: What is the perceived influence of internal supervision on teachers' productivity in primary schools in Ifelodun Local Government Area of Ilorin, Kwara State?

Table 2: Showing the frequency counts, mean and percentages of perceived influence of internal supervision on teachers' productivity in primary schools in Ifelodun Local Government Area of Ilorin, Kwara State

S/N	Item	SA	A	D	SD	MEAN
	Our school principal goes around to inspect teachers while they are in class	90(45.0)	69(34.5)	30(15.0)	11(5.5)	3.19
	Supervision within the school often lead to teacher's improvement of instructional materials	5(2.5)	30(15.0)	65(32.5)	100(50.0)	1.70

Regular classroom visitation by the principal or head of department enhances students' attention leading to higher productivity	120(60.0)	34(17.0)	26(13.0)	20(10.0)	3.27
Principal's checking of my lesson note helps to achieve the scheme of Work	90(45.0)	68(34.0)	24(12.0)	18(9.0)	3.15
Routine classroom visitation by the principal/head of department develops good teachers' attitudes toward work	70(35.0)	60(30.0)	41(20.5)	29(14.5)	2.86
Emphasis on professionalism has forced some untrained teachers to go for diploma course in Education	66(33.0)	94(47.0)	21(10.5)	19(9.5)	3.04
Suggested techniques and strategies by supervisor's lead to higher productivity	3(1.5)	33(16.5)	74(37.0)	90(45.0)	1.75
The student's performance increase when there Is increased supervision	53(26.5)	79(39.5)	39(19.5)	29(14.5)	2.78
Lesson note, school dairy and other school records are duly updated when there is suspicion that supervisors are coming.	16(8.0)	49(24.5)	68(34.0)	67(33.5)	2.07
Weighted Mean					**2.65**

Decision rule: Not influenced=00-2.49 Influenced= 2.50-4.00 Note: The figures in parentheses are in percentages

Table 2 shows the responses of the respondents on the perceived influence of internal supervision on teachers' productivity in primary schools in Ifelodun Local Government Area of Ilorin, Kwara State. It was indicated that the following were not the perceived influenced of internal supervisions: Supervision within the school often lead to teacher's improvement of instructional materials (mean=1.70), Suggested techniques and strategies by supervisors' lead to higher productivity (mean=1.75), and Lesson note, school dairy and other school records are duly updated when there is suspicion that supervisors are coming(mean=2.07). While the following items were the perceived influence of internal supervision: Our school principal goes around to inspect teachers while they are in class (mean=3.19), Regular classroom visitation by the principal or head of department enhances students' attention leading to higher productivity(mean=3.27), Principal's checking of my lesson note helps to achieve the scheme of Work(mean=3.15), Routine classroom visitation by the principal/head of department develops good teachers' attitudes toward work(mean=2.86), Emphasis on professionalism has forced some untrained teachers to go for diploma course in Education(mean=3.04), and The student's performance increase when there Is increased supervision(mean=2.78). In the light of the result, it was revealed that internal supervision influenced teachers' productivity in primary schools. The weighted mean (**2.65**) which is a numeric indicator that the internal supervision influenced teachers' productivity in primary schools Ifelodun Local Government Area, Kwara State

Research Question two: What is the perceived influence of external supervision on teachers' productivity in primary schools in Ifelodun Local Government Area of Ilorin, Kwara State?

Table 3:
Showing the frequency counts, mean and percentages of perceived influence of external supervision on teachers' productivity in primary schools in Ifelodun Local Government Area of Ilorin, Kwara State

S/N	Item	SA	A	D	SD	Mean
	Inspectors from Ministry of Education come to our school for routine inspection.	**43(21.5)**	**94(47.0)**	**38(19.0)**	**25(12.5)**	**2.78**
	Inspectors from Local Education Committee visit our school for routine inspection	**50(25.0)**	**75(37.5)**	**35(17.5)**	**40(20.0)**	**2.68**

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Our school principal goes around to inspect teachers while they are in class	**75(37.5)**	**90(45.0)**	**19(9.5)**	**16(8.0)**	**3.12**
My note of lessons is vetted every week by the principal or the teacher responsible for it	**7(3.5)**	**28(14.0)**	**60(30.0)**	**105(52.5)**	**1.69**
Personnel from TRCN Teacher Registration Council of Nigeria) have come for inspection in our school	**51(25.5)**	**80(40.0)**	**30(15.0)**	**39(19.5)**	**2.72**
NUT (Nigeria Union of Teachers) staff do come to inspect our school	**18(9.0)**	**55(27.5)**	**70(35.0)**	**57(28.5)**	**2.17**
Teachers update their school records to avoid inspectors' embarrassment	**38(19.0)**	**79(39.5)**	**33(16.5)**	**50(25.0)**	**2.53**
Inspectors visit or notice of it, is a kind of motivation to teachers that lead to high productivity	**49(24.5)**	**72(36.0)**	**43(21.5)**	**36(18.0)**	**2.67**
Teacher still perceive school inspectors as fault-finders and ministry's policemen to their job	**35(17.5)**	**67(33.5)**	**52(26.0)**	**46(23.0)**	**2.46**
Inspectors from Ministry of Education come to our school for routine inspection.	**15(7.5)**	**109(54.5)**	**45(22.5)**	**31(15.5)**	**2.54**
Weighted Mean					**2.54**

Decision rule: Negative=00-2.49 Positive= 2.50-4.00 Note: The figures in parentheses are in percentages

Table 3 shows the responses of the respondents on perceived influence of external supervision on teachers' productivity in primary schools in Ifelodun Local Government Area of Ilorin, Kwara State. It was indicated that the following items were not the perceived influence of external supervision: My note of lessons is vetted every week by the principal or the teacher responsible for it (mean=1.69), NUT (Nigeria Union of Teachers) staff do come to inspect our school (mean=2.17), and Teacher still perceive school inspectors as fault-finders and ministry's policemen to their job(mean=2.46). While Inspectors from Ministry of Education come to our school for routine inspection(mean=2.78), Inspectors from Local Education Committee visit our school for routine inspection(mean=2.68), Our school principal goes around to inspect teachers while they are in class(mean=3.12), Personnel from TRCN Teacher Registration Council of Nigeria) have come for inspection in our school(mean=2.72), Teachers update their school records to avoid inspectors' embarrassment(mean=2.53), Inspectors visit or notice of it, is a kind of motivation to teachers that lead to high productivity(mean=2.67), and Inspectors from Ministry of Education come to our school for routine inspection(mean=2.54). In the light of the result, it was revealed that perceived influence of external supervision influenced teachers' productivity in primary schools. The weighted mean (**2.54**) which is a numeric indicator that the external supervision influenced teachers' productivity in primary schools Ifelodun Local Government Area, Kwara State

Hypotheses

Research Hypothesis One: There is no significant perceived influence of internal supervision on primary school teacher productivity in Ifelodun Local Government Area of Kwara State.

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Table 4:
Summary of Regression Analysis showing the perceived influence of internal supervision on primary school teacher productivity in Ifelodun Local Government Area of Kwara State.

Variable	Mean	SD	n	R	R Square	Adjusted R Square	F	Sig.
Internal Supervision	23.80	15.631	200	.985	.970	.970	6371.837	.000
Teacher Productivity	40.51	7.739						

Table 4 shows the regression analysis on the perceived influence of internal supervision on primary school teacher productivity in Ifelodun Local Government Area of Kwara State. The result indicated that there was positive influence of internal supervision and primary school teacher productivity in Ifelodun Local Government Area of Kwara State (R = .985) while the R-Square is .970 which means that the independent variable (internal supervision) explained 98.5% variation of the dependent variable (teachers productivity). This indicates a good fit of the regression equation. Thus, this is a reflection that internal supervision significantly influenced teacher productivity in Ifelodun Local Government Area of Kwara State ($F_{(1,199)} = 6371.837$, $P < 0.05$). The hypothesis is therefore rejected in the light of the result since the significant value is less than 0.05. This implies that internal supervision has significant influence teacher productivity in Ifelodun Local Government Area of Kwara State.

Research Hypothesis Two: There is no significant perceived influence of external supervision on primary school teacher productivity in Ifelodun Local Government Area of Kwara State.

Table 5:
Summary of Linear Regression showing the perceived influence of external supervision on primary school teacher productivity in Ifelodun Local Government Area of Kwara State.

Variable	Mean	SD	n	R	R Square	Adjusted R Square	F	Sig.
External Supervision	25.33	15.631	200	.987	.974	.974	7452.690	.000
Teachers' productivity	40.51	9.146						

Table 5 shows the regression Analysis of the significant difference on the perceived influence of external supervision on primary school teacher productivity in Ifelodun Local Government Area of Kwara State. The result indicated that there was a positive influence of external supervision on teacher productivity in Ifelodun Local Government Area of Kwara State (R = .987) while the R-Square is .974 which means that the independent variable (external supervision) explained 98.7% variation of the dependent variable (teacher productivity). This indicates a good fit of the regression equation. Therefore, this is a reflection that external supervision significantly influenced teacher productivity in Ifelodun Local Government Area of Kwara State ($F_{(1,199)} = 7452.690$, $P < 0.05$). The hypothesis is therefore rejected in the light of the result since the significant value is less than 0.05. This means that external supervision has significant influence on teacher productivity Local Government Area of Kwara State.

Discussion
The finding that internal supervision significantly influenced teachers' productivity in primary schools aligns with the understanding that effective supervision plays a crucial role in shaping educational outcomes. Internal supervision,

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carried out by school administrators such as principals and heads of departments, has a direct impact on the teaching-learning process within the school environment. Research has consistently highlighted the importance of internal supervision in enhancing teacher performance. According to Chike (2019), internal supervision involves the continuous monitoring, guidance, and support provided by school leaders to teachers, aimed at improving instructional practices. This direct involvement of school administrators in teachers' daily activities fosters a sense of accountability and promotes professional growth. The positive influence of internal supervision on teachers' productivity has been documented in various studies. For instance, a study by Oduolowu (2018) demonstrated that internal supervision significantly improved teacher motivation, commitment, and classroom engagement. This suggests that when administrators are actively engaged in overseeing teachers' work, it leads to increased teacher morale and dedication. Moreover, internal supervision serves as a mechanism for identifying areas of improvement. As noted by Okonkwo (2020), regular classroom observations and feedback sessions within the context of internal supervision enable administrators to pinpoint specific challenges faced by teachers and provide targeted support. This aligns with the findings of the current study, indicating that internal supervision positively influences teachers' productivity by addressing their professional needs.

However, it's important to recognize that the effectiveness of internal supervision can vary based on the approach taken by administrators. A study by Adekunle (2017) emphasized that internal supervision must be characterized by constructive feedback, collaborative reflection, and a focus on instructional improvement. When administrators adopt an authoritarian approach, it can hinder teacher development and lead to demotivation. The finding that external supervision has a positive influence on teacher productivity is consistent with the broader understanding that oversight and guidance from external entities contribute to improved educational practices and outcomes. External supervision, conducted by individuals or organizations outside the immediate school context, brings an additional layer of accountability and professional development for teachers. Numerous studies have highlighted the significance of external supervision in enhancing teacher productivity. According to Smith (2016), external supervision, often carried out by educational authorities or inspectorate bodies, ensures that schools adhere to established educational standards and best practices. This external oversight motivates teachers to align their teaching strategies with these standards, thereby positively impacting their overall productivity. A study by Johnson and Williams (2018) demonstrated that external supervision fosters a sense of responsibility among teachers. When teachers are aware that their performance is being evaluated by external entities, they are more likely to engage in reflective practices, seek professional development opportunities, and invest effort in improving their instructional methods. This aligns with the finding of the current study, indicating a positive influence of external supervision on teacher productivity. Moreover, external supervision provides teachers with fresh perspectives and insights. As noted by Brown (2020), external supervisors often bring a wealth of experience and expertise from various educational contexts. Their feedback and recommendations help teachers gain new ideas, strategies, and approaches to teaching, ultimately enriching their instructional practices. However, it's important to acknowledge that the effectiveness of external supervision can vary based on the approach and rapport established between external supervisors and teachers. A study by Thompson (2019) emphasized the importance of a collaborative approach in external supervision, where supervisors serve as mentors rather than mere evaluators. When external supervisors engage in constructive dialogue, share insights, and provide tailored guidance, teachers are more likely to perceive the supervision as supportive rather than punitive.

Conclusion

In conclusion, the finding that external supervision has a positive influence on teacher productivity underscores the value of external oversight in promoting continuous professional growth and improved teaching practices. When conducted in a collaborative and supportive manner, external supervision contributes to enhanced teacher performance, aligning with broader educational goals and standards. The finding that internal supervision influences teachers' productivity in primary schools underscores the pivotal role that school administrators play in shaping the teaching and learning environment. Through ongoing support, guidance, and collaboration, internal supervision contributes to teacher growth, enhanced instructional practices, and ultimately, improved educational outcomes.

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ACADEMIC STAFF TURNOVER IN NIGERIAN UNIVERSITIES: CHALLENGES AND WAY FORWARD

BY

Adam Ishola Mustapha, Kikelomo .W Sallee & Rashidat Modupe Oladimeji
Department of Educational Management, Faculty of Education,
Kwara State University, Malete.
Email: adammustapha@kwasu.edu.ng

Abstract
The issue of academic turnover in Nigerian universities poses severe challenge to university system as a sizable number of proven scholars from the institutions have migrated abroad in search of greener pastures in the last two decades, while many of them have been absorbed into universities and Centers of Research in Europe, America and Asian countries. Nigerian universities have witnessed a series of industrial conflicts due to the failure of the employers to review their conditions of service and the progressive encroachment upon the power and authority of the governing council as well as internal day-to-day administration of universities through government directives Thus, job continuity and turnover among University lecturers has often attracted the attention of educational administrators, planners, policy makers, agencies and relevant stakeholders. Therefore, the study examined academic staff turnover in Nigerian universities: challenges and way forwards. The concept of turnover was scholarly examined from different perspectives. Specifically, it discusses the causes, such as: inadequate funding of education, poor conditions of service for academics when compared to their counterparts abroad, poor state of infrastructural facilities, oppression of academic staff and interference of government in institution's internal affairs among others. The study concluded that the magnitude at which academics leave universities in Nigeria poses serious challenges to university education in the country. To curtail this menace in Nigerian universities, adequate funding of universities, provision and rehabilitation of decay infrastructures, open administration, non-interference of government in university internal affairs and wooing professionals in diaspora back to the country become imperative.
Keywords: Academic staff, Turnover, Universities, Challenges and Way forward

Introduction

Universities need adequate academic workforce suitably knowledgeable to focus on the obligations of teaching, research, and community engagement. Thus, the need to retain and attract first-class academic staff cannot be overemphasized for the institutions to actualize her mandates. However, retention of employees in higher education institutions is a serious concern that poses a major challenge to these institutions. High employee turnover has grave implications on the quality, consistency, and stability of academic enterprises. Turnover can have detrimental effects on students and remaining academic staff members, who struggle to give and receive quality services, when positions are vacated and then filled by inexperienced personnel. High turnover rates strengthen clients' mistrust of the system and discourage workers from remaining in, or even entering, the field (Horwitz etal, 2017). The dearth of academic staff and the failure of universities to retain quality academic staff continue to be crucial to the changing prospects and potentials of knowledge formation and learning. The quality of education in an educational institution depends greatly on the quantity and quality of staff in the institution. In Nigeria, provision of quality education in tertiary institutions has over the years been threatened by shortage of academic staff and worsened by exodus of many among those available in the institutions to better jobs in both developed and developing countries.

Academic staff turnover is a challenge of enormous intent and dimension as public fund which would have been exhausted for the provision of facilities, materials and equipment for the education and training of individual, who on the completion of schooling resigns for some other jobs due to one reason or the other (Ajayi, 2020). It becomes evidently clear that turnover is counterproductive for the realization of university mandate of teaching, research and public service. Thus, to the individual academic staff, turnover involves several loss of earning which would have accrued if the individual were otherwise engaged. (Tamuno, 2018). The magnitude at which academic staff leave universities environment in Nigeria is alarming and constitutes serious challenges to university education in the country. Evidently, turn over or what is otherwise known as brain drain syndrome in university milieu was due to lack

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of academic freedom, poor compensation package, disappointing working environment, increased enrolment, as well as pitiable conditions of service (Ajayi etall, 2017). These problems have made the university settings defectively conducive for effective teaching and learning process. Turnover is a phenomenon that afflicted the university education in Nigeria particularly in the 21st Century that the institutions have lost skilled scholars to underdeveloped countries like: Ghana and Rwanda and industrialized countries like: Britain, America, France and Germany (Osasuli, 2019).

Lecturers' turnover has severe effects on service quality, institutional image, academic synergies, scope of knowledge production, consistency and stability of academic enterprise. Academic staff left universities as a result of anxiety of rationalization, retrenchment and retirement often choose to find their exit before the powers give the marching orders. The reasons advanced for the turnover include: increasing pauperization, diminished power and prestige, salaries and conditions of service, which do not commensurate with their services or contributions. Added to this is the fact that the attributes, which habitually keep the academic mind in the universities – rich collection of up-to-date books and journals in libraries, functional laboratories, bustling seminars, research grants, have all become rare commodities (Sanda, 2020). High labour turnover threatens the development, innovation for efficiency, continued existence, good will and credibility of an organization, universities inclusive. Although, labour turnover is inevitable in an organization due to illness, accidents, aged, death and a variety of personal reasons bring about separation, however too much of labour it severely reduce productivity, as workers are perpetual learners, new to the organization all the time; demoralize incumbents and damage an organization's public image thereby adversely affecting her corporate existence (Ajayi, et al., 2017). Consequently, some of the lecturers prefer to look out for other job conditions that are more favourable which have resulted in making the university environments generally defectively advantageous for effective teaching and learning process. Staff retention is one of the most critical issues facing organizational managers that increasingly gaining attention as a result of globalization, technological advancement and heavy expenses associated with hiring of innovative employees in a competitive labour market. A motivated workforce is crucial to the success and survival of any organization in today uncertain and turbulent business climate with its ever rising competition (Smit, etall, 2021).Thus, appropriate understanding of staff expectations regarding the work environment becomes critical issues for the management of educational system in their abilities to retain academic employees. It is against this backdrop that the study examined academic staff turnover in universities: challenges and way forward.

Concept of Turnover

Turnover as a phenomenon being considered from plethora of angles depending on the subject in question. Derek (2018) remarked that turnover is the mount into and out of an organization or rate of withdrawal among staff engaged in an institution for a given time frame or period by the workforce. Robbin (2021) viewed turnover as the deliberate and instinctive permanent departure from rendering services to an organization which may be in the form of quits, discharges, lay-off, retirement, leaves of absence and even death. Academic staff turnover is one of the unorganized forms of industrial conflict and retreat by employees usually emanated from unsatisfactory situations. The incidence of labour turnover can at times be seen asa reflection of the quality of management skill in securing contentment among the people employed (Ongow, 2017). It is truism that certain amount of labour turnover is inevitable due to illness, accidents, aging, death and a variety of personal reasons bring about separation. However, too much of academics turnover can severely reduce productivity, as workers are perpetual learners, new to the organization all the time; demoralize incumbents and damage an organization's public image there by adversely affecting her corporate existence (Oyewole,2018). Organizations are highly concerned about employees' departure because it is commonly very costly to select and train new employees to replace those who left. There is a general situation of discontent pervading the entire labour scene in Nigeria. Nigerian university teachers are not unaffected by this general state of anomaly and frustration over the last 30 years as sizable number of academic staff have migrated abroad in search of greener pastures (Baiys, 2022). Thus, turnover is the movement of academic staff, who are in charge of the training of less skilled individuals, from one tertiary institution to another or to another job entirely, within a country or another country.

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Factors Responsible For Turnover in Nigerian Universities

Scholars have attributed the predominance rate of turnover to numerous factors, even though there is convergence of opinions expressed in literature. Among such factors are:

1. Decaying Infrastructure and Facilities in Institutions: Pitiable conditions of classrooms, laboratories, workshops, office space, library and other specialized rooms prerequisite for imparting knowledge and skills to students The issue of inadequate and decay infrastructural facilities at all levels of the educational system has been a concern to education stakeholders in university education. Regrettably the existing classrooms in many tertiary institutions in Nigeria are derisory for the population of students and effective teaching and learning. Personnel office is relevant in institutions because it serves as a place where academic staff assess their written works, prepare for the next day's activities, and relax after working. In many tertiary institutions, these are inadequate for the available staff while those that are available are not large for relieve capacity of staff and even not sufficiently furnished. This situation, do discourage many academic staff particularly when they compare themselves to their counterparts in the foreign countries.

2. Paucity of Funds: In an ideal situation, one of the mandates of university is to serve as centre for research. Academic staff are there for expected to carry out research on the challenges facing the country, with a view of providing lasting solution to them. Research needs fund for it to be carried out effectively and achieve its objectives. The issue of research funding in tertiary institutions in Nigeria, leaves much to be desired. Many researches had been abandoned due to insufficient funds which frequently demoralizes lecturers and compelled them to leave for foreign countries where opportunity for such, abound.

3. Irregular Promotion of Staff: In an ideal situation, staff of tertiary institution who are qualified for promotion, supposes to be promoted as and when due. There are situations where staff of tertiary institutions will not be promoted due to one reason or the other, particularly when the concerned staff is having an axe to grind with management. These often lead to staff leaving their institutions for another where their regular promotion can be guaranteed. Baiys (2022) observed that many academic staff, who are due for promotion in public tertiary institutions but are denied, are often wooed by the state and private tertiary institutions with shortage of staff. Such staff are often promised extra allowance and opportunities apart from their regular promotion.

4. Corruption Practices: Corruption has been the bane of the development of the economy of Nigeria. As at 2013, Nigeria ranked144th out of the 177 countries. Educational institutions are not even spared in the issue of corrupt practices in Nigeria. Many forms of corruption thrive in tertiary institutions in Nigeria, such as favoritism/nepotism in the allocation of allowances, fellowships; collection of bribes; collusion with contractors, by pass of allocation criteria such cases of corrupt practices of the leaders do discourage staff many among who do take solace in leaving their institutions for jobs in other countries.

5. Rising Insecurity: One of the basic needs of man is the guaranty of his/her security, that is, the security of all citizens ought to be guaranteed by the government in power, whether at the state or federal level. The situation in Nigeria over the years leaves much to be desired. Killing of innocent citizens and destruction of properties have been rampant. The case of Boko Haram insurgency which originated from the Northern part of Nigeria but now spreading to other parts is disturbing. Many lives of staff and students of tertiary institutions had been lost while properties destroyed through the activities of the insurgents. There is no doubt that many of the casualties are academic staff which will send wrong signal to their counterparts in other campuses. Without mincing words, kidnapping is now a lucrative business in Nigeria. What started in the Niger Delta areas few years ago, as a weapon for protesting over-exploitation of Oil without commensurate development in the region, has spread to every nooks and crannies of the country including educational institutions. The security headache in Nigeria at the present makes the country unsafe for the citizens and serving as impetus for many lecturers of tertiary institutions to flee the country for safety.

6. Introduction of horrible Policies by Government: Policies and programmes of government do have impact on the living standard of the citizens, which can be positive or negative. In the past, policies such as introduction of tuition fee, introduction of Structural Adjustment Programme (SAP), withdrawal of subsidy on petroleum products,

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deregulation of downstream petroleum sector, acceptance of loan for development of universities, were rebuffed by the masses including staff and students of tertiary institutions who could easily visualize their merits and demerits. Many lecturers had thus in the past arrested, humiliated, assaulted, and retired forcefully because of their grievances over governments policies and programmes. Many are thus forced to go on exile in other to avoid the embarrassing situation.

7. Poor Conditions of Service of Staff: It is often said that a labourer deserves his/her wage. The issue of wage has however been a sensitive issue in any organization, educational institution inclusive. Apart from its utilization in satisfying basic personal, family, other social and economic obligations, it is an indication of the regard for work and estimation of the skill, expertise, and worth of every worker. In Nigeria, monthly wage of lecturers of tertiary institutions is low, compared to what obtains in many countries in Africa and other continents in the world Worthy of note also is the fact that the salary of a professor in Nigeria is not up to what a fresh graduate earns in the telecommunication company, Oil companies, as well as Banks. Nigeria is even a country where the annual salary of a university professor is not up to the amount being spent to hire a coach for the country's football team. In the past, many strike actions had taken embarked upon in Nigeria due to inability of government to honour agreements reached with Staff, particularly on issues such as increase in salaries and allowances. Academic staff of universities in Nigeria appear to be dogs that must back before being given food to eat. The academic condition of service are uninspiring and motivating , while the attainment of basic necessities of life has become a mirage to the dedicated, enthusiastic and seasoned academic staff (Academic Staff Union of University, 2018).

8. Marital factor: Academic employees equally leave university system for reasons that are principally not connected to their work. The most prevalent instances involve people moving away when their spouses or partners relocated. Others include the desire to fulfill a long term ambition to travel, pressure attached with juggling the needs of work, family and illness. To an extent, such turnover is inevitable. Raymond (2020) emphasized that in this era of gender equality, women are struggling for egalitarianism in political and public positions and thus the like hood of far more available opportunities for women with high academic status is high. Also, most male academic that are married to female academics emigrate with their families when the opportunities come.

Consequences of Brain Drain in Tertiary Institutions in Nigeria

The issue of turnover has many consequences in universities such as:
1. Loss of Staff of Tertiary Institutions: Inadequacy of high-level manpower has been a feature of Nigeria. Little can one wonder that it has been a developing country when the indices of national development, are considered. It is worthy of note that should brain drain continue in Nigeria, many professionals and intellectuals in the ivory towers would emigrate which will induce poor rating of the universities among the other universities in the world. Should the trend of brain drain also continue in Nigeria, there is tendency for tertiary institutions to be filled with young and less experienced staff that lacks the necessary mentors and role models to guide student. It is not a gainsaying that some programmes are worst hit by dearth of lecturers. Presently, programmes such as medicine, engineering and technical, among others had lost majority of their staff to the gulf states of Saudi Arabia, Iran, Iraq and others such as USA, Great Britain. Should this continue, most of the programmes will suffer while poor training will be given the students involved.

2. Production of Low Quality Graduates: Ordinarily, the worth of an educational system can be measured by the quality of its outputs. It is thus expected that the graduates of educational institutions would be able to display quality skills and knowledge at their respective places of work. While it cannot be contested that educational institutions in Nigeria had produced graduates in different fields of science and technology, many among these graduates in various sectors of the economy, are of poor quality. Many scholars had criticized the quality of education at the three levels of the educational system in Nigeria, where all point to the fact that there is declining quality in such education To the extent that the employers of labour are complaining over the inability of those employed to perform. Many public and private establishments are thus spending huge money to train and retrain their employees in order to meet standard. Presently, graduates of tertiary institutions in Nigeria must pass aptitude tests before they can be employed.

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3. Low Rating of Institution/Non-Accreditation of Courses: Many tertiary institutions and programmes may also suffer accreditation problem if this persist. It is worthy of note that some higher institutions had resulted to the rationalization of courses as a result of dearth of academic staff. The implication of this in a country that is characterized by high level unsatisfied higher education admission demand will be serious. This will indeed continue to aggravate the situation and makes tertiary education elitist in Nigeria. Quite unfortunate is the fact that an online report in indicates that as at year 2014, no university in Nigeria is among the world best 500 universities list. The best university from the Africa continent was university of Cape Town, South Africa. In Africa, the best university from Nigeria (ObafemiAwolowo University, Ile Ife) ranked 44th while university of Ibadan and Benin ranked 65th and 69th respectively.

Measures to Curb Academic Staff Turnover in Nigerian Universities

Aluko (2022) enumerated the following measures for retaining academic staff in Nigerian Universities:

1. Attractive Compensation Package: attractive remuneration package is one of the key retention strategies of academics in that it relatively fulfills their financial and material desires. When the reward system is adequately managed, it helps to achieve the organization corporate objectives and retain productive workforce. Compensation package is regarded as the most vital motivational factor of retention among academic staff in educational system. Rosser (2018) found that wide disparity in salary system is one of the key indicators undermining the commitment of academics to their institutions and consequently their decision or intent to leave. Thus, the ability of universities to effectively align the rewards and incentives with staff requirements and interests help to retain productive workforce thereby facilitating the achievement of the set goals. The more attractive the overall packages, the better the retention and attrition of the employees (Umar, 2020).

2. Training and Development Opportunities: the importance of training and developing the academic staff cannot be undermined in a changing world and circumstance that lay more emphasis on quality teachers and students. It is considered a form of manpower development that provides employees with specific knowledge, abilities and skills required to enhance their competencies and deficiencies in performances (Chew, 2019).Career development has a potential effort on staff retention strategies. Organization that concentrates extensively on continuous training of staff will be in a much stronger position to retain the most talented employees, thus becoming an employer of choice (Boxal, etal, 2020) Tetty (2021) observed that training opportunities is the engine that keep the universities true to their mandates as centre of ideas and innovation. Therefore, training and career development programmes restrict academic staff from leaving the educational industry, increase loyalty and enhance professional competency there by facilitating the actualization of university goals. When academic staff are adequately trained, it saves the institution from expenses on selection and decline in productivity due to staff turnover.

3. Conducive working environment: pleasurable working setting reduces academic turnover and induce lower degree of job stress, while undesirable work environment often influence turnover decision. Jone (2018) observed that work environment that is comfortable and relatively low in physical or psychological stresses tends to enhance productivity and efficiency among academics and facilitate the attainment of educational goal. Rosser (2021) observed that few of educational industry provide adequate support for academic staff to integrate technology in to their works. The extents to which academics feel supported in terms of being provided with adequate and favourable facilities is critically important to overall quality of their work life and enhance their retention. The study of Walker and Arnold (2017) revealed that provision for supportive learning and working climate are crucial for the retention of talented academics.

4. Promotional Opportunities: this is an advancement of an employee in the hierarchy of an organization from a particular level to a higher level. Since the success of any educational system depends on the quality of its teachers in terms of possessing required abilities, knowledge and zeal to carry out their duties effectively, the school organization should not only be fair in their promotional exercise, but also make the staff perceive the promotion programme as being devoid of bias. Elevation of staff to higher status after satisfying the pre requisite conditions is fundamental to academic employees' retention and sustainability. Dockel (2021) argued that employees should not only be rewarded

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financially, but also offer opportunities to growth within the institution. Souza (2022) in his findings discovered that employees who receive timely promotion and optimistic of promotional expectation in future are highly attracted in their respective places in the organization. Additionally, when employees are promoted as and when due, they think they are being elevated in their positions and carrier buildings is progressing, but when they do not get prompt promotion they become dissatisfied and thinking of leaving the organization. Theobald (2019) affirmed that to retain academic staff in the educational system, the institution management must create room for carrier advancement opportunities; failure to do so may result to brain drain of experienced and seasoned academic staff.

5. Wooing Academics in Diaspora Back to Nigeria: Government should woo the Nigerians professionals that are in exile back into Nigeria to invest in the economy or take up job in any of the sectors so that they can contribute to the development of the country in the present dispensation. This can be done through the introduction of immigration policies that will discourage the flow of skilled individuals out of the country. Government should develop a database of the professionals in various fields in the Diasporas using the internet and encourage more remittances from those in the diaspora so as to strengthen the economy of the nation.

Conclusion

Human resources in the right quantity and quality are *sine qua non* to a nation's development. Regrettably, lack of manpower, characterized university education in Nigeria, which is worsened by turnover. Talents exodus from universities Nigeria constitutes loss of resources invested on their training. At present, it is disturbing that Nigeria's universities are rated low in global ranking. One of the conditions for ranking universities is the quantity and quality of academic staff in stock. It is hopeful that if the strategies are adopted and implemented by Government and institutions‟ administrators, the menace will become a thing of the past while the state of tertiary education will improve from the status quo in Nigeria. Nigeria's developmental challenges demand that universities should be positioned as foremost place to prepare the nation for the expected leap forward. But the evidence seems to suggest that the institution remains ill prepared. This owes partly to the low morale of the academic staff, which in turn exacerbated the tempo of lecturers' turnover from the system. It is fair to say that lecturers will be enthusiastic, committed and goal oriented when the work environment is conducive; good welfare packages like good houses, adequate health and medical insurance, training and development opportunities and other relevant fringe benefits. In the absence of these, it can only be expected that dissatisfaction and eventually quits will result. Given their role in society, there is a strong case to pay unique attention to university academics while not constituting them into a special class. However, it is important to further explore opportunities to provide more incentives tenable lecturers make the most of their roles in the development process. In doing this, it is evident that economic inducement does not provide sufficient motivation for university lecturers'. A holistic approach that satisfactorily takes into account crucial on-economic factors as well must be employed.

Suggestions

Based on the study, the following suggestions were made:

1 Adequate funding of university education to enhance effective service delivery
2. Provision and rehabilitation of decay infrastructures and facilities in universities should be given priority
3. Unnecessary interference of government in university internal affairs should be avoided
4. Salaries and fringe benefits of lecturers should be enhanced and made relevant to prevailing economic circumstances by reviewing them periodically.
5. Academic staff developments should be accorded priority since possible growth and advancement on the job is a vital motivational factor.
6. Prominence should be given to the provision of research grants, while sponsored seminars and conferences should be prioritized to enrich the knowledge and skills of academic staff.

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ASSESSMENT OF PEDAGOGICAL KNOWLEDGE EFFICACY AND APPLICATIONS AMONG SECONDARY SCHOOL CHEMISTRY TEACHERS IN NIGERIA

BY

[1]Ahmed Abiola Tawa, [2]Yusuf Olayinka Shogbesan, [3]Imam Bashirat Titilope & [4]Olorundare Adekunle Solomon
[1&4]Department of Science Education, Faculty of Education, Al-Hikmah University, Kwara State, Nigeria.
[2]Department of Arts and Social Sciences Education, Faculty of Education, Al-Hikmah University, Kwara State, Nigeria.
[3]Department of Science Education, Faculty of Education, University of Ilorin, Ilorin, Nigeria.

Abstract
This study assess the pedagogical knowledge efficacy and applications among secondary school in kwara state, Nigeria. A mixed research design was adopted to conduct the study. Related literature was reviewed after the conceptual framework based on the major variable of the study. The population of the study comprises of all the chemistry teachers in secondary schoolin kwara state. Based on the data estimate collected from Kwara State Ministry of Education, out of an average number of 118 schools in Ilorin, four Senior Secondary Schools were purposively selected and 40 Chemistry teachers were then randomly selected for the study. Data collected were based on the research questions and were analyzed using both descriptive and inferential statistic. The finding from the study revealed that majority of chemistry teachers have adequate knowledge about the instructional strategies while few still have contrary view about it. Further finding shows that some chemistry teachers still don't possess efficacy when exposed to observation protocol. The study concluded that chemistry teachers possess adequate knowledge of the pedagogical knowledge and knowledge of assessment of chemistry students while some still had contrary view about the knowledge of assessment, despite the fact that Pedagogical content knowledge plays important role in classroom instruction.
Keywords: Pedagogical knowledge, content knowledge, pedagogical content knowledge, efficacy, content representation

Introduction

The most important aspect of every educational program is teacher, from the primary school level of education to the highest level of education, since teachers are responsible for putting educational activities into practice. Hence, the achievement of any nation depends mainly on the quality of its teachers. According to Ani, et.al. (2013), teachers education includes solid pedagogical theory, professional skills, and instructional abilities. In line with this submission, science teachers were trained in the institution to become science teachers and they should possess adequate pedagogical content knowledge to be effective science teachers. According to Ahmed and shogbesan (2023) asserted that educators' pedagogical content knowledge (PCK) is crucial to the development of effective teaching practises and the implementation of effective curriculum. Science educators PCK is very important in the development of effective teaching practices and they will be able to implement the curriculum especially the chemistry teachers that Okorie and Akubuilo (2013) attributed causes of students' poor performance in Chemistry to teachers' inadequate knowledge of teaching curriculum on which students learning is based, as well as teachers' lack of adequate knowledge of the subject matter and instructional strategies.

Science plays a very important role in the development of many nations. It is essential that science teachers possess basic knowledge for teaching. Science has also been viewed as the pursuit and application of knowledge in order to have a better understanding of both natural and social world based on systematic methodology evidences (O'Hanion, 2015). According to Abimbola (2013), science is a body of knowledge, a way or method of investigating and a way of thinking in the pursuit of understanding of nature. Olorundare (2014) also defined science as assessing, amending and enhancing activities which deal with ideas relating to natural phenomena and how they can be interpreted. Science was defined by Bradford (2017) as an organised and rational approach aimed at finding out means by which everything in the confinement of the universe works. It is also described as a body of knowledge acquired and synthesised by

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ways of determining the nature of all things in the universe. According to Ivowi (2003), the development of any nation depends basically on the level of scientific and the technological literacy possessed by the citizenry. Science and its application have become important for sustainable development in all nations' economy.There are two major branches of science; pure and applied sciences. Pure sciences include Biology, Physics and Chemistry (Infoplease, 2013; Helmentine, 2015). Chemistry is a branch of science which deals with the study of the structures, composition, properties and reaction of matter in different forms. Bagley (2017) defined Chemistry as the study of matter, its properties, how and why substances combine or separate to form other substances, and how substances interact with energy. In the study of Chemistry, it has been observed that matter changes its forms. Therefore, there is the need to understand the basic principles involved in the formation of new substances (American Chemical Society, 2015).

Chemistry teaching is supposed to be students-centered to enhance understanding of the concept. This can be achieved using proper methods and instructional media in teaching students when students are willing to learn (Adesoji & Olatubosun, 2008). In line with submission chemistry teachers should have adequate pedagogical knowledge about chemistry teaching at secondary school. Students are curious in nature; they ought to participate actively in the learning process as they constantly equip, test, speculate and build their individual ideas and understanding that becomes functioning, significant and valuable to them. Owing to the position of Chemistry in relation with other science subjects such as Physics and Biology at Senior School level and also as a prerequisite for admission requirement to study courses such as medicine, agricultural science and engineering, students are expected to perform well. These disciplines require a credit pass in Chemistry (Bamidele & Adekola, 2017) at secondary school level. Consequently, there is the need to put in place all necessary requirements for the effective teaching and learning of Chemistry in order to achieve a positive outcome. The teaching of chemistry by chemistry teachers should have adequate knowledge about pedagogical practices to be use for teaching of chemistry.

Literature Review

The poor performance of Senior School science students has been attributed to teachers' low level or lack of Pedagogical Content Knowledge (Gess-Newsome, 1999); hence, teachers need to make science comprehensible and interesting for their students. To do this, teachers need to change and develop their PCK (Shulman, 1986), since PCK is a distinctive body of knowledge necessary for classroom teaching (Kind, 2009). It has been a challenge for students to have a clear knowledge of certain chemistry concepts due to instructional methods used by teachers to teach these concepts like mole concepts (Lamidi et.al 2015). The teaching of students, according to the present day standards for students to achieve the characteristics of the 21st century learning skills, requires that teachers need to understand the subject matter deeply so that they can help students create useful cognitive maps, relate one idea to another and address misconceptions held by the students. There is the need for teachers to represent ideas using content representation in planning their lesson. Teachers are also expected to be acquainted with the interconnection across disciplines with the day- to- day life. This kind of understanding provides the basis of PCK that enables one to make ideas accessible to others (Shulman, 1987). The original conceptualization of PCK did not consider the 'doing' of teachers, as Shulman (2015) believed he had been inattentive to the role of 'pedagogical culture' or the lived settings in which teaching, learning, and development occurs. For PCK to be meaningful and effective, it had to be mindfully situated within the culture of science teaching and learning and the settings in which teaching, learning, and development occurs (Shulman, 2015). Is therefore important to carry out research on pedagogical knowledge efficacy and application among secondary school in Nigeria.

Despite the position of chemistry in relation with other science subjects, findings from several studies have revealed the causes of dwindling academic performance of Chemistry students at the Senior School level in Nigeria. The situation is due to the abstract nature of Chemistry (Samba & Eriba, 2012), schools, students and teachers- related factors Nwagbo, 2006; Mailumo, Agogo & Kpagh, 2007; Ugwu, 2008; Rand, 2012; Okorie & Akubuilo, 2013; Okebukola, 2016; Ojukwu, 2016; Concept difficulty (Agwai, 2008) is also one of the reasons amounting to poor performance of secondary school students in Chemistry. Majority of the aforementioned studies have showed that most of the causes of dwindling students' performance are due to the ineffectiveness of the teachers. Ojukwu's (2016) finding revealed that lack of qualified teachers, ineffective methods of teaching, lack of teaching experience, the non-use of instructional media had been identified and perceived as the causes of poor performance of students in

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Chemistry. Okorie and Akubuilo (2013) attributed causes of students' poor performance in Chemistry to teachers' inadequate knowledge of teaching curriculum on which students learning is based, as well as teachers' lack of adequate knowledge of the subject matter and instructional strategies. Chemistry teacher must have adequate pedagogical content knowledge in teaching concepts in chemistry for students' proper understanding. The poor learning outcome in mole concept is as a results of a number of problems such as teachers lack of subject matter expertise, their lack of pedagogical knowledge understanding, and students' misconceptions of the mole concepts, among many others (Yaayin,2018; Nweshi et.al., 2020; Adu-gyamfi & Vorsah, 2022).

According to Gates (2015), having an effective teacher is the single, most essential in-school factor that has influence on students' achievement. In line with submission of (Gate 2015), to be effective teacher, they should have solid pedagogical content knowledge. In order to provide solution to ineffectiveness in teaching on the part of teachers, Shulman (1986) brought up the concept of pedagogical content knowledge (PCK) as a distinctive type of knowledge for teaching which creates a content domain understandable for learners (Shulman, 1986; Shulman, 1987). An effective teacher is required to improve their knowledge with reference to all aspects of pedagogical content knowledge and the topics they teach (Magnusson, Krajcik& Borko, 1999). PCK is hybrid of both content knowledge and pedagogical knowledge. The content knowledge is about knowledge of what to teach while pedagogical knowledge deals with knowledge of how to teach what you know or the subject matter. The pedagogical knowledge is very important in chemistry teaching because of nature of the subject itself, because most students feel that the subject is abstract and it is not easy to understand, but if the teachers uses better instructional strategies most of the problem will be solved. Hence there is need to carry out study on pedagogical knowledge efficacy and application among chemistry teacher at secondary schools in Nigeria. Several research has been conducted on PCK and using various PCK models to assess teachers pedagogical and content knowledge in different concepts in chemistry (Widhiyanti et. al.,(2017), Arrigo et. al. (2022). As a result of this, Loughran et al. (2013) recommended that teachers should be encouraged to use CoRe and PaP-eRs so as to improve their thinking about teaching for positive outcome in the teaching and learning processes. If the problem of poor understanding of chemistry concepts by the student still persist there is need to assess the pedagogical knowledge efficacy and application of among secondary school chemistry teachers in Nigeria.

Purpose of the Study

The primary purpose of this study was to assess teachers' pedagogical knowledge efficacy and application among Secondary School Chemistry teachers in Nigeria. The study specifically:

i. determined chemistry teachers' knowledge of instructional strategies used for teaching Chemistry;
ii. evaluated the knowledge of assessment of Senior School Chemistry teachers in the teaching of Chemistry;
iii. examined the Senior School Chemistry teachers' efficacy towards the teaching of Chemistry content

Research Questions

In this study, answers were sought to the following questions:

1. Do Secondary School Chemistry teachers demonstrate the knowledge of instructional strategies used for teaching Chemistry?
2. Do Secondary School Chemistry teachers possess knowledge of assessment in the teaching of Chemistry?
3. What is the Secondary School Chemistry teachers' efficacy towards the teaching of Chemistry content?

Methodology

This study is a mixed method research that involved gathering of both quantitative and qualitative data. The quantitative aspect of the research assess the teachers' pedagogical knowledge among chemistry teachers in secondary school in kwara state Nigeria while the efficacy of chemistry teachers was examined using observation protocol to observe the chemistry teachers in the classroom to show how effective the chemistry teachers are. The target population for this study was all Senior Secondary School Chemistry teachers in Ilorin. Based on the data estimate collected from Kwara State Ministry of Education, out of an average number of 118 schools in Ilorin, four Senior

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Secondary Schools were purposively selected and 40 Chemistry teachers were then randomly selected for the study. Then 20 Chemistry teachers were randomly selected to examine the efficacy of pedagogical knowledge and application of instructional strategies in the classroom. An instrument was developed to elicit information from the respondents. Lastly, data collected were analysed using descriptive statistics.

Results

Research Question 1: Do Senior School Chemistry teachers demonstrate adequate knowledge of instructional strategies in the teaching of Chemistry?

Table 1: Percentage Analysis of Senior School Chemistry Teachers' Demonstration on the Knowledge of Instructional Strategies in the Teaching of Chemistry

S/N	Knowledge of Instructional Strategies for Teaching Chemistry	Agree (%)	Disagree (%)
1.	Experiment is best used to teach Chemistry concepts.	40(100%)	0 (0%)
2	Demonstration method facilitates conceptual understanding of chemical concepts.	39(97.5%)	1 (2.5%)
3.	Discussion method is the most effective method for teaching Chemistry concepts in the classroom.	28(70.0%)	12(30%)
4.	Innovative instructional strategies are suitable for teaching abstract concepts in Chemistry.	39(97.5%)	1(2.5%)
5.	Inquiry method is suitable for teaching chemical reaction.	31(77.5%)	9(22.5%)

Based on the responses provided in Table 1 by the teachers, about 97.5% of them possessed the requisite knowledge of instructional strategies for teaching chemistry contents which further showed high level of understanding of instructional strategies in chemistry teaching, while 2.5% of the teachers did not possess adequate knowledge of instructional strategies as shown in the listed statements in the table. In this case chemistry teachers should demonstrate adequate knowledge of instructional strategies by scoring 100% in their responses. The first item on knowledge of instructional strategies which says Experiment is best used to teach chemistry concepts shows that all the chemistry teachers possess adequate knowledge of instructional strategies on the first item the result also shows that 77.5% of chemistry teachers possess knowledge about inquiry method being suitable for teaching of chemical reaction while 22.5% still not possess knowledge about inquiry method being suitable for teaching chemical reaction. 30% of chemistry teachers still had contrary view about Discussion method as the most effective method for teaching chemistry concepts in the classroom.

Research Question 2: Do Senior School Chemistry Teachers possess knowledge of assessment in the teaching of Chemistry?

Table 2: *Percentage Analysis of Senior School Chemistry Teachers' Knowledge Possession of Assessment in the Teaching of Chemistry*

S/N	Knowledge of Assessment of Chemistry Teachers	Agree (%)	Disagree (%)
6	Questioning skill can be used to assess the knowledge of Senior Secondary School (SSS) students on Chemistry concepts.	40(100%)	0(0)

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7	Assignment/ Home work can promote the facilitation of knowledge about Chemistry concepts in students.	39(97.5%)	1(2.5%)
8	Laboratory activities provide an effective platform to measure knowledge acquired by students	36(90%)	4(10%)
9	Classroom testing of students' knowledge of Chemistry concepts is an effective feedback mechanism for the Chemistry teacher.	38(95%)	2(5%)
10	There is need to assess Chemistry students on their ability to apply Chemistry knowledge.	38(95%)	2(5%)

Table 2 shows frequency and percentage distributions of teachers' response on their knowledge of assessment of chemistry, particularly the aspect of questioning skills. The results showed that 97.5% of the teachers had full grasp of how to assess chemistry contents while 2.5% of them had contrary views as indicated in their response. Form the table the results shows that chemistry teachers possess adequate knowledge about Questioning skill which can be used to assess the knowledge of Senior Secondary School (SSS) students on Chemistry concepts. Also form the table 97.5% had knowledge about the use of Assignment/ Home work can promote the facilitation of knowledge about Chemistry concepts in students while 2.5 had contrary view. Only 90% of chemistry teachers possess knowledge about Laboratory activities provide an effective platform to measure knowledge acquired by students. It shows from the table that 90% of chemistry teachers understand that Classroom testing of students' knowledge of Chemistry concepts is an effective feedback mechanism for the Chemistry teacher, 10% had contrary view about this. 95% of chemistry teachers understand that there is need to assess Chemistry students on their ability to apply Chemistry knowledge to their society.

Research Question 3: What is the Senior School Chemistry teachers' efficacy towards the teaching of Chemistry content?

Table 3
Percentage Analysis of Senior School Chemistry Teachers' Efficacy towards the Teaching of Chemistry Content

S/N	Chemistry Teachers' Efficacy	Agree (%)	Disagree (%)
11	Pedagogical knowledge is always tasking when teaching Chemistry as a subject.	30(75)	9(22.5)
12.	It is somewhat difficult to teach Chemistry concepts using content representation.	27(67.5)	13(32.5)
13	Content knowledge is best displayed through laboratory activities in Chemistry.	36(90)	4(10.0)
14	Selection of appropriate instructional strategies can facilitate effective Chemistry knowledge acquisition by students.	38(95)	2(5.0)
15	Developing the right scientific approach to the teaching of Chemistry encourages students to learn Chemistry.	39(97.5)	1(2.5)

Chemistry teachers' efficacy is subject to how chemistry teachers can multi-tasks different techniques to bring about understanding for students and improve their performance in the subject. This can only be achieved if the combination of positive responses on the items or statements in Table 3 is ascertained. Therefore, 95% of chemistry teachers agreed with the statement which stated that selection of appropriate instructional strategies can facilitate effective chemistry

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knowledge acquisition by students. This indicates that the chemistry teachers possessed knowledge of the ability to produce a desired outcome in the teaching of Chemistry, while 5% did not to possess the outlined skills as shown on Table 3. 75% of chemistry teachers agreed that Pedagogical knowledge is always tasking when teaching Chemistry as a subject while the remaining 22.5 disagreed while some of the chemistry teachers do not respond. 97.5% of chemistry teachers had right view on Developing the right scientific approach to the teaching of Chemistry encourages students to learn Chemistry.

Classroom Observation Protocol

S/N	ELEMENTS TO BE OBSERVED	EVIDENT WHEN THE TEACHER…	Excellent (5 marks)	V.Good (4 marks)	Good (3 marks)	Fair (2 marks)	Poor (1 mark)
1.	Knowledge of Instructional Strategy for teaching Chemistry	1. Uses of appropriate activities in instruction 2. Uses of real-life examples and analogies in instruction **3.** Utilizes different instructional strategies in presentation					
2.	Teacher efficacy	1. Developed the right scientific approach to teaching of Chemistry 2. Selection of appropriate instructional strategy **3.** Displayed and effective content representation					

The Method used for the analysis of research question 3. The element to be observed by the teachers was analyzed using rating scale of observation protocol. The analysis was done by scoring each question observed by the teachers. The criteria for scoring in each of the evidence when the teacher exhibit it range between1-5 marks. The number of scores obtained by each teacher on each question divided by maximum score of 30. The percentage is determined by the following equation:

$$\text{Percentage scores} = \frac{\text{Obtained score}}{\text{Obtainable score (30)}} \times 100\%$$

Discussion

Finding from the present study showed that majority of chemistry teachers demonstrate adequate knowledge of instructional strategies required. For example, all chemistry teachers sampled 40 (100%) agreed that using experiment is best method in teaching chemistry concepts. The combined knowledge of how teachers understand science and the instructional strategies used to teach science have become an important research interest (Gess-Newsom, 2015). This is also apparent from responses on item 19 where 39 (97.5%) agreed that innovative instructional strategies are suitable for teaching abstract concepts in chemistry. Because of the key role of teachers in the creation of significant learning is the question arises regarding how prepared biology teachers are to teach this important content (e.g., van Dijk 2009; Cofré et al. 2017; Deniz & Borgerding, 2018). it is therefore important to study which is the pedagogical content knowledge (PCK) of evolution that biology teachers display, this is, what knowledge do they have regarding how to teach and evaluate this subject, and which are the students' learning difficulties (e.g., Cofré et al. 2016). In line with this submission, it is imperative to study teachers' knowledge of instruction strategies of chemistry teachers. One of the limitations that prevents teachers from adequately teaching this content is the lack of training on teaching strategies to teach evolution (e.g., Romine et al., 2014; Sickel & Friedrichsen, 2013; Cofré et al. 2017) and to work with student preconceptions (Lucero et al., 2017; Parraguez et al. 2022).

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It was also found out that 30% of the teachers disagreed with the statement that discussion method is most effective method for teaching Chemistry concepts in classroom. This implies that majority of the chemistry teacher possessed the knowledge of both components of topic and subject specific strategies. Teachers use of strategies can be influenced by their level o believes about a method or approach. This belief in turn influences the type of strategies they apply in the classroom. This implies that chemistry teachers should possess these two major components of teachers' knowledge on instructional strategies i.e. knowledge of subject- specific strategies e g demonstration or laboratory while knowledge of topic –specific teaching strategies includes representation, analogy, example and models. This finding from the study as regard instructional strategies is in agreement with the submission of Hodson (2001) who described teaching as multifaceted creativity where teachers are frequently required to amend their teaching strategies to ensure student learning. Teachers should make use of different teaching strategies. Another finding from the study revealed that the chemistry teachers sampled possessed adequate knowledge on what, when, and why of assessment during chemistry teaching. All chemistry teachers sampled 40(100%) agreed that questioning skill can be used to assess the students' knowledge of chemistry concepts. While, out of the 40 chemistry teachers sampled 36(90%) chemistry teachers agreed that laboratory activities provide an effective platform to measure knowledge acquired by the students. This indicates that 4(10%) of the teachers sampled still disagreed with the statement that activities of laboratory can provide platform to measure knowledge acquired by chemistry students.
This implies that knowledge of assessment possessed by the chemistry teacher as one of component of pedagogical content knowledge is apparent among the teachers. This knowledge of assessment is important because the knowledge will help the teachers to determine what to assess, how to assess and the reason for the assessment. This is in agreement with submission of Magnusson et al. (1999) who modified Grossman model by adding the knowledge of assessment as important component of PCK. The teachers used the feedback from these assessments to update their teaching during classroom instruction. This goes with the submission of Atkin, Black and Coffey (2001), who indicated that identification of learning and performance goals and assessment of students' current level of understanding are the points to be considered in carrying out assessment.

Chemistry teachers' efficacy towards the teaching and learning of the subject represented the beliefs and assessments in terms of behaviour necessary for effective teaching. Finding from this study also revealed that out of 40 chemistry teachers, only 27 agreed with item 27 which states that it is difficult to teach chemistry concepts using content representation. This indicates that small percentage of chemistry teachers 13 (32.5%) disagree with item 27, this number of chemistry teachers did not find it difficult to use content representation (CoRe) when teaching chemistry concepts. Majority of respondents, 27(67.5%) found it difficult to use content representation to teach chemistry concepts. Thirty-six (36) chemistry teachers agreed that Content knowledge is best displayed through laboratory activities in teaching.

Conclusion

It can be concluded from the findings of this study that chemistry teachers possess adequate knowledge of the pedagogical knowledge and knowledge of assessment of chemistry students while some still had contrary view about the knowledge of assessment, despite the fact that Pedagogical content knowledge plays important role in classroom instruction. Some of chemistry teachers still do not have adequate knowledge about PCK. It shows that small percentages of chemistry teachers still had problem with content representation. Based on the finding from observation protocol few of the chemistry teachers score more than 50% of the score.

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DETERMINANT OF PERFORMANCE AND FAILURE RATE AMONG MATHEMATICS STUDENTS IN JUNIOR SECONDARY SCHOOLS CERTIFICATE EXAMINATION IN KWARA STATE

BY

[1]Olarewaju Adijat Omoladun & [2]Omosanya Kabir Olalekan
[1]Department of Science Education, Faculty of Education, Al-Hikmah University, Kwara State, Nigeria.
[2]Federal School of Statistics, Ajibade Sasa Road, Ibadan.

Abstract
The deplorable in the rate of performance among the junior school students in Mathematics has raised concern among the stakeholders in Nigeria. This study thereby aimed to investigate the determinant of performance and failure rate among mathematics students in Junior Secondary Schools Certificate Examination in Kwara State. The specific objectives sought to find out: the attitude of students towards mathematics in junior secondary school certificate examination; performance of students in mathematics in junior secondary school certificate examination; the rate of failure in mathematics in junior secondary school certificate examination; and the determinants of students' performance in mathematics in junior secondary school certificate examination. The method adopted to accomplish the objectives involved the use of a structured questionnaire and a proforma containing the Basic Education Certificate Result from 2015-2019. The population consist of junior secondary school students from three (3) private and public secondary school in Ilorin West LGA of Kwara State. A two-stage sampling was used to select a sample of 25 students across six(6) schools. The findings revealed that there is an upward trend in performance of students in mathematics based on pass rate from 2015 to 2019. Highest rate of failure in mathematics was recorded in 2015 while the lowest rate was recorded in year 2017. Findings also indicated that the greatest determinant of students' performance in mathematics in Junior Secondary School were student factor with mean score of 16.37 while there was a significant difference in the attitude of students towards mathematics in junior secondary school based on gender ($t=9.19$; $\rho < 0.05$). Based on the findings, it was recommended that government at all levels (Federal, State and Local) should ensure that basic educational facilities such as learning materials, libraries, standard classroom blocks and laboratories are provided for schools so as to enhance teaching and learning. Also, Mathematics teachers should encourage students on how to learn mathematics by reinforcing them when necessary.

Keywords: Determinant, Performance, Failure, Attitude, Trend, JSSCE

Introduction

Mathematics is the language without which science, commerce, industry, the internet, and the entire global economic infrastructure are struck dumb. In order to function in a mathematically literate way in the future, students must have a strong foundation in Mathematics. A strong foundation involves much more than the rote application of procedural knowledge. Thus, Mathematics plays a crucial role in human life. Mathematics prepares one for the future world. Makondo and Davison (2020) posit that Mathematics provides an effective way of building mental discipline and encourages logical reasoning. Consequently, many nations take Mathematics as a compulsory subject at O'level since it is a fundamental subject for human life. A child must obtain a minimum of five credits at two sittings including English Language and Mathematics to be able to proceed to the tertiary level of the educational system. Mathematics is made compulsory for all students to offer and pass at the senior secondary certificate examination and also a basic requirement for admission into any higher institution of learning in Nigeria (FRN, 2013). Therefore, the Performance in Mathematics in this National Examinations determines who would transit from one cycle to the next cycle of education.

Hassan and Bello (2022) while studying students' achievement in Mathematics as a prediction of their scores in Physics and English language proficiency stated that Mathematics is virtually the soul of all fields of studies either Mathematical or Non-Mathematical. The researchers concluded that there is significant influence of the individual independent variables to physics achievement that is Mathematical ability and English proficiency. This shows that Mathematics is the language of Science and Technology, because it is the tool for solving problems in science subjects

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like Physics and Chemistry. It is common belief of educationists that no one can make progress in any field until he/she has the basic knowledge of Mathematics. Mathematics plays its vital role in all the multi disciplines of societal development and can be seen as 'the queen of science' the main driving force behind all scientific discoveries (Ameen & Salman, 2016).

However, it is disappointing to note that the students' performance in Mathematics at internal and external examination has remained considerably poor despite the relative importance of Mathematics in the modern world today. It was noted that some factors led to this were lack of quality education, qualified teachers and poor learning environment. Abdullahi et al. (2022) argued that students' performance at the junior school certificate examination (JSCE) conducted by West African Examination Council have consistently remain poor over the years. Measuring of academic performance of students is challenging since student performance is an outcome of socio-economic, psychological and environmental factors. Mathematics is not only important for acquiring academic qualifications, but also prepares students for the future. Thus, a group of students who fail in Mathematics face learning difficulties in Mathematics and related courses in higher levels particularly science, engineering and other business-related courses. Hence, the nation will lack skilled people in the areas of technology, health, engineering, agriculture and related fields (Daniel & Mugiraneza, 2023). Consequently, the country will lag behind in the technological endeavors due to lack of skilled individuals.

Tanko et.al (2022) highlighted that without Mathematics, there is no science, without science, there is no modern technology and without modern technology, there is no modern society. Thus, all the stakeholders in education must emphasize on building capacity in Mathematics skills to foster development in science and technology for competitiveness and agricultural development of the country. Researchers, government and non-governmental organizations have tried to identify factors behind students' performance in Mathematics at all levels of education in Nigeria. Many stated that the high failure rates have been attributed to, amongst other factors, the absence of competent teachers; inadequate teaching/learning resources such as books, teaching aids and understaffing in most schools (Mazana, Montero & Casmir, 2020). Higher failure rates are also associated with low level of motivation among teachers, teachers' attitude towards students and Mathematics, poor instructional strategies, teachers' weak content knowledge (Mazana et al., 2019; Ameen & Salman, 2016), teachers emotions in the classroom (Frenzel et al., 2021; Alrajeh, & Shindel, 2020). Other factors include, examination setting, poor preparation of teachers in the implementation of the curriculum, and ability grouping (Ogar & Aniefiok, 2023). Some researchers have even grouped these effects into different variables in relation to the stakeholders involved in the field of education. These vary from Government related variables, parents related variables, student related variables, teachers related variables, examination body related variables, curriculum related variables, test related variables, textbook related variables, home-related variables and student related variables.

Literature Review

Curriculum is a vital component of any educational environment. It is central to education at all levels in the world. The term curriculum therefore can be said to be the total environment and which education takes place. Thus, According to Vinnervik (2022), curriculum embraces the child, the teacher, the subject, the content, the methodology of teaching and evaluating. School academic activity is governed by the national curriculum and teachers are recognized as key driver in implementing the curriculum (Braun et.al. 2012). Junior secondary level is the first three years in secondary before the completion of the last level of education in secondary school. At this stage, the students will be exposed to five compulsory cross cutting subjects and four distinct fields of study of which Mathematics is prominent in all as a compulsory subject. Now, considering the importance of Mathematics and its position in the national curriculum, there is a great need for the emphasis on its preparation/organization and effective communication of the subject. Experience with the teaching of Mathematics in most Nigerian secondary schools showed that many Mathematics teachers employ poor or insufficient motivation and support for inclusive practices in mathematics classrooms which could bring about poor understanding of the concepts taught (Bista, 2023).

Baird, Isaacs, Johnson, Stobart, Sprague and Daugherty (2011) opined that there is a global focus on Mathematics attainment as a gateway to economic progress, with the leaders of many Western nations anxious to see improved results in international performance indicators such as the Programme for International Student Assessment (PISA)

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or Trends in International Mathematics and Science Study (TIMSS). The objective of Mathematics includes Mathematical ideas progress from concrete to abstract; grow from particular to general and it knowledge is conceptual as well as procedural. Similarly, in Mathematics we come across 'definitions' that describe concepts, 'examples' to illustrate procedures, 'theorems' to state valid results, 'conjecture' that talks about Mathematical statements for which proofs are to be worked out but which seem plausible and 'counter example' to disprove statements. The scope of Mathematics provides effective way of building mental discipline and encourages logical reason and mental vigor. Mathematics touches all aspects of life. According to Greek philosophers, the whole life is synonymous to Mathematics.

Dada (2012) affirmed the fact that teaching of mathematics in secondary education after independence did not in any significant way different from what it used to be before the independence. It was such lives and cries that forced the government to organize a national conference on curriculum development in Lagos between September 8-12, 1969. The conference on curriculum was sponsored by the Nigerian Educational Research Development Council (NERDC) and was saddled with the onerous responsibility of reviewing the nation's educational system with particular emphasis on the objectives of education and the content of the curriculum in the light of the peoples' needs; both as individuals and as a nation (Dada, 2012).

Students' attitude towards mathematics is given various definitions in the literature. For example, Kibrislioglu et. al (2016) defines attitude towards mathematics as liking or disliking of the subject; a tendency to engage in or avoid mathematical activities; a belief that one is good or bad at mathematics; and a belief that mathematics is useful or useless. Several studies have demonstrated that attitudes towards mathematics are directly and significantly associated with students' performance. For instance, Mensah and Kurancie (2013) conducted a study in Ghana and found a significant positive correlation between students' attitude and performance. The Trends in International Mathematics and Science Survey (TIMSS) results of 2007 reported in Gonzales, et al. (2008) also indicate that 4th grade and 8th grade students with a more positive attitude had higher average achievement in mathematics as compared to those with less positive attitudes. In a more recent study, Ngussa and Mbuti (2017) conducted a study in Arusha, Tanzania, involving secondary school students. They established a moderate relationship between student's attitude and performance when teachers use humour as a teaching strategy. They concluded that the enhancement of students' positive attitude can boost students' performance in mathematics. However, Joseph (2013) in his study of community secondary school students in Kagera, Tanzania found that the majority of students (55%) had a general negative attitude towards mathematics, with a positive and significant correlation between attitude and performance ($r = 0.33$).

The literature shows that students' attitude is affected by numerous factors. They include such factors as the school, peer students, home environment and society (Yang & Land, 2013). Yılmaz, Altun, and Olkun (2010) identify factors that include connecting mathematics with real life, using instructional materials, teachers' personality, teachers' content area knowledge, bad instructional practices, lack of commitment by students' and teachers' classroom management. Other factors include teachers' emotional support (Blazar & Kraft, 2017), teachers' affective support (Sakiz, Pape, & Hoy, 2012), class activities, subject content and amount of work, scarcity of teachers and inadequate resources (Joseph, 2013; Sakiz, Enu et al., 2015), peer and parental influence. Furthermore, in line with Simmers et.al (2011) the factors also include, creating insecurities in students' mathematics ability and teacher failure to provide explanations for the mathematical concepts being taught. Researchers (Mata, Monteiro, & Peixoto, 2012; Mulala, 2015; Moussa & Saali, 2022) have identified important factors that contribute to students' attitudes towards learning mathematics. These include the students themselves, the school, the teachers' beliefs and attitudes and their teaching methods. The teachers' teaching method has a major influence on students' attitudes (Moussa & Saali, 2022; Mensah et al., 2013). Teachers can do many things to facilitate the classroom learning to alleviate students' engagement level and confidence in learning mathematics (Mulala, 2015; Mazana, et.al 2020). This can enable the learners to become confident in using mathematics to analyze and solve practical problems in real-life situations.

Based on gender difference in the attitude of students towards mathematics, Abdullahi (2016) in a study of gender differences in secondary school students' attitudes towards learning mathematics and the resulting implications on their performance indicated that there were significant gender differences in students' attitudes towards learning

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mathematics and in their performance in the subject both in favour of male students. The researcher also observed that male students show more positive attitudes towards learning mathematics than their female counterpart. This study further examine the gender differences in terms of hypothesis testing. The reviewed studies established the definition of students' attitude to learning mathematics, its influence on student performance and also showed a number of factors influencing students' liking or disliking of mathematics. Examination is a measure of academic achievement and performance in education. When a student's academic performance falls below the expected standard, failure is said to have occurred. Ononye and Obiakor (2020) opined that the high rates of failure recorded yearly in public examinations are only a symptom of a pervasive national failure syndrome. On this, pointed out that despite the investment on secondary school education in Nigeria, students are not still performing well. According to some researchers, factor that determines how students performs in mathematics and other related subject can be grouped under the following listed sub-heads: School factor, Psycho-social factor, Government factor, Home factor, Student factor, Teacher-related factor etc.

The school environment or organizational characteristics have been considered in other research. Studies indicate student feelings of alienation may be greater in tertiary institutions. Students who lived in hostel were shown to have a greater sense of comitment and higher retention rate in their studies. Braxton et.al., (2023) showed that institutional communication, fairness in policy and decision making, and participation was positively related to social integration and had significant indirect effects on student retention as well as their performances in mathematics. Others believed that the quality of a students' experience in the classroom was central to their retention and performances (Tinto 2017; Ritschel 2015). It is equally observed that a good educational policy will definitely tell on the performances of students (Fitriana et. al., 2023). Various studies had shown that successful performances of candidates in public mathematics examinations may be hindered by some psycho-social factors such as emotional disposition of candidates prior to and during examinations, poverty, ignorance, poor self-concept, ill-health or sudden sickness and poor study habit. Students' creative tendency and routine tendency help them to explore the unknown and to invent something new or to consolidate what they have already known. When such tendencies are disturbed or upset, they arouse emotions of anger and hostility in them (Oladele et al, 2022). In the same vein, when a candidate is suffering from colds, toothache, constipation, indigestion, poor eye-sight or hearing, mal-nutrition and other ailments that affect children, his level of concentration may be thwarted by the resulting annoyance and outburst of temper leading to academic performance. Children who have low intelligence have been shown to have less control of their emotions. They are less sensitive to danger and cannot foresee consequences of their actions and also have narrow range of interest and desire to satisfy (Oladele et al, 2022). Other behavioural symptoms that can indirectly affect the performances of candidates include restlessness, un-paired concentration, and examination phobia (Oladele et al, 2022).

Nigeria government has not done well for Nigerian teachers by not paying them well to serve as motivation for them. According to Inuwa, (2021), the general condition in Nigeria public secondary school is bad and teaching and learning are operating at the lower ebb. These authors concluded that teachers are left with no alternative than to work in a poor condition which has adverse effect on students' academic performance There is lack of recognition, motivation in term of salary and other incentive and nobody want to be a teacher; no new qualified teacher want to teach again, the old ones are going away. The resultant effect of this is lack of commitment and ineffectiveness of teachers (Kola & Opeyemi, 2021). Government plays crucial roles in the management of educational system in terms of policy formulation, programmes' implementation, funding, administration, supervision among others. The extent to which government is committed to these roles could make or mar the educational system. It is therefore not out of place to blame government for the mass failure of students in mathematics. Studies have shown that the causes of poor academic performance of students attributed to the government were instability of educational policy, leadership problems, job losses (Bashar, & Yasin, 2020), inadequate poor supervision of instruction, inadequate funding of education (Agbofa, 2023). Others include irregular payment of teachers' salaries. Parents play significant roles in the education of their children and wards. Apart from the fact they pay school fees and other levies, they buy textbooks, uniforms and other materials required by their children and wards. In addition to this, they are expected to supervise their academic works and give them good moral training. They are also expected to visit schools from time to time to find out how their children and wards are behaving with a view to taking corrective measures where and when

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necessary. However, the failure of parents to play these roles could negatively affect the academic performance of the students Bashar, & Yasin, 2020). Some parents are over protective and over anxious about their children performances. This attitude on the part of the parents can disturb the smooth emotional development of their children.

Similarly, parents who spoil their wards and refuse to make them grow are also breathing emotional instability in them. This may result in the children becoming antisocial or aggressive hence, such children attention would be diverted from studying to antisocial behaviours such as smoking and drinking to mention but a few. Similarly, social economic status of the family to a greater extent affects academic performance of children. Many parents in Nigeria cannot afford to send their children to the well-established schools where relevant skills can be acquired. Attwood et. al (2019) in his study on causes of students' failure in mathematics concluded that parental attitude hindered students' performance in mathematics. Considerable research evidences abound to show that students are responsible for their academic performance either negative or positive. Aremu & Sokan (2013) found out that the students' factors of poor academic performance were poor study habits, psychological adjustment problems, lack of interest in school programme, low retention, association with wrong peers, low achievement motivation and emotional problems. Other studies (Ollennu & Etsey, 2015); Karande & Kulkarni, 2015; Ajayi & Osalusi, 2013) have shown that students' lack of financial support, absenteeism, truancy, use of local language in the classroom, lack of interest and joy in teachers' lessons and learning disability cause poor academic performance of students. Other causes include low cognitive ability, gender prematurity, medical problems and inability of students to understand examination questions.

According to Boyd, Landford, Loeb, Rockoff, & Wyckoff, (2018) and Aaronson, Barrow and Sander (2017), the most important educational resources is teacher because he/she is at the centre of learning and it can significantly influence the students' achievement. Okemakinde, Alabi, and Adewuyi, (2013) were of the opinion that teachers have an important role to play by adequately preparing the young age for their roles in the community in order to achieve the set national objectives. Nigerian teachers are doing well but there are some areas where they need restructure so as to be able to cope with the current demand of excellent performance of students in WASCE because students' failure is the tantamount to teachers' failure and incompetence. Teachers' self-efficacy is a key factor in teacher's effectiveness which both government, researchers and other stakeholders in the field of education must pay attention to.

According to Aremu and Sokan (2013), the various causes of poor academic performance of students in mathematics which can be traced to the teachers were non-use of verbal reinforcement strategy and lateness to school, poor interpersonal relationships. Therefore, Nigeria education needs teacher who knows that there is no aspect of his or her work subject too difficult to teach neither is there any student who cannot be taught. Bandura (2013) also stated that many teachers do not cover their syllabus at the right time because they felt there is an area of the subject they are not very good. Teacher who don't trust his or her efficacy will try to avoid dealing with academic problems and instead turn his or her effort inward to relieve his or her emotional distress. Gogo and Nduka (2017) carried out a comparative analysis of student mathematics achievement in Junior Secondary Certificate Examination in Nigeria. The study adopted survey design of the expost-facto research type with a sample of 24,661,758 students in Nigeria who sat for the August/September JSSCE in general mathematics between 1991 and 2014 years, Findings from the study showed that the population of students that sat for JSSCE in general mathematics increased by 147.76% after a period of 13years and that improvement in achievement was significant with time. Longjohn & Audu (2020) carried out a survey to investigate the academic performance of students in school-based assessment and two external examinations organized by the Junior Secondary School Examination Council (JSSC). Three core subjects were chosen for comparativeanalysis namely Mathematics, English Language, and Civic Education.The study adopted the ex-post factoresearch design with a sample of 684 students drawn from secondary schools in Obio-Akpor Local Government Area of Rivers State. A proforma was used for data collection, while mean and standarddeviation were used to answer the research questions, with repeated measure analysis of variance used totest the corresponding null hypotheses at 0.05 level of significancethe result showed that with theexception of civic education, students performed better in Mathematics.

In the research carried out by Udofia and Udoh (2017) on the performance of secondary school students in JSSCE from 2004 to 2006, they discovered that the students were not performing as expected. In addition, Obasi and Ugo

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(2018) carried on Predicting Growth Rate of Students' Achievement in Mathematics using Mathematical Growth Model, a developmental survey design was employed where students' JSSC mathematics achievement results from 1991-2016 were collected from the Development Division, Junior Secondary School Examination Council (JSSC) Lagos, Nigeria. Onyeka and Arokoyu (2018) researched on comparative analysis of student Mathematics achievement in Junior Secondary Certificate Examination in Nigeria. The study adopted a survey research design of the expost-factor and the findings showed that the population of students that sat for JSSCE in Mathematics increased and there was improvement over the year of the study. Onanuga and Saka (2018) investigated the trends of performance of students in selected Science, Technology, Engineering, and Mathematics (STEM) subjects in the Basic Education Certificate Examination (BECE) conducted by Ogun State Ministry of Education, Science and Technology, Nigeria The study adopted an ex post facto research design to carry out the trend analysis of students' results in the examination from 2011 to 2015. All the students that enrolled and sat for the BECE examinations constituted the target population while the students that sat for the selected STEM subjects (Mathematics, Basic Science, and Basic Technology) within the years under review constituted the sample for the study. The results of these students were collected and analyzed using Microsoft Excel with its in-built trend line capabilities. The results showed that students performed well in the selected STEM subjects in the years under review. Furthermore, the study revealed that while performance in other subjects will continue to improve steadily, performance in mathematics will dwindle between 2016 and 2018 and then will begin to steadily improve from 2019 to 2020. It further observed that the Nigeria vision 20:2020 might not be realized as planned unless urgent steps are taken to improve performance in Mathematics. A comprehensive literature review has shown that there are number of factors that hindered student's performance in Mathematics for the certificate examinations. Some observed factors as submitted by researchers include; government, parents, students, teachers, materials among other problem. There have been series of studies on the performance of students in Mathematics and science related subjects at various academic levels.

According to Oranga et.al. (2023), parental involvement in the academic performance of their children includes communicate with child to boost up good values in them, meeting with teachers regularly regarding child's progress, general surveillance of children's learning activities, supporting and guiding the child about school activities, helping the child to develop reading habits, involve in homework; attending school meetings and events, discussing school/class activities at home; spending quality time with the child, working on child's strengths and weaknesses, etc. All these activities of parents show a positive effect on academic performance of a child. Attwood (2014) in his study on causes of students' failure in Mathematics concluded that parental attitude hindered students' performance in Mathematics. Studies also revealed that parents that are not financially buoyant can cause academic disturbance for learners. Shortage of instructional materials in mathematics also caused low performance of students in junior secondary examination.

Moreover, Komakech (2015) found that there is a positive relationship between students' attendance to school and academic performance in Mathematics. Using correlational approach to assess attendance on academic performance in Nigeria, Oghuvbu (2022) had the same result as Komakech. He found that there is a positive correlation between class attendance and academic performance in Mathematics. Udonsa (2015) investigated the trend on students' performance in Mathematics at senior secondary certificate educations in Nigeria. The researched looked at the factors that contributed to the consistent poor performance of students in SSCE Mathematics by analyzing the trend and rates of failure in Mathematics. Hypotheses were formulated and tested based on the factors that seemed to be the major challenge. The findings showed that inadequate teaching materials, unqualified teachers and large class size are the major factors responsible for poor students' performance in Mathematics in SSCE examination. Ameen and Salman (2016) found out that fear of Mathematics, inadequate qualified teachers and inadequate teaching materials were some of the causes of poor performance in Mathematics and concluded that developing positive attitude, motivation and proper guidance toward mathematics and provision of relevant teaching materials could make students perform better in mathematics. Furthermore, the study of Suleiman and Hammed (2019) on perceived causes of students' failure in mathematics, the findings revealed that students' failure in mathematics could be cause by insufficient number of qualified teachers in mathematics, lack of teaching aids, frequent transfer of mathematics teachers from one school to another, poor ocio-economic background of the student, and poor teaching methodology used by the teachers. It was concluded that students' negative attitude

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toward mathematics, anxiety and fear of mathematics are caused by inadequate qualified teachers, poor teaching methods, inadequate teaching materials, overcrowded classes etc which brings about poor performance in mathematics in Junior secondary schools in Kwara state, Nigeria. Jega et.al. (2019) examined the causes of students' mass failure in high schools and found that causes of students' failure includes poor socio-economic background and lack of qualified Mathematics teachers and concluded that there is a general impression that Mathematics is difficult by its very nature.

Research Questions

i. What is the attitude of students toward mathematics in Junior Secondary School in Ilorin west local government area?
ii. What is the trend of students' performance in mathematics in JSS examination in Kwara state from 2015-2019?
iii. What is the rate of failure in mathematics in Junior Secondary School Certificate Examination in Kwara state from 2015- 2019?

Research Hypothesis

H_{01}: There is no significant difference in the attitude of students' towards mathematics in Junior Secondary School based on gender.

Methodology

The study adopted descriptive survey design since the variables in the study include variables to measure parental factor, teacher's factor and student's factor. The population for the study comprised of all junior secondary school students offering Mathematics while the target population included all mathematics students in junior secondary school in the six selected junior secondary schools in Ilorin west local government. The sample consisted of 150 junior secondary school students selected from six public junior secondary school in Ilorin west LGA of Kwara state. Two stage sampling was used to select the respondents for the study. The first stage purposively selected six junior secondary school from Ilorin West LGA while the simple random sampling technique was used to select twenty-five (25) junior secondary school students from the six schools selected. Both the primary and secondary data was collected on students' performance from schools and Ministry of Education between 2015 and 2019. First, the record of the total number of students who registered and those passed with A to P for JSSCE during the said years was obtained from Ministry of Education.

The proforma of record was used to evaluate the trend and failure rate among mathematics students that sat junior secondary certificate examinations within 2015-2019. Secondly, the structured questionnaire was designed to obtain information from the students on their attitude towards mathematics as well as major determinants of their performance. The questionnaire was used to elicit relevant information concerning attitude of students and determinants of students' performance in Mathematics in Junior Secondary School in the study area. The questionnaire contained three sections. Section A of the questionnaire deals with personal data of the respondents, such as school type, gender, age bracket and arm qualification of the parent. Section B contains information used to elicit responses from the respondents on the attitude of students towards mathematics in Junior secondary school while Section C elicited responses based on the determinant of students' performance in mathematics in junior secondary school in the study area. To show the extent to which the respondents agree or disagree, the instrument was structured in the modified Likert Fashion, on a 4- point Scale, ranging from "Strongly Agree" (SA), through "Agree" (A), "Disagree" (D) to "Strongly Disagree" (SD). Subjects are then instructed to respond to their degree of agreement with the statements contain in the instrument.

The questionnaire designed for the study was subjected to a validation process for face and content validity. Having validated the questionnaire, a pilot testing was carried out on the instrument using 15 questionnaires administered to students from a junior secondary school in Ilorin East LGA but not among the selected junior secondary school for the study.This was done to see whether the item is clear enough to be easily understood by the respondents and to also help to determine the workability of the proposed method of data analysis for the study. The Cronbach's Alpha method

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of testing for reliability was used to test for the consistency of the instrument and the questionnaires were reviewed instantly at the point of collection to ascertain that no question(s) was left unattended. The data collected on the field were coded and analysed. The Statistical Package for Social Science (SPSS) was used for analysis. Descriptive statistics and t-test was used to analyse both the primary and the secondary data collected. Descriptive Statistics like tables, percentage and graph were used to observe the trend of students' performance as well as failure rate. Also, frequency count and percentage were used for the demographic section of Primary data while the Section B and Cof the questionnaire were analysed using mean score rating and ranking. On the other hand, t-test statistical technique was used to test the null hypotheses formulated in the study, examine the difference in attitude of students towards mathematics based on gender and examine the difference in determinant of students' performance in mathematics in Junior Secondary school based on school type. T-test assesses whether the means of two groups are statistically different from each other. All these hypotheses were tested at 5% level of significance. The data collected were analyzed using both descriptive and inferential statistics. For the demographic data and some research questions, frequency counts, percentages, tables, charts, mean rating score and ranking were employed while t-test statistical tool was employed to analyze the hypotheses at 0.05 level of significant.

Results

Presentation of Tables and Interpretation

Table 1:
Demographic Information of the Respondents

Variable	Frequency	Percent %
Gender		
Male	68	46.6
Female	78	53.4
Age Bracket		
<10years	3	2.0
10-14 years	96	65.8
15-19 years	47	32.2
> 19years	0	0
Total	**146**	**100**

Table 1 showed demographic information of the respondents' students. Based on gender of the respondents, 46.6% of the respondents' students are male while 53.4% were female. This indicates that there is higher percentage of female junior secondary school students that gave response to the questionnaire than male junior secondary school students in the study area. Lastly, in terms of age bracket of the respondents, the study further revealed that 2.0% of the respondents' students surveyed were below 10years, 65.8% were within 10-14years, 32.2% were within 15-19years and while none was above 19years. This indicate that majority of the students in the junior secondary school were within 10-14years of age.

Research Question One: *What is the attitude of students toward mathematics in Junior Secondary School in Ilorin west LGA?*

Table 2:
Mean and Rank Order on the Attitude of Students toward Mathematics in Junior Secondary School in Ilorin west LGA

S/N	Attitudes	Mean	SD	Rank
1	I sees mathematics as nature	3.47	0.8	1st

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2	I have a low capability to assimilate during mathematics class	3.30	0.86	2nd
3	I have no interest in mathematics because it requires hard work	3.15	0.88	3rd
4	I often develop phobia when learning mathematics	3.12	0.95	4th
5	I dislike learning mathematics	2.97	0.94	5th
	Grand	**3.20**	**0.89**	

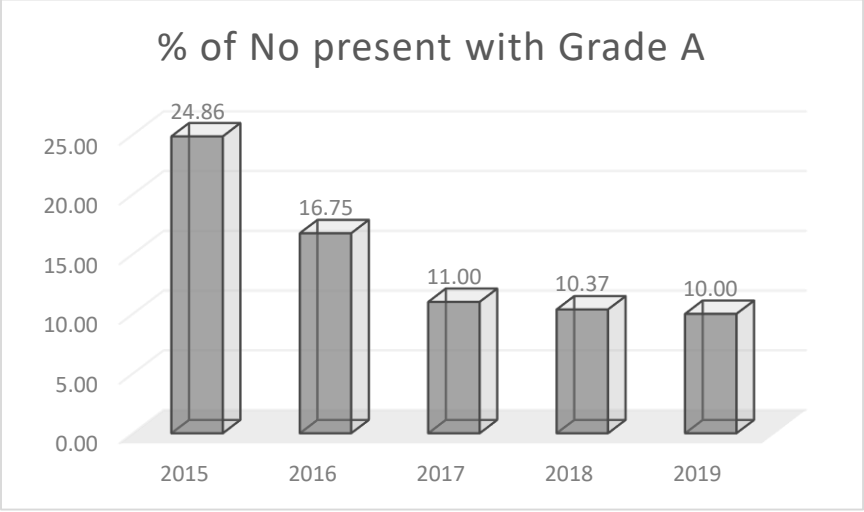
Table 2 shows that Items 4, 3 and 4 which states that "I sees mathematics as nature; I have a low capability to assimilate during mathematics class; and I have no interest in mathematics because it requires hard work" have mean scores of 3.47, 3.30 and 3.15 ranked 1st, 2nd and 3rd respectively while Item 2 and 1 which states that "I often develop phobia when learning mathematics; and I dislike learning mathematics" with a mean score of 3.12 and 2.97 ranked 4th and 5th respectively. All of the five items have mean scores that is above the mid-mean score of 2.50, then it can be said that majority of the respondents affirmed to the stated items and the result also shows that the junior secondary school students in Ilorin West LGA have negative attitude towards mathematics.

Research Question Two: *What is the trend of students' performance in mathematics in kwara state from 2015-2019?*

Table 3:
Student Performance in Mathematics in Basic Education Certificate Examination

	% of No present with Grade			
Year	**A**	**C**	**P**	**Pass Rate %**
2015	24.86	30.24	24.01	79.11
2016	16.75	40.82	28.21	85.78
2017	11.00	46.00	34.00	91.00
2018	10.37	45.98	34.14	90.49
2019	10.00	45.82	35.02	90.84

Source: Kwara State Ministry of Education
Keys: *A- Distinction; C-Credit; P-Pass*



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Figure 1: Bar Chart Showing the trend of Percentage of Candidates with Distinction (Grade A) in Mathematics

Figure 1 showed a steady decrease in the number of junior secondary school students that sat for the basic certificate examination and obtained Distinction (Grade A) in mathematics from 2015 to 2019. Year 2015 recorded the highest distinction in mathematics with 24.86% of those who validly sat for the examination, followed by year 2016 with 16.75%, then year 2017 with 11%, year 2018 with 10.37% and year 2019 with 10%. This implies that there is downward trend in performance of students in mathematics based on Distinction (Grade A) in mathematics from 2015 to 2019.

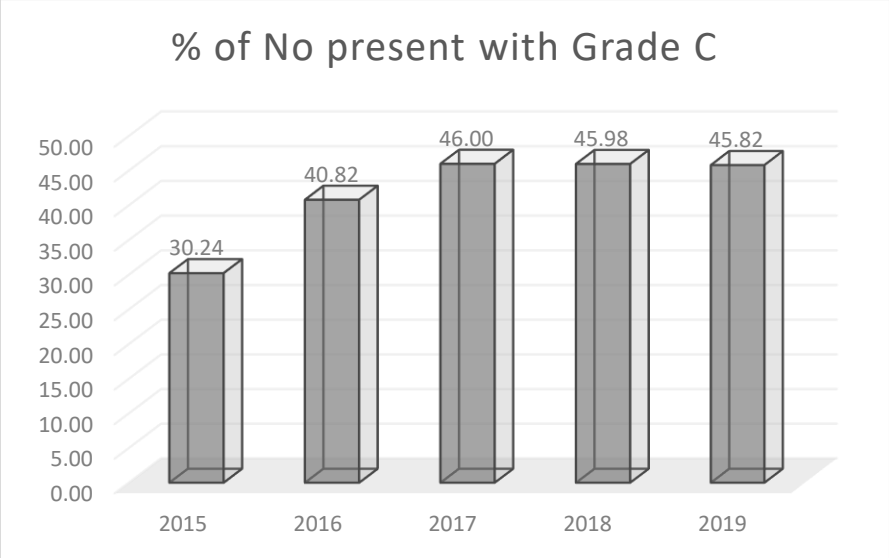


Figure 2: Bar Chart Showing the trend of Percentage of Candidates with Credit (Grade C) in Mathematics

Figure 2 showed an increase in the number of junior secondary school students that sat for the basic certificate examination and obtained Credit (Grade C) in mathematics from 2015 to 2019. Year 2015 recorded the lowest credit with 30.24% of those who validly sat for the examination, then increases in year 2016 to 40.82%, while year 2017 to 2019 had approximately 46%. This implies that there is an upward trend in performance of students in mathematics based on Credit (Grade C).

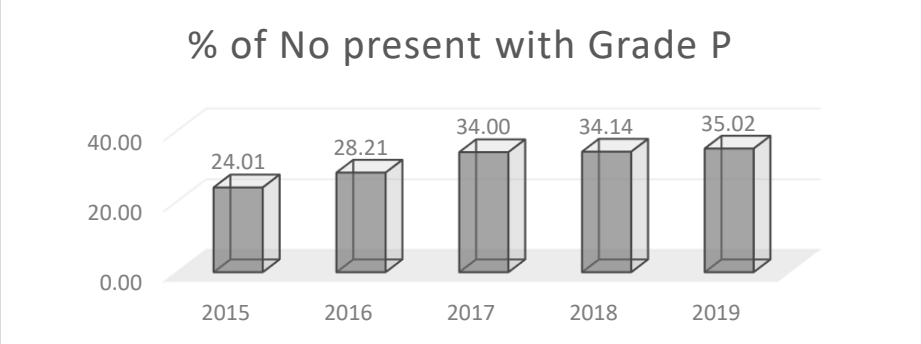


Figure 3: Bar Chart showing the trend of Percentage of Candidates with Pass (Grade P) in Mathematics

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Figure 3 showed a steady increase in the number of junior secondary school students that sat for the basic certificate examination and obtained Pass (Grade P) in mathematics from 2015 to 2019. Year 2015 recorded the lowest Pass in mathematics with 24.01% of those who validly sat for the examination, then increase to 28.21% in year 2016, then to 34% in year 2017, then to 34.14% in year 2018 and then to 35.02% in year 2019. This implies that there is an upward trend in performance of students in mathematics based on Pass (Grade P) in mathematics from 2015 to 2019.

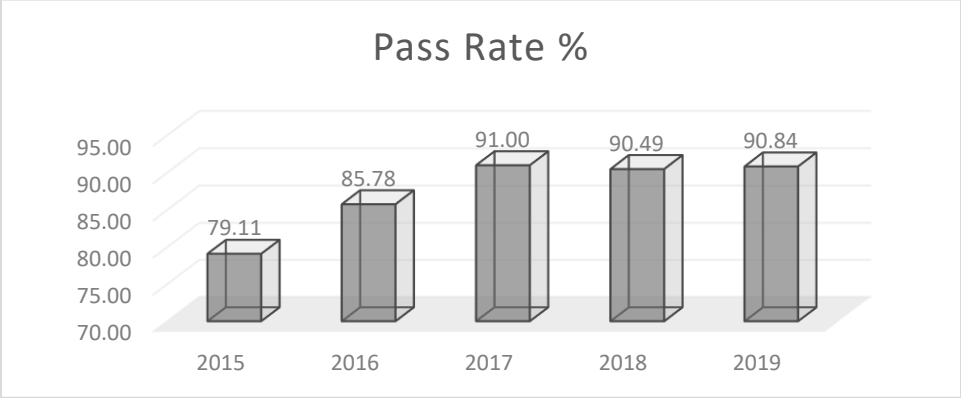


Figure 4: Bar Chart showing the trend of Percentage of Pass Rate in Mathematics

Figure 4 above showed an increase in the pass rate of junior secondary school students that sat for the basic certificate examination in mathematics from 2015 to 2019. Year 2015 recorded the lowest pass rate with 79.11% of those who validly sat for the examination, then increases in year 2016 to 85.78%, while year 2017 to 2019 had approximately 91%. This implies that there is an upward trend in performance of students in mathematics based on pass rate from 2015 to 2019. In summary, there is downward trend in performance of students in mathematics based on Distinction (Grade A), an upward trend in performance of students in mathematics based on Credit (Grade C), an upward trend in performance of students in mathematics based on Pass (Grade P) in mathematics from 2015 to 2019. On overall, there is an upward trend in performance of students in mathematics based on pass rate from 2015 to 2019.

Research Question Three: *What is the rate of failure in mathematics in Junior Secondary School in kwara state from 2015- 2019?*

Table 4:
Percentage Distribution of Rate of Failure in Mathematics in Certificate Examination

Year	No Present	Failure Rate %
2015	41,153	20.00
2016	41,721	14.28
2017	43,430	9.00

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2018	44,155	9.52
2019	43548	9.17

Source: Kwara State Ministry of Education

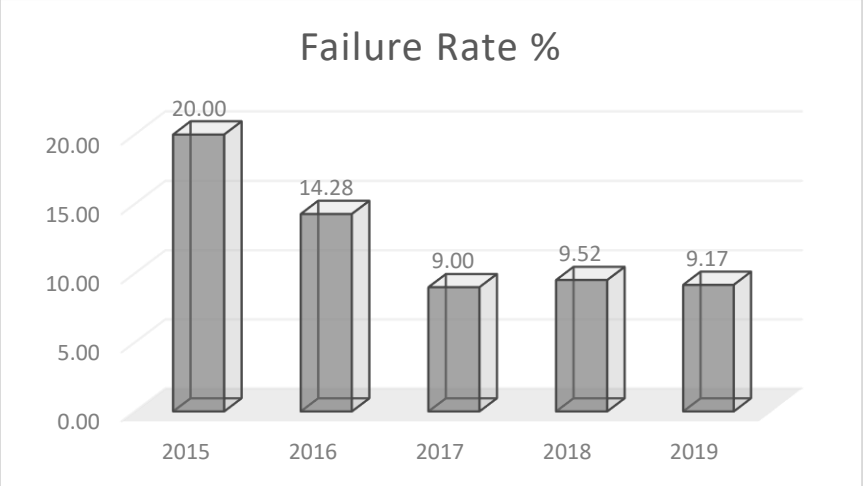


Figure 5 above showed that the highest rate of failure among Junior secondary school students in certificate examination in mathematics was recorded in year 2015 with 20%, followed by year 2016 with 14.28%, then year 2018 with 9.52%, then year 2019 with 9.17% and then 9% in year 2017. This implies that the 2015 recorded the highest rate of failure in mathematics while the lowest rate was recorded in year 2017.

Hypotheses Testing

H_{O1}: *There is no significant difference in the attitude of students towards mathematics in Junior Secondary School based on gender.*

Table 6: Mean, Standard Deviation and t-test Analysis of Difference in the Attitude of Students towards Mathematics in Junior Secondary School Based on Gender

Gender	No	Mean	Std.	df	Cal.t-Value	Sig. (2-tailed)	Decision
Male	68	3.68	.10				**H_{01}**
				144	9.19	<0.001	**Rejected**
Female	78	2.79	.77				

ρ >0.05

As shown on Table 6, male students had mean score of 3.68 with standard deviation 0.10, while female students had mean score of 2.79 with standard deviation of 0.77, the calculated t-valuewas 9.19 while its calculated significance value is<0.001 at alpha level of 0.05. On this basis, null hypothesis one was therefore rejected. This means that there was significant difference in the attitude of students towards mathematics in junior secondary school based on gender. The reason was that the calculated significance value (<0.001) was lower than 0.05 alpha level (**ρ**< 0.05).

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Discussion

The study investigated the determinants of performance and failure rate of students in mathematics in junior secondary school in Ilorin West LGA of Kwara State. From the analysis presented in the previous chapter, the following discussions of findings were made. Findings revealed that majority of junior secondary school students in Ilorin West LGA have negative attitude towards mathematics. Attitude towards mathematics have been defined by Kibrislioglu (2023) as liking or disliking of the subject; a tendency to engage in or avoid mathematical activities; a belief that one is good or bad at mathematics. The finding of the present study which revealed students' negative attitude towards mathematics is in line with Joseph (2013) in his study of community secondary school students in Kagera, Tanzania where he also found that majority of students had a general negative attitude towards mathematics. Another finding revealed an upward trend in performance of students in mathematics in junior secondary certificate examination based on pass rate from 2015 to 2019. The breakdown of this performance indicate that a downward trend in performance of students in mathematics based on Distinction (Grade A); an upward trend in performance of students in mathematics based on Credit (Grade C); and then an upward trend in performance of students in mathematics based on Pass (Grade P) in mathematics from 2015 to 2019. The performance of the students in mathematics have improved over time. The study of Gogo and Nduka (2017) is in consonance with the present findings where they found out that there was an improvement in achievement of students that sat for WASSCE in general mathematics. Implication of the progress on performance in mathematics correlates with the study of Ameen and Salman that excellence in the knowledge and use of Mathematics is an essential factor in the development program of any nation that wants to have respectable status among other nations of the world. At such, mathematics as a subject cannot be divorced from the world of technologies which is a key to progress and development.

Further findings revealed that the highest rate of failure in mathematics by junior secondary school students in Kwara state was recorded in 2015 while the lowest rate was recorded in year 2017. The poor record in 2015 is in agreement with Ononye and Obiakor (2020) who recorded high rates of failure in public examinations.It is also in disagreement with the study of Gogo and Nduka (2017) worked on comparative analysis of student mathematics achievement in Junior Secondary Certificate Examination in Nigeria who recorded better performance in mathematics after a period of 13years. The trends of students' performance in International Mathematics competitions using comparability of TIMSS 2015 mathematics tests in relation to the raw-score and May/June West African Senior Secondary Certificate Examination (WASSCE) in general Mathematics in Nigeria from 2010 to 2015 it was found out that mathematics performance in Nigeria has been persistently poor over the years, as less than 50% of the candidates passed at credit. Also, a decreasing trend in rate of failure among students in mathematics was observed in the present study. This shows an improvement which is in line with Kibrislioglu et.al (2023) and Gogo & Nduka (2017) research on comparative analysis of student Mathematics achievement in West Africa Senior Secondary Certificate Examination in Nigeria. Meanwhile, his study revealed that there was improvement over the year of the study.

Based on the hypotheses tested, it was revealed that there was significant difference in the attitude of students towards mathematics in junior secondary school based on gender ($t=9.19$; $\rho < 0.05$). The mean value in our present study implies that male are more positive of mathematics than female. This is in line with Abdullahi (2016) in a study of gender differences in secondary school students' attitudes towards learning mathematics and the resulting implications on their performance which indicated that there were significant gender differences in students' attitudes towards learning mathematics and in their performance in the subject both in favour of male students. It also agrees with Montero and Casmir (2019) study that a significant relationship between attitude and achievement was established depicting stronger relationships in boys than in girls.

Conclusion

Based on the findings of the study, it was concluded that the junior secondary school students in Ilorin West LGA have negative attitude towards mathematics. Such negative attitude have been established to be caused by many factors ranging from students factor, to school factor, teacher factor, socio-economic factor and so on which subsequently affect academic performance in mathematics. Also, there is an improvement in the performance of students in mathematics in junior secondary school in Kwara state which subsequently reduces failure rate in certificate

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examination. And again, students factor is the greatest determinant to performance of the students. Meanwhile, the study further concluded that attitude of students towards mathematics differs between gender as male students were acknowledged to have more positive relationship with mathematics than female.

Recommendations

In view of what the research study discovered and the situation of determinant of performance and failure rate of students in mathematics in Ilorin West LGA of Kwara State, the following recommendations were made;

i. Government at all levels (Federal, State and Local) should ensure that basic educational facilities such as learning materials, libraries, standard classroom blocks and laboratories are provided for schools so as to enhance teaching and learning.
ii. Mathematics teachers should be given regular training and retraining programmes (such as conferences, seminars and workshops that are related to mathematics) in order to be more innovative in there method of teaching mathematics so as to stimulate students' interest in mathematics
iii. Mathematics teachers should encourage students on how to learn mathematics by reinforcing them when necessary so as to discourage negative attitude toward Mathematics.
iv. Conducive classroom for the teaching of mathematics should be created and over-population of students in classroom should be discouraged.
v. Adequate period should be allocated for mathematics class so as to reduce rate of failure in Mathematics.

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TEACHER SALARY AS CORRELATE OF PUBLIC SECONDARY SCHOOL EFFECTIVENESS IN NORTH-CENTRAL, NIGERIA

BY

Sheu Muritala Adaramaja
Department of Educational Management, Faculty of Education, Kwara State University, Malete.
Email: muritala.sheu@kwasu.edu.ng

Abstract
The study investigated the relationship between teachers' salary and public secondary school effectiveness in North-central, Nigeria. Salary occupies crucial position in the management of employees in any organisation. Salary provided for teachers in public secondary schools in North-central Nigeria seems ineffective. This might negatively lead to their ineffectiveness in secondary schools. The objectives of this study were to: exermined level of salary provided for teachers in public secondary schools; investigate the relationship between teachers' salary and school effectiveness in public secondary schools. The study adopted a descriptive research design of correlational type. The population for this study comprised all the principals and teachers in public secondary schools in North-central Nigeria. Multi-stage sampling technique was used to select 859 respondents that comprised 99 principals and 760 teachers. The research instrument tagged "Teachers' Salary Questionaire (TSQ) and School Effectiveness Questionnaire (SEQ)" with Reliability coefficients of 0.79 and 0.75 were realised for the teachers' salary and school effectiveness questionnaire respectively using Cronbach Alpha. Descriptive statistics of Mean, and Standard Deviation were used to answer research question, while the sole Hypothesis was tested using Pearson product-moment correlation statistic. The findings of the study revealed that teachers in public secondary schools were provided with fairly satisfied salary in their teaching job with a mean of 51.27. While a significant relationship exists between teachers' salary and school effectiveness in public secondary schools in North-central, Nigeria. Thus, it was concluded that teachers' salary is a predictor of Public Secondary School Effectiveness in North-central, Nigeria. The study recommended that state governments should intensify their efforts by paying more attention to teachers' salary through regular and prompt adequate payment of salary.
Keywords: Teacher's salary, public secondary schools, effectiveness

Introduction

Teachers are important stakeholders in the educational system and as such, Salary for their services rendered should be very attractive, if all of the realisations of the effectiveness of the schools is of priority to the government and other stakeholders in education. This is very necessary because, if teachers are not adequately compensated, the realisation of the school's effectiveness could be hindered. According to Sulyman (2021), in Nigerian public secondary schools, the issues of teachers' salary has been generating a topic of discussion, because teachers have the feeling that they are not well treated by the State government. For instance, in public secondary schools in Kwara State, sometimes, teachers get their salaries late. Additionally, there has been a serious complaint by public secondary school teachers in Kwara State and many other States of the federation over the new Minimum Wage. The governments in these States, including Kwara State, implemented the New Minimum Wage for teachers who are between Grade Level 1 to 6 but did consequential adjustments for teachers from Grade Level 7 to 17. This situation might not encourage the teachers, who are beneficial to the consequential adjustments (Sulyman, 2021). To this end, Samson (2020) stated that the remuneration and incentives for teachers in public secondary schools in many states in Nigeria, especially in the areas of salary, promotion, training opportunities, fringe benefits, and other incentives, have been lacking in encouragement. This could make teachers worrisome and consequently harm the school's effectiveness. Manafa (2020) stated that adequate payment of teachers is very crucial. The inefficiency of certain public secondary schools in Nigeria may stem from the inadequate payment of teachers' salaries. This confirms how important teacher's salary is to the realisation of school effectiveness.

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Obadare (2018) lamented that one of the factors responsible for the ineffectiveness of public secondary schools in Nigeria is the lackadaisical attitude of the governments toward teachers' compensation especially in the aspects of salary, promotion, fringe benefits and professional development. On the other hand, teachers' salary plays a significant role in enhancing school effectiveness. Salary of teacher needs to be given adequate attention by the employers to facilitate effective performance of the organisation. According to Odoh (2011), salary is usually based on mutual agreement between the employees and the employer, which may be sometimes an individual, group of individuals or government, depending on the ownership of the job. Surbhi (2015) elucidated that salary is a fixed amount of money given to employees at regular periods for the services rendered towards the realization of organizational goals. Wasiu and Adebajo (2014) asserted that one of the benefits of prompt payment of salaries is the it helps the organisation to properly retain the competent, committed highly motivated employees it needs to clinch success. Salary contributes majorly in setting and boosting morale of the workers. (Haryati 2012) elucidated that regular payment of salary could create productive human resources who in a long way improving the viabilitiy and commitment of the employee as well as actualization of the mission of the organization.

The study conducted by Muhammad-Rafiq (2012), revealed that to achieve effectiveness in schools, salary needs to be paid to teachers at the right time. Attractive salary package is one of the significant determinants of organizational effectiveness. Rosser (2012) believed that poor attitude of the government to salaries is one of the key factors hampering not only the commitment of teachers, but also effective goals realization. Kamoh, Ughili and Abada (2013) asserted that inadequate delay in the payment of teachers' salaries has been one of the factors responsible for ineffectiveness in public secondary schools in Nigeria. Kolawole (2015) maintained that there is no gainsaying that the effectiveness of school is anchored on many factors; however, the role played by teachers' salary cannot be over-emphasised. This is because the input of teachers should prevail and determine the success of the inputs from all other stakeholders in education. School effectiveness however means the extent to which the school has been able to achieve the stated goals. This is why Adedeji (2018) maintained that the effectiveness of school could be measured through discipline, neatness of the environment, the mutual relationship among school members or between school members and members of the host community, and judicious utilisation of the available resources which should facilitate or determine the effectiveness of school. For this to be well achieved, among other things which should be done, teachers' salary needs to be given adequate attention by the government, while teachers also need to effectively perform their job to enhance school effectiveness. Nayyar (2015) asserted that one of the causes of the ineffectiveness of public secondary schools in Nigeria is poor teacher compensation. If teachers are well-compensated by their employers, they are likely to perform their jobs in a way that would facilitate the actualisation of encouraging school effectiveness. To support this position, teachers as the custodians and facilitators of learning, their salary need to be adequately for the service they are rendering in schools. The inability of the government to meaningfully boost their morale through regular payment of salary might hinder public secondary schools' effectiveness. Hence, it is against this background, researchers conducted the study on teachers' salary as a correlate of public secondary schools' effectiveness in North-central, Nigeria.

More so, the effectiveness of public secondary schools in North-central Nigeria in the areas of learning, discipline, school-community relations and supervision has not been encouraging. Learning, which is an important reason students enrol in schools, is not properly taking place, based on the fact that some students cannot compose simple sentence or correctly and answer questions properly, a scenario which might be causing failure in examinations. The rate of indiscipline in these schools is high as some students engage in bad habits while learning is ongoing, decide not to go to school, leave classrooms or schools without permission, and the likes. Some teachers do not take adequate supervision of students a priority and this gives them opportunity to be involved in activities that could hinder effective learning. Also, the synergy among parents, members of the school community, teachers and school management is not encouraging. This scenario has been a concern for stakeholders in education, most especially parents and members of the public. According to Ololube (2016) this could be due to untimely payment of salary. Additionally, many researchers have conducted studies related to this present study, for instance, Ajayi and Ekundayo (2011) examined factors determining the effectiveness of secondary schools in Nigeria. The findings of the study revealed that leadership, facilities and discipline determined the effectiveness of secondary schools in Nigeria. Sulyman, et al. (2019) examined teachers' compensation as a correlate of job performance in Ilorin West Local Government Basic

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Schools, Kwara State. From the findings of the study, it was revealed that there was a significant relationship between teachers' compensation and job performance in Ilorin West Local Government Basic Schools, Kwara State. More so, Sulyman and Adebayo (2020) conducted a study on quality assurance strategies as determinants of public secondary schools' effectiveness in Kwara State, Nigeria. The findings showed that quality assurance strategies determined public secondary schools' effectiveness in Kwara State, Nigeria. However, to the best of the researcher's knowledge, none of the previous studies focused on teachers' salary as a correlate of public secondary schools' effectiveness in North-central Nigeria, and this is the gap that this study filled.

Purpose of the Study

This study was set to examine the relationship between teachers' salary and public secondary schools' effectiveness in North-Central, Nigeria. Specifically, the study:

i. examined the level of salary provided to the teachers in public secondary schools in North-Central, Nigeria;
ii. investigated the relationship between teachers' salary and public secondary schools' effectiveness in North-Central, Nigeria.

Research Question

i. What is the level of salary provided for teachers in public secondary schools in North-Central, Nigeria?

Research Hypothesis

HO: There is no significant relationship between teachers' salary and public secondary schools' effectiveness in North-Central, Nigeria.

Methodology

The research design used for this study was a descriptive design of correlation type. This design is considered appropriate because it helped the researcher to describe the characteristics of the variables studied and determined the relationship between the independent variables (teachers' salary) and the dependent variable (school effectiveness) in North-Central, Nigeria. The population for this study comprised all the principals and teachers in public secondary schools in the North-central Nigeria. There were 1,836 and 29,210 principals and teachers respectively in public secondary schools in the North-central Nigeria which comprised Benue, Kogi, Kwara, Nasarawa, Niger, Plateau States and Federal Capital Territory (FCT). The sample size for the study was 859 respondents which comprised 99 and 760 principals and teachers respectively. Principals and teachers were employed as participants because they could provide the required information needed in the study. Multi-stage sampling technique was used in the study. Random sampling technique was used at the first stage to select three states out of the six states and FCT in the North-central Nigeria. Kogi, Kwara and Niger were randomly selected out of the six States and FCT in the North-central Nigeria. Stratified random sampling technique was used at the second stage to select 37 public secondary schools in Kwara State, 29 public secondary schools in Kogi state and 33 public secondary schools in Niger State, to make a total of 99 public secondary schools. Random sampling technique was used at the last stage to select 234, 278 and 248 public secondary school teachers in Kogi, Kwara and Niger States respectively, making a total of 760 teachers. In determining the sample size of this study, the tabulation sample size by Research Advisors (2006) at 95% confidence and 5.0% margin of error was employed to select 859 participants out of 2346 respondents.

Two Research instruments were used in the study. Teachers' Salary Questionnaire (TSQ) and School Effectiveness Questionnaire (SEQ) were adapted from the works of Nelms (2005) and Sulyman (2021). TSQ contains 24 items on the Teachers' Salary which was structured in a modified four-point Likert scale of Very Satisfied (VS) "4 points", Satisfied (S) "3 points", Fairly Satisfied (FS) "2 points" and Not Satisfied (NS) "1 point". SEQ contained 20 items on the school effectiveness. Structured in a modified four-point Likert scale of Exemplary (E), 4 points, Satisfactory (S), 3 points, In Need of Improvement (INI), 2 points and Seriously Inadequate (SI) 1 point. Respondents were asked to

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make their choice by putting a tick (√) on the column that best describes their view. Both face and content validity of the questionnaires were ascertained with the help of the experts in Department of Educational Management and Counselling, as well as expert in the area of Educational Research, Measurement and Evaluation in the Faculties of Education, Al-Hikmah University, Ilorin; University of Ilorin, and Federal University Gusau, Zamfara State. Comments, observation, corrections and suggestions made by the experts were effected accordingly before the final draft of the instruments. Cronbach's Alpha method of reliability was adopted to test reliability of the two instruments: TSQ and SEQ. Thirty copies of the instrument were administered on 10 principals and 20 teachers outside the sample of the study.

The data gathered were analyzed using Cronbach's Alpha and the reliability coefficient of 0.79 and 0.75 were realized for Teacher Salary Questionnaire and School Effectiveness Questionnaire respectively. This affirms that the instrument was reliable to be used for the study. Face to face method of administration was adopted in the administration. Out of the total of 859 respondents comprised 99 principals and 760 teachers selected for the study, only 828 questionnaires were duly filled and returned, that is 99.36% of the total respondents. Descriptive statistics of Mean, Standard Deviation, Minimum, Maximum and Range were used to answer research questions 1 while Pearson Product-Moment Correlation (PPMC) Statistic was used to test the sole hypothesis. All the analyses were done using Statistical Package for Social Science (SPSS). The hypothesis was tested at 0.05 level of significance.

Results

Research Question 1: What is the level of salary provided for the teachers in public secondary schools in North-central, Nigeria?

Table 1:

Result of Descriptive Statistics of Level of Teachers' Salary

Variable	N	Mean	Std Deviation	Minimum Value	Maximum Value	Range
Level of Teachers' Salary	828	51.27	17.83	24	96	72

Table 1 shows the results of descriptive statistics of the level of salary provided for the teachers in public secondary schools in North-central, Nigeria. Minimum, maximum and range values were used to categorise teachers' response as 24-42 (Not Satisfied), 43-60 (Fairly Satisfied), 61-78 (Satisfied) and 76-96 (Very Satisfied). As it is revealed from the Table 1, a mean score of 51.27 falls within the range of fairly satisfied (43-60). This shows that teachers in public secondary schools in North-central, Nigeria were provided with fairly satisfied salary.

Ho: *There is no significant relationship between teachers' salary and public secondary schools' effectiveness in North-central, Nigeria.*

Table 2:

Summary of Correlation between Teachers' Salary and School Effectiveness

Variable	N	$\bar{X}$	SD	Cal. r-value	Df	p-value	Decision
Teachers' Salary	828	13.46	4.90				

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				.911	826	.000	Ho Rejected
School Effectiveness	828	46.79	16.74				

Source: Field Study, 2024

As shown in Table 2, the calculated r-value is .911 with the p-value 0.000 which is less than the set p-value 0.05 at 826 degrees of freedom. Hence, the null hypothesis which states that there is no significant relationship between teachers' salary and school effectiveness in public secondary schools in North-Central, Nigeria is rejected.

Discussion

The study examined the relationship between teachers' salary and public secondary schools' effectiveness in North-central, Nigeria. The findings from the first research question revealed that teachers in public secondary schools in North-central, Nigeria were provided with fairly satisfied salary in their teaching job. The finding is also in consonance with the assertion of Rosser (2012) who stated that public school teachers are not adequately salaried. Rosser (2012) further stated that poor attitude of the government toward teachers' salary is one of the key factors hampering not only the commitment of teachers, but also effective goal realisation. The finding is also in line with Kamoh, et al. (2013) who asserted that inadequate and delay in the teachers' salary have been the factors responsible for ineffecetive of teachers in public secondary schools in Nigeria. For a school to achieve effectiveness, adequate and prompt payment of salary is highly needed. The finding from sole hypothesis revealed that significant relationship existed between teachers' salary and school effectiveness in public secondary schools in the North-central, Nigeria. That is, teachers' salary was a determinant of school effectiveness in public secondary schools. The finding agrees with Muhammad-Rafiq (2012) who opined that attractive salary package is one of the significant determinants of organizational effectiveness. This finding is also in line with the view of Wasiu and Adebajo (2014) whose study revealed that adequate salary payment would trigger employees towards effective job performance thereby leading to realisation of the stated goals. The benefits of prompt payment of salaries help the organisation to properly retain the competent, committed and highly motivated employees it needs to clinch success. Salary as an aspect of compensation plays a significant role in enhancing effectiveness. When salary is timely and adequately paid to teachers at the end of each month, they would be able to take care of themselves as well as their family members, thereby motivating them to perform their duties in such a way which would facilitate actualisation of effectiveness.

Conclusion

The study examined the relationship between teachers' salary and public secondary schools' effectiveness in North-central, Nigeria. The study concluded that teachers in public secondary schools in North-central, Nigeria were provided with fairly satisfied salary in their teaching job; there was a significant relationship between teachers' salary and of school effectiveness in public secondary schools in the North-central, Nigeria.

Recommendations

Based on the findings and conclusion drawn from this study, the following are the recommendations proffered:

1. State governments should intensify their efforts by paying more attention to teachers' salary through prompt and adequate payment of salary.
2. Government should at all times ensure that salary is timely and adequately paid at the end of the month to enhance teachers' effectiveness in the school.

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ASSESSMENT OF KNOWLEDGE OF DANGER SIGNS IN PREGNANCY AMONG PREGNANT WOMEN ATTENDING ANTENATAL CLINIC IN DUTSE GENERAL HOSPITAL JIGAWA STATE, NIGERIA

BY

[1]Lamu, H., [2]Umar, A. B., [3]Bashir, S.S. & [4]Ahmad, A.
Department of Nursing Sciences, Faculty of Allied Health Sciences, College Of Health Sciences, Ahmadu Bello University, Zaria, Nigeria.

Abstract
Jigawa has an unacceptably high maternal mortality ratio (MMR) which is estimated at 2,000 deaths per 100,000 live births. Despite this alarmingly high mortality attributed to obstetric complications, the proportion of those with any kind of knowledge of these danger signs is not known in this state. This study aimed to assess the level of knowledge of danger signs of pregnancy among pregnant women attending antenatal clinics in Dutse General Hospital, Jigawa State. The study is a health facility-based and a descriptive cross-sectional study was adopted. A total sample size of 378 pregnant women was drawn from retrospective data from the previous year using the research advisor's table. Data was collected through the use of a structured questionnaire using a systematic sampling technique and analyzed using a Statistical Package of Social Science (SPSS). Findings indicated that respondents are well aware of danger signs in pregnancy but have limited knowledge of it. Only 31.2% of the respondents had sufficient knowledge about the danger signs of pregnancy while the majority could not differentiate between danger signs and minor discomfort. Data analysis indicated that knowledge of danger signs in pregnancy positively correlated and was significant to the level of education of the respondent at a 95% confidence limit. Based on the findings of this study, it can be concluded that there is a low level of knowledge about the danger signs of pregnancy among women attending antenatal clinics in Dutse General Hospital.
Keywords: Danger signs, pregnancy, antenatal clinic, knowledge

Introduction

Pregnancy is not a disease, and pregnancy-related morbidity and mortality are almost always preventable. Yet, 303,000 women die from complications arising during pregnancy, delivery, or puerperium globally, with a maternal mortality ratio of 216 maternal deaths per 100,000 live births (Alkema *et al.*, 2016). About 99% of these cases are said to occur in developing regions, with sub-Saharan Africa alone accounting for 2 in 3 (66%) deaths (World Health Organization, 2016). Nigeria accounted for the second highest burden of maternal death globally after India (WHO, 2016).

Say et al., (2014) an update of WHO global causes of maternal death, attributed 73% of all maternal deaths to be due to direct obstetric causes and 27.5% to be caused indirectly. Among the direct causes of global maternal death, hemorrhage accounted for 27.1%, hypertensive disorders 14.0%, and sepsis 10.7%. Among the indirect causes, unsafe abortion accounted for 7.9% while embolism 3.2%. Most causes of maternal mortality are linked to inadequate knowledge of obstetric complications and danger signs in pregnancy. Pregnancy-related complications cannot be reliably predicted, and it is therefore important for pregnant women to have knowledge about pregnancy danger signs and seek immediate help if needed. (Sufiyan et al., 2016). Danger signs in pregnancy are those symptoms that may indicate a pregnant woman's health or that of her fetus is in jeopardy hence the need for swift medical attention the commonest danger signs during pregnancy which places the life of both the mother and her fetus at risk of deaths include vaginal bleeding, convulsions/fits, swollen face/hand, high fever, abdominal pain, severe headaches, blurred vision, absence of fetal movements, the gush of fluid from the vagina, foul-smelling vaginal discharge (Harvard school of public health 2014, as cited by Mwilike *et al.*, 2018). Increasing pregnant women's knowledge of pregnancy "danger signs" is the most effective method used in improving the utilization of skill care during pregnancy and puerperium (Bintabara *et al*., 2017; Munro *et al.,* 2017; Azeze *et al.,* 2018; Masoi & Kibusi 2019).

Many pregnant women and their families in developing countries have a limited understanding of pregnancy danger signs (Okour *et al.,* 2010). Underdeveloped countries like Nigeria face worse complications of the problem than the developed ones. Low awareness is a major contributing factor that leads to delays in reaching a facility with trained

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providers when complications occur (Sufyan *et al.,* 2016). Therefore, contributes to high maternal morbidity and mortality experienced (Bintabara *et al.,* 2017). Mgawadere *et al.,* (2017) identified these delays to be, delays in the decision to seek care, delays in reaching the place of care, and delays in receiving appropriate care.

Each pregnancy carries some level of risk (Nikiema *et al.,*2009; Okour *et al.,* 2012) and for every maternal death, between 15 to30 women who survive childbirth suffer from short and long-term disabilities such as obstetric fistula, ruptured uterus, or pelvic inflammatory disease(Aborigo *et al.,* 2014). Complications can occur at any time from conception to the postpartum period. Fortunately, many obstetric complications can be effectively managed if warning signs are detected early and acted upon promptly (Bintabara *et al,* 2017). Therefore, pregnant women as well as women of reproductive age and families need to be trained on how to recognize danger signs and develop plans for emergencies that include transport to hospitals or skilled care, and access to financial resources, which can be achieved through community mobilization and the need to utilizing ANC services among pregnant women, as this will have a significant effect in the reduction of maternal mortality. During pregnancy, antenatal care is the care that a woman receives to ensure healthy outcomes for her newborn and herself and serves as a means to identify high-risk pregnancy (WHO, 2010) as cited by hxd Mcnellan *et al.,*2019). There are potential benefits that can be obtained from antenatal care. The period presents opportunities for reaching pregnant women with several interventions that may be crucial to their health and well-being and that of their infants (WHO, 2016). Besides, it is an opportunity to educate the women and families about danger signs, symptoms, and risks of labour to plan for delivery.

Despite all the efforts by the federal ministry of health and some non-governmental organizations to make ANC service accessible and affordable to all pregnant women, Jigawa state still records low coverage which stands at 20.1%; delivery by health professionals and facility-based delivery rates are 5.1% and 4.5% respectively. The Low ANC coverage has been attributed to religious and cultural beliefs in Jigawa state (Kanuwa, 2012) This has made the maternal mortality ratio to be high in Jigawa state as early recognition of these danger signs is needed to reduce these high mortality and also improve pregnancy outcomes. Fortunately, many obstetric complications can be effectively managed if warning signs are detected early and acted upon promptly (Bintabara *et al.,* 2017). In Jigawa state, where maternal morbidity and mortality are high, little is known about the level of knowledge and health-seeking behavior of pregnant women towards pregnancy danger signs, this gave the researcher concern and thus the need to carry out this study.

Literature review

Concept of Danger Signs In Pregnancy

Most women go through pregnancy without serious problems. Normal discomforts of pregnancy may include heartburn, a need to urinate often, backache, breast tenderness and swelling, and feeling tired. However, some symptoms may mean danger for the woman or her baby (Summit Medical Group, 2014). It is of paramount importance for pregnant women to have adequate knowledge of these danger signs, and to seek health care when the need arises.

Model of Health-Seeking Behavior

Various studies demonstrated that one's decision to engage with a particular medical channel is influenced by a variety of socio-economic variables, sex, age, social status of women, type of illness, access to services, and perceived quality of the service and all these factors have been grouped into two types of health seeking behaviour model which is: pathway model and determinate model (Tipping & Segall, 1995, as cited in University of British Columbia, 2015).

Knowledge of Danger Signs in Pregnancy

"Knowledge is power", this means that knowing things gives us control over them. Knowledge is a powerful factor that empowers people to achieve greater results. The more knowledge an individual acquires the more powerful he/ she becomes. It is therefore of paramount importance to empower pregnant women and women of childbearing age with the knowledge of danger signs in pregnancy as this will help them in early diagnosis, management, and prevention

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of complications that may arise during pregnancy, and thereby, reduce maternal morbidity and mortality associated with these conditions. It also allows pregnant women to seek medical care early and then participate actively in their care and also helps them in their healthcare decision-making. If a pregnant woman is equipped with the knowledge of danger signs in pregnancy, it will increase the level of awareness of this condition to other women thereby reducing our workload as health care providers.

Studies have been done on pregnant women on danger signs in pregnancy in sub-Saharan Africa, in some states in Nigeria, but there is little or no research on this in Jigawa state where maternal mortality is said to be high. Several studies done on danger signs during pregnancy as well as during labour and puerperium have all shown inadequate/ low levels of knowledge. A study done in Southern Ethiopia by Hailu *et al.,* (2010) showed poor knowledge of danger signs in pregnancy. Most studies have shown a low level of knowledge of danger signs not only during pregnancy but also during delivery and after childbirth. A study carried out in Uganda and Ethiopia found knowledge of danger signs in pregnancy to be relatively low And suggested that pregnant women should be given health education on danger signs of pregnancy during antenatal care, to equip these women with good understanding and be able to seek help immediately when they experience one or more of the symptoms(Hoque & Hoque, 2011; Kabakyenga *et al.,* 2011)., A similar result was obtained from research carried out in Tanzania on rural women's awareness of danger signs(Pembe, *et al.,* 2009). The study suggested the need to improve the quality of counseling and family members' involvement in caring for pregnant both during pregnancy and delivery. Mwilike (2013) also found low knowledge of danger signs among Tanzanian women and also attributed knowledge to their educational level and age. Mwilike (2013) also shows self-employment to be a major motivating factor for seeking help as women can decide on their own without seeking permission while women who are employed by others have a tight schedule and can only visit health facilities when there is a complication.

Studies have also shown a correlation between knowledge and area of residence. Hailu *et al.*, (2010) Found knowledge to be low and affected by residential areas whereby those who lived in urban were more knowledgeable than those who lived in rural areas. Additionally, a study in Uganda shows similar results about knowledge and residential areas (Kabakyenga, 2011). Further studies have also shown a relationship between knowledge and socio-demographic characteristics. Amenu *et al.,* (2014), attributed knowledge scored by the women to maternal educational level, ANC follow-up during the last pregnancy family income, and being multiparous and of last delivery. A similar study carried out by Bililign and Mulatu (2016) on knowledge of obstetric danger signs and associated factors in Ethiopia found low knowledge of obstetric danger signs. Vaginal bleeding was found to be the most common mention danger sign during pregnancy and associated factors were being employed, previous delivery in a health facility, and the number of ANC visits. Ossai and Uzochukwu's (2015) socioeconomic status, age less than 30, being single, and having a primary school education or less were attributed to poor knowledge scores. Sufiyan *et al.,* 2016) also found poor knowledge among pregnant women as only 4.9% percentage of these women had good knowledge as well as poor perception.

Research Objective

To assess pregnant women's level of knowledge about danger signs during pregnancy.

Research Question

What is the level of knowledge of pregnant women about pregnancy danger signs?

Methodology

A descriptive survey design was adopted for the study.The study was conducted in Dutse the state capital of Jigawa. Dutse is a local government located in the northwest of Nigeria, with an estimated population of 325,500 (National Population Commission of Nigeria, 2015). It has an estimated population of 16,275 pregnant women which constitute 5% of the total population. Dutse General Hospital is located in Jigawa state capital along Kiyawa Road. The target population for the study was pregnant women attending antenatal clinics in Dutse General Hospital. A total of 378

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respondents were utilized for this study. Consenting pregnant women attending antenatal clinic in this health facility pregnant women who have attended antenatal clinic more than once were included. Very ill pregnant clients as well as mentally retarded pregnant women were excluded since it will be difficult for them to comprehend and answer questions for themselves. Pregnant women who were not aware of the term danger signs in pregnancy were excluded from the study.

The sample size was determined using a retrospective annual record of pregnant women that attended ANC in this facility last year (2017) as well as those that correspond with the months of study that is July /August which were gotten to 11,521, 876, and 940 attendees respectively. The total sample size was drawn from the research advisor's sample size table (2006) using a sample frame of 11,521. Retrieved from (http://research-advisors.com) all rights reserved. Using a confidence interval of 95% and a 5% margin of error. The resulting sample size was 378. A systematic sampling technique was used to recruit the sample of 378 pregnant women from the months of July and August. The sample fraction was gotten to be $1/5^{th}$, generator of random numbers was used to generate a number between 1 and 5, this number was then picked as the first number and the next number was then since the sampling fraction was $1/5^{th}$ then every fifth number was then included. The researcher picked a random number 1 to 5 and from this onwards every 5th eligible pregnant woman attending ANC was selected until the desired sample was gotten in each of the months. Where the identified respondent is ineligible the next number was selected until a total sample size of 378 was achieved. One main tool (questionnaire) was used for data collection. It was adopted by the researcher from Mwilike (2013). Content and face validity of the research instruments were done. The research instrument was distributed to five experts from the Department of Nursing Sciences, and the Department of Obstetrics and Gynecology, at Ahmadu Bello University Zaria. Their corrections were incorporated in the final draft of the questionnaire.

Permission to carry out the study was sought from hospital management, informed consent was obtained from all the respondents recruited for this study. The researcher and two research assistants (a newly qualified nurse and a community health extension worker (CHEW)) who were fluent in the Hausa language were involved in the data collection process from the month of July to August 2018. The questionnaire was formulated in English language and then given to an expert in Hausa language to be translated into Hausa language/ and back to English to maintain the consistency of the data. Training on how to collect the data was given to the research assistants for 2 days this was done by describing the overall research aim and objectives, methods of data collection and techniques, sampling and inclusion criteria as well as procedures for obtaining both verbal and written consent from the respondents during pretesting in a similar health facility in Dutse. The researcher along with the two research assistants interviewed the women in the Hausa language. The researcher also went further to supervise the general data collection process and check for consistency and completeness of the material. The questionnaire consists of two sections that seek information on the sociodemographic characteristics of pregnant women and knowledge of danger signs.

An introductory letter was obtained from the Department of Nursing Science at Ahmadu Bello University Zaria. Which was taken alongside a copy of the proposal and an application letter to the Ministry of Health Dutse seeking ethical clearance from the Honourable Commission for Health Dutse Jigawa State. Permission to conduct the study was obtained from Dutse General Hospital. The research respondents were informed about the purpose of the study and were equally informed that their participation is voluntary, they can withdraw from the study at any time if they no longer feel comfortable. Both written and verbal consent were obtained from the participants before administering the questionnaire to them. Anonymity and confidentiality were assured by following the World Medical Association (WMA) Declaration of Helsinki-ethical principles for medical research involving human subjects. Descriptive and inferential statistics were used, and chi-square and linear association were used to examine the level of association between knowledge and sociodemographic data as well as knowledge. The responses on the research instrument were checked for completeness and coded using numbers. The researcher then enters the data directly into the computer using a statistical software package called the Statistical Package for the Social Sciences (SPSS) version 24 for analysis.

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Analysis

Table 1: Distribution of Respondent's Socio-Demographic Characteristic (n= 378)

Variables	Categories	Frequency	Percentage %
AGE	≤19	137	36.2
	20-29	202	53.4
	30-39	26	6.9
	≥40	13	3.4
Ethnic group	Hausa	332	87.9
	Yoruba	3	0.7
	Others(specify)	43	11.3
Religion	Muslim	365	96.5
	Christian	13	3.5
Marital status	Married	375	99.3
	Single	3	0.7
Occupation	Not employed	60	16.0
	Farming	9	2.5
	Artisan	216	57.1
	Public servant	2	0.4
	Employed in formed private sector	23	6.0
	Businesswoman	44	11.7
	Others	24	6.4
Monthly income In naira	≤4900	340	89.9
	5000-14900	26	6.9
	15000- 24900	9	2.3
	≥25000	3	0.8
Level of education	None	62	16.3
	No formal education	162	42.9
	Primary	48	12.8
	Secondary	74	19.5
	Tertiary	32	8.5
Type of Family	Nuclear family	107	28.2
	Extended family	178	47.1
	Joint family	93	24.6
Gravidity	1	34	8.9
	2-4	144	38.1
	≥5	200	52.9
	0	287	75.9
	1-3	54	14.4

Number of times given birth in health facility	≥4	37	9.7
Residency	Urban	172	45.5
In the previous pregnancy	Rural	206	54.5
Did you attend an antenatal care visit?	No	49	13.0
	Yes	329	87.0

A total number of 378 pregnant women were recruited for this study. The average age of the respondents was 25 years. The majority 87.9% of the respondents were Hausa, and the dominant religion was Muslim, 96.5% and up to 99.3% of the respondents are married, furthermore, 57.1% are Artisan, while 16% of them not employed, with an average monthly income of ₦4200. Also, 27% and 26.3% of the respondents revealed that their spouses are Farmers and public servants respectively. 42.9% of the respondents had no formal education, while only 8.5% of them attended tertiary institutions. Among the respondents, 87% admitted attending antenatal care in the previous pregnancy; meanwhile, only 24.1% had utilized the health facility during labour and childbirth in their previous pregnancy.

Table 2: Respondents knowledge on danger signs of pregnancy (n=378)

Questions	Danger signs	Freq.	%
Do you know the danger sign of medical health that occurs during pregnancy	No	7	1.8
	Yes	371	98.2
	Total	378	100.0
If yes mention the danger signs that you know to occur during pregnancy	Convulsion	161	42.6
	Vaginal bleeding	212	56.0
	Severe headache	197	52.1
	High fever	121	31.9
	Severe Abdominal pain	115	30.5

98.2% of the respondents (n=371) were aware of the obstetric danger signs that occur during pregnancy. Meanwhile, when asked to verbally mention these danger signs of pregnancy 56% of the respondents mention vaginal bleeding, 52.1% mention severe headache, 42.6% mentioned convulsion, while 31.9% and 30.5% respectively mention high fever and severe abdominal pain.

Table 3: categorization of respondents' knowledge of danger signs in pregnancy based on scores. (n=371)

Variable	Frequency (%)

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No knowledge	0 (0)
Low knowledge	256(68.8)
Sufficient knowledge	115(31.2)

Table 3 shows the overall knowledge score of the respondents and depicts that the majority 256(68.8%) of the respondents have low knowledge of danger signs in pregnancy.

Table 4: Respondents knowledge on danger signs of pregnancy when prompted by the researcher (n=371)

	Categories		
	Minor discomfort	Danger signs	Total
Variables	**Freq. (%)**	**Freq. (%)**	**Freq. (%)**
Severe vaginal bleeding	5 (1.3)	366 (98.6)	371(100.0)
Severe persistent headache	8 (2.2)	363 (97.9)	371(100.0)
Blurred vision	8 (2.2)	363 (97.8)	371(100.0)
Severe abdominal pain	12 (3.2)	359 (96.8)	371(100.0)
Reduced fetal movement	21 (5.7)	350(94.3)	371(100.0)
Too weak to get out of bed	25(6.7)	346 (93.2)	371 (100.0)
Swelling of finger, face and leg	8 (2.2)	363 (97.8)	371 (100.0)
Convulsion	8 (2.2)	363 (97.8)	371 (100.0)
Fast or difficulty in breathing	12 (3.2)	359(96.8)	371 (100.0)
Fever	89 (23.9)	282 (76.0)	371 (100.0)
Frequency of urination	143 (38.5)	235 (63.3)	371(100.0)
Nausea and vomiting	149 (40.1)	222 (59.8)	371 (100.0)
Food dislikes and food	159 (42.8)	212 (57.1)	371 (100.0)
Cravings	163(43.9)	208 (56.0)	371 (100.0)
Heartburn	113 (30.4)	258 (69.5)	371 (100.0)
Constipation	104 (28.0)	267 (71.9)	371 (100.0)
Swollen veins	84 (22.6)	287 (77.3)	371 (100.0)
Back and joint pain	78 (21.0)	293(78.9)	371(100.0)
Abdominal cramps in early pregnancy	71 (19.1)	300 (80.8)	371 (100.0)
Headaches and migraines	68 (18.3)	303 (81.6)	371(100.0)
Average	**17.8%**	**82.2%**	

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Findings from Table 2.2 show that the respondents with the majority (82.2%) indicated all the variables (severe vaginal bleeding, severe persistent headache, blurred vision, etc.) as danger signs.

Table 5: Distributions of problems that might cause symptoms (n=371)

	No		Yes		Total	
	Freq.	%	Freq.	%	Freq.	%
Ectopic pregnancy	95	25.6	276	74.4	371	100.0
Miscarriage	93	25.1	278	74.9	371	100.0
Hyperemesis gravidarum	101	27.2	270	72.8	371	100.0
Preterm labor	99	26.7	272	73.3	371	100.0
Infection in pregnancy	101	27.2	270	72.8	371	100.0
Fetal distress	109	29.4	262	70.6	371	100.0
Preeclampsia	93	25.1	278	74.9	371	100.0
Toxemia	96	25.9	275	74.1	371	100.0

Table 5 shows that the respondents with the majority (73.5%) admitted all the variables (Ectopic pregnancy, Miscarriage, Hyperemesis gravidarum, Preterm labor, Infection in pregnancy, Fetal distress, Preeclampsia, and Toxemia.) are the problems that might cause these symptoms.

Table 6: Relationship between knowledge and level of education

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	376.397[a]	116	.000
Likelihood Ratio	344.521	116	.000
Linear-by-Linear Association	.645	1	.422
N of Valid Cases	371		

From the above table it was revealed that the p-value (0.000) is less than (0.05) we therefore reject the null hypothesis (H_0) and conclude that knowledge of danger signs during pregnancy is associated with the level of education at a 95% confidence limit.

Discussion

The purpose of this study was to assess the level of knowledge of danger signs in pregnancy among pregnant women attending antenatal clinics in Dutse General Hospital, Jigawa State. A total of 378 respondents were used for the study and a structured questionnaire was utilized to answer the research question. This chapter discussed the findings based on the research objective. All the respondents were pregnant women attending antenatal clinics. The age of the respondents ranges from 15 to 45 with an average of 25 years. The majority (87.9%) of the respondents are Hausa, 96.5% of the respondents are Muslims, and up to 99.3% of the respondents are married, furthermore, 57.1% are artisans, while 16% of them are not employed. This may explain why most of the respondents had a monthly income ranging from ₦200 to ₦30,000 with an average of ₦4200. Results on knowledge of danger signs of pregnancy among pregnant women attending an antenna clinic in Dutse General Hospital indicate that the majority of these women are well aware of it. But when asked to mention any of the danger signs they know, most of the respondents were able to mention vagina bleeding (56.0%) which was followed by severe headache (52.1%), convulsion (42.6%), high fever (31.9%) and severe abdominal pain (30.5%) respectively. This is similar to the study carried out in Northwestern Nigeria by (Sufyan *et al*., 2016) on knowledge, attitude, and perception of pregnancy danger signs among women of childbearing age which showed that 62.2% of the respondent knew vagina bleeding while 35.1% knew convulsion as danger signs in pregnancy.

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Furthermore, studies carried out in Tanzania, Sothern Ethiopia, and Uganda all found vagina bleeding to be the most frequently mentioned danger signs in pregnancy this may be because vagina bleeding is not supposed to be seen in a normal pregnancy. Failure to recognize danger signs in pregnancy may compromise these women's decision to seek prompt care when a complication arises. In terms of their overall knowledge score, it was found that the majority (68.8%) had low knowledge while approximately a third (31.2%) had sufficient knowledge of it. This is not surprising as similar studies were done in Ethiopia (30.9%), South Africa, rural Tanzania (26%), South Africa and northwest Nigeria (4.9%), a (2%) and (Hailu *et al.,* 2010; Hoque & Hoque, 2011; Pembe *et al.,* 2009; Sufyan, *et al*., 2016.). A low level of education can be one of the major reasons for low knowledge of dangerous signs of pregnancy as 42.9% of the respondents had no formal education with only 4.9% having attended tertiary institutions. When asked to differentiate between danger signs in pregnancy and minor discomfort, respondents with the majority percentage (82.2%) indicated all the variables (severe vaginal bleeding, severe persistent headache, blurred vision, etc.) as danger signs, the least percent (17.8%) sees all the variables as minor discomfort. This is speculated to be due to poor quality of care and inconsistency of information during ANC since about 97.9 percent of women had attended antenatal clinics at least once in their last pregnancy. Information on obstetric danger signs is usually delivered to pregnant women during antenatal clinics, but the quality of the service in low-resource settings is said to be inconsistent (Villar *et al.,* as cited in Aborigo *et al*., 2014). This Poor quality of care was thought to be due to a shortage of providers, informal costs in public hospitals, and illiteracy (Tibandebage *et al.,* 2013). Appropriate Health-seeking behavior is influenced by the knowledge and awareness of danger signs in pregnancy. That is pregnant women and their families are likely to seek immediate care in the event of an emergency if they are fully aware of these warning signs. Therefore, reducing morbidity and mortality associated with it. Effective approaches are therefore required to streamline the information delivery systems. The recollection ability of these women can be enhanced through the use of a Simplified information delivery system with little or no education and implication enabling them to use public health services more effectively.

Conclusion and Recommendation

Based on the findings of this study, it can be concluded that there is a low level of knowledge about the danger signs of pregnancy among pregnant women attending antenatal clinics at Dutse General Hospital. Knowledge about danger signs during pregnancy has been found to have a significant relationship with the level of education. Based on the findings, it is recommended that access to health information and education on the danger signs of pregnancy should be made readily available to all women of reproductive age and their family members by health workers in the state. This can be done through community outreach programs that are solemnly targeting information on obstetric complications in pregnancy.

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EFFECTS OF MODIFIED LECTURE AND CASE-BASED TEACHING METHODS ON COGNITIVE ACHIEVEMENT OF STUDENT NURSES IN NURSING SCHOOLS IN NORTHWEST STATE IN NIGERIA: A COMPARATIVE INTERVENTIONAL STUDY

BY

[1]Felicia Philip, [2]Emmanuel Ejembi Anyebe, [3]Babayo Mohammed Tukur, [4]Gomma M. Hayyat & [5]Zubairu, S. A.

[1]Department of Nursing Sciences, Faculty of Allied Health, Ahmadu Bello University, Zaria, Nigeria
[2]Department of Nursing Sciences, College of Health Sciences, University of Ilorin, Ilorin, Nigeria
[3]Department of Nursing Sciences, College of Health Sciences, University of Maiduguri, Nigeria
[4]Department of Curriculum Development, Faculty of Education, Ahmadu Bello University, Zaria, Nigeria
Email: anyebe.ee@unilorin.edu.ng

Abstract

Teaching is constantly being modernized to suit the ever changing needs of diverse learning experiences of students. Continuous evaluation of teaching methods is therefore a routine. The study assessed the effects of modified lecture and case-based teaching (CBT) methods on student nurses' cognitive achievement in Nursing Schools. Adopting a quasi-experimental two-group research design, a combination of stratified and simple probability sampling techniques was used to select two schools. Students were assigned to control and experimental groups. A set of multiple-choice, fill-in-the-blank spaces, short-answer test items was used to measure the cognitive performance of the 102 respondents, before and after lecture and case-based teachings on "postpartum haemorrhage" in Maternal and Child Health Nursing course. The data collected at both phases were analyzed descriptively and inferentially using Statistical Package for the Social Sciences (SPSS) 23.0. Results revealed that in the two schools, students were predominantly females (89.2%). The scholastic achievement showed that mean score for lecture method in posttest compared to pretest was good > 50%. In lecture, there was also an improved performance in the post-test with 56.7% scoring > 50. For CBT, 80.0% of the students in School I had poor score (< 49%) in the pre-test while only 33.3% improved post-test. In comparison, the mean score of students for lecture was higher than that of case based teaching. This indicates that the post test scores for each of the teaching methods increased; although scores for the lecture method improved more significantly than that of the CBT. It is concluded that mean scores for modified lecture method for both experimental and control groups were higher than those of case based teaching groups in both schools, indicating that cognitive achievement in lecture was higher. The post test scores for lecture improved more significantly, indicating that effect of lecture on cognitive achievement of student nurses was better. No statistically significant differences were however found between them. It was therefore recommended that student nurses should be exposed to case based teaching in the nursing curriculum as it appears a less used approach, accounting for its less improved scores post-test.

Keywords: Case-based Teaching, Cognitive Achievement, Modified Lecture Method, Nursing Education, Nursing Students, Teaching Methods

Introducton

The contemporary health care system requires nurses to to advance their knowledge, clinical competency, and autonomy in teaching/learning (Shohani, *et al.,* 2023) and clinical judgment (Bano, *et al.*, 2015), especially as more sophisticated technologies and society's orientation to health and self-care are witnessed in the educational needs of nurses. This development is good both for the nursing profession and the consumers of nursing services as better educational preparation begates better performance (Agbedia, 2012). To justify the enormous activities on classroom and clinical education in nursing), nurse educators need to have clear, and realistic expectations of the desired outcome of both classroom and clinical learning process using contemporary approaches (Hafeez, 2021; Kantar & Sailian, 2018). The effectiveness of classroom and clinical teaching is often judged by the standardized outcomes it produces. This is made easier if nurse educators follow student centered teaching strategies, with all the teaching needs available. Bano, *et al.,* (2015) discussed numerous teaching strategies that suit the pedagogical learning, although not all can be

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properly applied by nurse tutors in both classroom and clinical area to yield the desired outcome. Teaching is considered as 'ever evolving' processes especially in medical school. Consequently, this teaching needs to be modernized continuously to sooth the ever changing needs of a diverse society (Simmons&Wilkinson, 2018). Of the many teaching methods available (lecture, demonstration, simulation, problem based, role play, and project study, case based and brainstorming among others) the traditional (lecture) method is the most commonly adopted (Abu-Hasheesh, *et al*., 2017).

However, methods that are student-centred are preferred. Ogkouzi & Saemian (2012) had posited that learners should be in-charge of their own learning while the teacher acts as a facilitator during teaching-learning process. This implies that teaching and pleasant learning of basic concepts and processes can only be accompanied within the instructional framework with the combination of teaching strategies and approaches (Adesanya & Adesina, 2014). These strategies constitute the varying methods of teaching that help teachers deliver the prescribed skill through cognitive, affective and psychomotor domain and achieve desired outcome (Ibtihal, 2017). Lecture, as one of the oldest methods,is specially placed in the training programs, concerned with the teacher being the controller of the learning environment. It is one of the oldest and by far the most widely used methods of teaching. There are different types of lecture method and this includes the modified method where other forms or additions are made to the conventional pure reading of a text to the hearing of a group of students. For example using chalk and board, pictures, panels and posters to explain a text and making additional emphasis by writing on board and use of illustrations. The lecture method has advantages of exposing new material to a large class, it has teacher control advantages, enables teaching to engage large communication n, it also permits the dissemination of unpublished or not readily available material.

On the other hand, Case-based Teaching (CBT) is a long established pedagogical method, which is defined in a number of ways depending on the discipline and type of 'case' employed. It incorporates many principles of adult learning e.g. active involvement of learners, social interaction, tutor and peer input, communication, modelling professional thinking and action, providing direction and feedback, and creating a collaborative learning environment leading to active construction of knowledge (Bano, *et al.,* 2015). Case based Teaching (CBT) is student-centered and facilitates students' learning and teaches them to decide about their perspective field, by the use of case studies (Kaddoura, 2011). Case Based Teaching is structured so that trainees explore clinically relevant topics using open ended questions with defined goals. This type of learning has been shown to enhance clinical skills, improve team work, improve patient outcome. This study focuses on the cognitive achievement in lecture and case based teaching methods. Cognitive achievement in this study is the total score obtained by each respondent in the control group being taught with lecture or the experimental group taught with case based method. The total score is 100% and measured using test items with different sections. In the field of nursing, only few scientific research comparing Case Based and lecture in teaching core subjects have been attempted. Some factors that may have influenced the outcome of this study relate to the type of students in the study and the subject matter in the professional field.

Literature Review

The fruitfulness of any academic achievement is measured when the education of students is involved. In the Nursing school, several factors come into play when discussing academics and this includes students' interest, level of entry, parental support, adequate learning facilities and teaching methods etc. Since teaching methods impact student learning significantly, it follows that the method in which knowledge is taught must undergo series of study to determine their conformity with current trends best practices (Hafeez, 2021). Students learn differently through different distinct ways. There is need to use approaches that holistically deal with the uniqueness of students through domains of learning. Developing and delivering lessons by teachers are important in the teaching process. The Nursing schools are faced with the challenge to train students who are able to think critically and be effective in evidence based practice through different teaching strategies (Shohani, et al., 2023). The traditional lecture method now modified in different forms is one of the prominent teaching methods utilized in medical schools and other institutions of higher learning (Logan, at al., 2022). Lecture may be sufficient in promoting cognitive learning at the levels of remembering and understanding but may not be effective in promoting cognitive learning at the higher levels of application, analysis, synthesis, and evaluation. On the other hand, the case based method is a student centered approach that results in deeper level of learning and helps in the application of theoretical knowledge into clinical practice as opined by Idika,

(2021). Case based teaching (CBT) is valued in the sciences especially medicine and nursing. This is because it fosters critical thinking exposing students to real-world scenarios. According to a review, CBT is a form of teaching and learning that creates a connection between theory and clinical practice.

Determining the level of learners' satisfaction is an important criterion for measuring the efficiency of educational systems. In a study by Tsekhmister (2023), it was found that Case Based Teaching when compared to other techniques can increase medical and pharmacy undergraduate students 'academic performance as well as their capacity to analyze cases. The result of a quasi experimental study conducted by Mostafa, *et al.*, (2019) indicated that case based teaching is a more effective method for educating nursing students about cardiac dysrhythmias and enhancing their diagnostic skill. This exposed only some of the students to the methods and could vary with other methods. Allowing students express their opinion on the preferred method of teaching will help in outcome of teaching and ensure better participation. In 2021, Ozcan studied factors affecting students' academic achievement according to the teachers opinion. The goal is to help student process information more deeply, which allows them to relate new information to existing ideas or experiences. This current study hopes to compare case based teaching and modified lecture method among nursing students in Kaduna State, Nigeria to add to the existing knowledge on contemporary teaching methods in the Nigerian setting.

Objectives of the Study

The main objective of the study was to compare effect of case based teaching and lecture method on cognitive achievement of student nurses. The specific research objectives were to;

1. identify the effect of case based teaching method on cognitive achievement of students nurses;
2. identify the effect of lecture method on achievement of students nurses;
3. compare effect of case based teaching and modified lecture method on cognitive achievement students' nurses.

Research Hypotheses

Three hypotheses were developed, which guided this study:

H_o1: Students in study group who are exposed to case based teaching method will achieve higher scholastic achievement in posttest than in pretest.

H_o2: Students in study group who are exposed to lecture method will report higher scholastic achievement in the post test than in pre test.

H_o3: Effect of scholastic achievement is higher in Case based teaching compared to effect in lecture based teaching.

Methodology

Research Design

A quasi-experimental (a two-group pretest/post test research design) was adopted to compare effect of Case-based Teaching (CBT) and Modified Lecture methods on students' cognitive achievement in Maternal and Child Health Nursing. Postpartum hemorrhage was taught (using case based teaching and modified lecture methods of teaching). Both samples and schools had pre- and post-tests for each course before and after the introduction of the topic, respectively. The effects on the teaching methods were determined from the scores and later compared. The study was conducted in two Nursing Schools, stratified into government- and private-owned, in Kaduna State.

Study Population and Sampling Procedure

The study population for the study was all the 172 second year student nurses in the four schools of Nursing in Kaduna State. Sampling involved selecting two schools out of the four and the respective students, using a combination of stratified and simple probability sampling methods. The four nursing schools were identified and stratified into government- and private-owned, comprising of two schools each category. One school was selected from each stratum using simple random method. The two schools selected were: St. Gerard's School of Nursing, Kaduna (School I) and School of Nursing, Ahmadu Bello University Teaching Hospital Zaria (School II) for private- and government-owned respectively. Maternal and Child Health Nursing course was used for the teaching. This is borne out of interest of the

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principal investigator, and for the fact that the second year student nurses were mature enough in study block for the course at the time of study, having spent at least a year in the training. The total study participants were 102 student nurses: 41 from School I and 61 from School II which were divide each into experimental (CBT) and control (lecture) as shown below.

Instrument

A set of twenty questions, consisting of multiple choice-, fill-in-the-blank-spaces-, true and false and short-essay questions, was used to measure the cognitive achievement of the students which was developed by the researchers based on the contents of the topic. The multiple choices, blank spaces and true and false had 5 items, each carrying 1 mark; the short-answer sections also had 5 items with marks from 2-4 respectively to give a total of 30 marks. This was converted to 100% for ease of grading. A lecture note on postpartum haemorrhage was developed and used to teach (as a modified lecture method). A case scenario was then used for case-based teaching in the schools selected.

Score system - The total test score was 30 marks and converted to 100%. Total score of results of pre and post-test was calculated to determine cognitive achievement for each school. The score was classified to evaluate level of achievement as follows: 70 – 100% (Excellent), 50 – 69% (Good), 0 – 49% (Poor). The mean score and t-test were calculated to determine the level of achievement of post-test scores compared to those of the pre-test for each teaching method in each school. The instrument was tested for validity and reliability (Cronbach's coefficient = 0.750).

Data Collection Procedure

Ethical approval was obtained from the Senate of Ahmadu Bello University (Approval Number: ABUCUHSR/2017/019, dated 27th June 2018. This followed an introductory letter obtained from the Department of Nursing Science, Ahmadu Bello University, Samaru, Zaria, which introduced the research study to the Committee. Both the Ethical Approval and Letter of Introduction were all presented to the participating schools. Informed consents were also obtained from study participants, assuring them that all ethical codes would strictly be adhered to.

Preparatory Phase: In the preparatory phase permission was obtained to conduct the study from each school after presenting introductory letter from the Department and Ethical Clearance from Ahmadu Bello University, Zaria. Each school was visited separately and the Year Two student nurses were purposively for the study. And working relationship was established with both the schools and students. Initially, pretest was administered to the whole class after introducing and explaining the general and specific objectives of the study to them. A strong appeal was made to the study participants not to cross-fertilise their information between the control and experimental groups to prevent possible contamination. The class was then divided into two groups: Control (School I =20, School II=31) and Experimental (School I =21, School II=30) for both schools. The results of the previous semester were used as a guide to draw up the allocation to control or experimental groups, to control for previous performance bias. Based on this categorization, each group was then given the study objective on Postpartum Hemorrhage based on the method to be employed. Time table was allocated for six (6) periods within three weeks and the students were introduced to the researcher. Experimental class was enlightened on mode of obtaining literature on the topic and was subdivided into 4-5 groups consisting of 8-10 participants each. Each subgroup had a chairman and secretary. A case scenario was presented which had complete content on the topic Postpartum Hemorrhage (PPH) and the basic outlines inclusive. Each subgroup was told to use textbooks, library, internet, as available. They were to make notes after holistically reviewing the problem under study.

Implementation Phase/Intervention - Lecture on postpartum Hemorrhage was presented to the control groups using the study objective. The control group had classes on modified lecture on postpartum hemorrhage using markers, and whiteboards, as outlined: definition of postpartum, causes, types, diagnosis, management and complications of hemorrhage. In the fourth & fifth schedule (2 hours), the experimental group continued their brain storming. Conclusion and summary of the topic by each group of the class was done. There were questions and answers where necessary and the researcher modulated the process throughout the interactions. A case scenario on a patient with postpartum hemorrhage was presented to the experimental group with a study objective. They were re-grouped into 8-10 students per group and enlightened on use of all available sources to consult and make presentations in 24 hours. The subgroups were made to choose a chairman and secretary to direct the sorting of materials, take notes and make

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presentations. At the end of lecture (2 hours of 3 lecture schedule), the students were made to sit for a post test using the same content of the pretest material to measure their cognitive achievement. The experimental group presented their findings in 2 hours of 3 lecture schedule to accommodate all the groups and enable members make contributions. The researcher modulated in-between and finally cleared any misconceptions. A post test was then administered to the modified lecture and case based teaching groups.

Evaluation phase - The results of pre-intervention and post-intervention were obtained in each school from the two groups; these were used to determine if there were differences pre- and post-intervention in both cases.

Data analysis Procedure

This involved setting out all the information and preliminary data which were collected and analysed. Scores were computed using excel, inferential statistics and Statistical Package for Social Sciences (SPSS) version 23.0. The various data collected were triangulated to meet the research objective. Cognitive test Scores - a score value of 100% was for the total score in each assessment test. While 1 is awarded to each correct objective answer, the short essay answers had scores of 2, 3 and 4 marks respectively as appropriate. The total mark was 30 which were converted to 100%. Total score of results of pre- and post-test was then calculated and classified as follows:

70 – 100% Excellent
50 – 69% Good
0 – 49% Poor

The results were presented using frequency tables, percentages and mean scores. Chi-square test level of significance was set at 0.05

RESULTS

Socio-demographic Characteristics of Study Participants

Table 1:
Socio-demographic characteristic of students for modified Lecture and Case Based Teaching in the two schools (N=102)

Variables	Frequency	Percentage
Gender:		
Male	11	10.8
Female	91	89.2
Age (in years):		
Below 19	3	2.9
20-30	69	67.7
Above 30	30	29.4
Marital Status:		
Single	67	65.7
Married	31	30.4
Divorced	3	2.9
Widowed	1	1
School:		
School I	41	40.2
School II	61	59.8
Total	102	100.0

Table 1 shows that respondents were predominantly females (n=91; 89.2%) while the remaining were males, mostly aged between 20 and 30 years (n=69; 67.7%). The profession is predominately female hence the reason why the higher percentage are females. The students in School I (St. Gerard's School of Nursing) were 40.2% (n=40.2) while the

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remaining 61(59.8%) were from School II (School of Nursing ABUTH). It is obvious that School 1 is a private school hence students pay heavily while school II is government owned and students pay just a token.

Effect of Case-based Teaching Method

Table 2
Level of scholastic achievement for Cased Based Teaching method

Level of scholastic achievement	**School(I)** (N=21) **Pre-test Post-test**				**School(II)**(N=30) **Pretest Posttest**			
	Freq	%	Freq	%	Freq	%	Freq	%
Poor (<50)	17	81	7	33.3	17	56.7	1	3.3
Good (50-69%)	1	4.7	11	52.4	12	40	10	33.3
Excellent (70-100%)	2	14.3	3	14.3	1	3.3	19	63.4
Chi-sqaure			**X^2=1.1784**				**X^2=1.1784**	
			***p*-v = 0.048**				***p*-v = 0.042**	

Table 2 shows the results case-based teaching for School I (41 divide into [20 for lecture group and 21 for case based teaching]), CBT group in school 1 is 21 where majority (81%) of the students had scores of less than 50 in the pretest; 14.3% scored excellently (70-100%). In the post-test after the intervention for case based teaching, 33.3% scored less than 50 and 14.3% scored excellently (70-100%) in School II. Similarly, 56.7% of the respondents had less than 50% score (poor) and 63.4% had 70-100. This indicates a percentage increase in performance, implying that an improvement in learning from the pre-intervention test results. The chi square test score of 1.784^a and 1.964^a for School I and School II respectively show that there are statistically significant effects on the levels of the students 'cognitive achievement in both schools (with *p*-value of 0.048 and 0.042 respectively).
Furthermore, a test of association between the schools show a p-value of 0.0862, indicating that there is no significant difference between the cognitive achievement (performance) of School I and School II. Cognitive achievement in case based teaching method is summarized Table 3, indicating a more improved achievement in post-intervention tests than in pre-intervention tests (mean scores in post-intervention tests are higher (mean=> 56) as against that of the pre-test (mean = 43.8703). However, this improvement did show no statistical significant difference between the post test and pretest scores (*p* =0.001; level of sig: 0.05).

Table 3:
Effect of Case Based Teaching Method on Cognitive Achievement of students

Case Based Teaching	**Mean**	**SD**	**T**	**N**	***p*-value**
Before Intervention	43.8703	8.8108	-6.424	50	0.001
After Intervention	56.6655	7.0699			

The first hypothesis (**H_o1**) that students in study group who are exposed to case based teaching method will achieve higher scholastic achievement in posttest than in pretest is therefore rejected.

Effect of the modified Lecture Method

Table 4:
Level of Scholastic Achievement of students for Modified Lecture

Level of cognitive performance	Poor (<50)	Good (50-69%)	Excellent (70-100%)	**Mean**	**Standard Deviation**	**X^2**	**P-value**
School(I) (n=21)							0.040
Pretest	12 (60)	7 (35)	1 (5)	45.925	48.693		
						1.361[a]	
Post test	1 (5)	12 (60)	8 (35)	57.700	7.74155		
							0.534
School(II)(n=30)							
Pretest	14(45.2)	13(41.9)	5 (16.1)	48.693	8.68205		
						1.463[a]	0.032
Post test	0(0.0)	10 (33.3)	20(66.7)	64.645	6.07343		

Table 4 shows that for School I, majority (60%) of the students had poor scores in the pretest, 35% had good scores while only 5% scored excellently. In the post-test however, 60% had good scores while 35% had excellent scores and percentage change was 30%. In School II, 45.2% of the respondents had scores less than 49 (poor) and 41.9% had good scores in the pretest. In the post-test, 16.1% had poor scores while majority 83.9% had excellent scores and the percentage score change was high (71%). Students in the control study groups exposed to modified lecture method recorded higher scores in post-test than Case Based teaching. There was no significant statistical difference in scholastic achievement in post test than in pretest. It implies that there was an improved achievement in terms of the post-test scores, although higher in school II. The chi square test scores of 1.361[a] and 1.463[a] for school I and II shows that there is effect on the level of cognitive achievement in both schools (p-value of 0.040 and 0 032 respectively).
Table 5 summarises the mean scores both pre- and post-intervention tests: post-test scores were higher (above 61) than pretest scores (less than 50). With *p*-value =0.001 (sig. Level = 0.05), we therefore reject the hypothesis that students in study group who had Modified Lecture teaching method recorded higher scores in post test than in pretest. There was a significant scholastic achievement in post test than in pretest.

Table 5:
Effect of Achievement of students for Modified Lecture methods

Lecture Method	**Mean**	**Standard deviation**	**T**	**N**	**P-Value**
Before Intervention	47.309	8.5462			
	61.1725	6.9075	-6.238	50	0.001
After Intervention					

The second hypothesis (**H_o2**) that students in study group who are exposed to lecture method will report higher scholastic achievement in the post test than in pre test is upheld.

Table 6:
Comparing cognitive achievement between (Post-test) of Case Based teaching and Lecture method

Variable	**Mean**	**Standard deviation**	**t**	**N**	***p*-value**
Post-test of Case based Teaching	56.6655	0.36515		50	0.030

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Post-test of Lecture based Teaching	61.1725	2.283

Table 6 Shows that the mean score in modified lecture is higher >61 in Modified lecture than in Case Based Teaching with a standard deviation of 0.365 and a t-test value of 2.2 which is also high. The calculated p-value is higher than the expected *p*-value (p=0.030< P0.05). This shows that there was statistically significant difference between scholastic achievements in modified lecture method compared to case based teaching method. The third hypothesis (**H_o3)** that effect of scholastic achievement is higher in Case based teaching compared to effect in modified lecture method is upheld.

Discussion

Effect of Case Based teaching on students' cognitive achievement

Results of the pre-test and post-test for case based teaching show that the mean score was improved after intervention. This is largely due to the fact that the students were exposed to all the materials and details of the topic from different sources as is the principle of case based teaching. This agrees with the study by Ghafourifard, *et al.*, (2013), stating the method creates avenue for students to engage and explore in the case scenario on postpartum haemorrhage. Students first encounter and identify the instructional task using past and present experiences as they are engaged on case scenario on hypothetical patient on postpartum haemorrhage. As they work together in teams 8-10, students build common experiences which prompts sharing and communicating. The teacher only acts as a facilitator, providing materials and guiding the students' focus. Also there was an improvement in student's performance when Case Based Teaching was used to determine effect by Yeng, *et al.,* (2015). Kireeti & Shankar-Reddy (2015) in studying undergraduate medical students found that Case Based Teaching create interest in the students to learn new things hence learning and remembering which improves performance cognitively. In school II more than half scored below 47. Only 1 scored 60-65, however in the post-test more than 73 scored 60 and above. In a study by Singh & Bhatt, (2011) on *Introduction of case based teaching in a conventional medical school,* 83 students responded to the feedback. To demonstrate several important aspects to students' attitudes to Case Based Teaching after alternating their teaching methods during several work sessions shows that students who undertook the Case Based Teaching format were better able to ask questions and make comments during class and enjoyed learning more.

Effect of Modified Lecture on students' cognitive achievement

This study found significant improvements in the post-test scores in both schools, indicating the positive effect pf modified lecture on the students' learning. Similar findings in other studies were noted as seen in Ibtihal (2017) who reported the suitability of modified lecture method on teaching Listening Comprehension skill for English students. Modified lecture remains one of the older methods of teaching, is an oral presentation of information by the instructor and use of chalk board and illustrations on causes of postpartum haemorrhage as was done in this study (Hassanpour-Dehkordi & Solali, 2016). The study is also not in agreement with Marmah, (2014) that pointed out that lecture method fails to give feedback to both teacher and learner hence affecting achievement. In this study, modified lecture was used which had given an added advantage to the method as observed in the post test results. The mean difference for scores in school I was 11.7 while the t-test was -6.6 with a significant level of 0.05 and a confidence interval of 95%. This indicated that there was a significant improvement in the mean score that gave rise to a high t-test.

Comparing effects of Case Based teaching and Modified Lecture on Cognitive Achievement of Students

The results in this study found that cognitive achievement is higher in modified lecture than case based teaching, being higher in the post than the pretests. This finding is in contrast to some earlier studies. For example, Simmons and Wilkinson (2018), in their study on *Lectures versus case discussions: randomised trial of undergraduate psychiatry teaching,* found that students using case-based discussion groups had scores that were significantly higher than those in the lecture groups. Similarly, Kukreja, *et al.,* (2018) had also found a positive impact on the scores of MBBS students Post-Test CBL evaluation, which was gender determined, girls obtaining higher scores than boys. In another

study on comparison of case based and lectures in dental education using SOLO Taxonomy by Ilguy,*et al.,* (2014), where a statistical significant difference was found between the mean scores of the relational and extended abstract categories of Case Based Teaching and lecture groups. Studies (Ferree, *et al.,* 2023; Liu, *et al.,* 2020)) also found the superior advantage of CBL over many other teaching methods among university-based students. The group of students used may have been unprepared, unexposed to such critical thinking teaching approaches, compared to degree-prepared students. There is a marginal gap in cognitive achievement in pre and posttests for both lecture and case based teaching. With better exposure, case-based method should have greater potential. In area of nursing education, Kantar and Sailian (2018) also reported the superior efficacy of a CBT on knowledge retention and judgment skills compared to lecture methods. The contrasting finding in the present study could be the level of unfamiliarity with case based strategy in the study environment (students claimed not to be familiar with the case based teaching – *personal interaction*). As a more extensive, similar but comparative study between this hospital-based programme (in this study) and the university-based nursing programme may be more revealing.

Conclusion

Both case-based teaching and lecture methods have shown significant effects on cognitive achievements of nursing students in the two schools. Lecture method appears to have more positive effect. This apparent difference can be attributed to the familiarity with the lecture method by students who hitherto are conversant with this method. However, a comparison of the effects between the two methods on cognitive achievements does not shown any statistical significant difference. This suggests that the opinions and preferences of the students for both modified lecture and case based teaching should be assessed to guide selection of the most student-preferred method, especially as teaching remains an "ever evolving" processes in the health science courses like nursing, with the ever changing needs of diverse knowledge and practice. Based on this and other findings of this study, it is recommended that: 1) lecture method, if it is to be used, should be modified to accommodate students active participation; 2) student Nurses should be exposed to case based teaching method in learning maternal and child health; 3) there should be constant case scenarios to be discussed to demonstrate advantages of Case Based Teaching; and 4) the Maternal and Child Health curricula should be restructured to accommodate more case based approaches to teaching.

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RISKS MANAGEMENT IN THE INTEREST-FREE BANKING IN NIGERIA: MODALITIES AND TECHNIQUES

BY

[1]Saad Jamiu Abdulazeez, [2]Kumuyi Francis Oladimeji & [3]Olarewaju, Eunice Foluke
[1]Department of Islamic Studies, Kwara State College of Education, Oro, Kwara State, Nigeria.
[2&3]Department of Christian Religious Studies, Kwara State College of Education, Oro, Kwara State, Nigeria.

Abstract
This paper examines modalities and techniques of risks management in the Interest-free banking. The paper also aimed at assessing the basic concepts of risk management, evolution of the Interest-free banking in Nigeria, its mode of operation and some of its unique features. Types of risks peculiar to the interest-free banking and modalities and techniques of their management are also given consideration in the paper. The methodology adopted in this paper is descriptive research based on documents analysis on relevant articles and literatures on the subject matter. The materials used include articles, books, conference papers, journals as well as internet resources. The paper concludes with the suggestions that there should be adequate awareness and orientation on the aim and objectives of risk management in Interest-free banking has giving assurance to the public that their transactions with the banks are saved and protected. Nigerian government should endeavour to give the bank enabling environment to thrive so as to revitalize the nation's economy from its instability.
Keywords: Risk, Management, Interest-free banking, Modalities, Techniques.

Introduction

In recent years, the landscape of banking and finance in Nigeria has witnessed a significant transformation with the emergence and growth of interest-free banking, aligning itself with Islamic financial principles. As a response to the needs of a substantial Muslim population seeking Sharia-compliant financial services, interest-free banking institutions in Nigeria have gained prominence (Adeyemi, Olamide, & Adetunji, 2019). However, the distinctive nature of interest-free banking introduces complexities in risk management that differ from conventional banking practices. This study aims to provide a comprehensive exploration of risk management in the context of interest-free banking in Nigeria, focusing on the modalities and techniques employed to ensure financial stability and compliance with Islamic principles. Credit risk, as defined, is the potential that a borrower or counterparty may not fulfill its repayment obligations as outlined in the contractual agreement. In the event of non-repayment, the creditor faces a loss, presenting a risk for financial institutions, such as banks. Notably, interest-free banking could exhibit reduced credit risk when juxtaposed with conventional banks. This potential diminution may be attributed to the religiosity of clients, fostering increased loyalty and diminishing the likelihood of defaults. Additionally, the unique relationship Islamic banks maintain with their depositors may further contribute to this decreased credit risk (Neifar, Malika, 2020).

Risk refers to the potential occurrence of adverse events, encompassing the inherent uncertainty surrounding the impact of an activity on aspects valued by humans. The international standard definition of risk is "effect of uncertainty on objectives" (Brilliant Math & Science Wiki, 2023, February 25) An important element of risk management is understanding the risk–return trade-off of different assets and investors. Investors can expect a higher rate of return only by increasing their exposure to risks. As the objective of financial institutions is to create value for the shareholders by acquiring assets in multiples of shareholder-owned funds, managing the resulting risks faced by the equity becomes an important function of these institutions (Merriam-Webster, 2023, August 28).

Interest-free banking is a new concept, and the risks associated with it are not yet fully understood. It faces unique risks due to Sharia compliance and Islamic financial law, with limited risk mitigation instruments (Akram & Rahman, 2018). The significance of this research lies in its potential to contribute to the knowledge base surrounding Islamic banking practices in Nigeria. It addresses the critical need for comprehensive risk management frameworks tailored to the unique characteristics of interest-free banking. As the interest-free banking sector continues to expand and

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integrate into the broader financial system, understanding the modalities and techniques for risk management becomes imperative for both practitioners and policymakers. It concludes with some suggestions which if are given consideration shall assist the Interest-free banking to progress into the highest level.

Conceptual clarifications

Risk: Risk entails the probability of experiencing a loss or facing perils related to the subject matter covered by an insurance contract. Additionally, it can represent a specific individual or object identified as a potential hazard for an insurer., an insurance hazard from a specified cause or source, or the chance that an investment (such as a stock or commodity) will lose value. (Merriam-Webster, 2023, August 28). It is also defined as the possibility that something bad or dangerous will happen. It can be used as a noun or a verb. As a noun, it means the possibility of something bad happening. As a verb, it means to expose to the chance of injury or loss (Dictionary.com, n.d.). Thus, Risk is the lack of certainty regarding the potential outcomes of an activity on elements that hold value for humans, including aspects like health, well-being, wealth, property, or the environment.

Management: Management refers to the process of planning, organizing, staffing, leading, motivating, and making decisions to achieve organizational objectives (Management Note. (2021, November 29). It is a multidisciplinary field that draws from various areas such as psychology, sociology, economics, and engineering (Economics Discussion, n.d.). Management involves coordinating the efforts of people to achieve the goals and objectives of an organization (OpenStax, 2022, December 12). It is both a science and an art and is considered a profession (Coursera, 2023, June 16). Thus, management is the process of directing and managing the efforts of individuals to achieve the goals and objectives of an organization

Risk management: Risk management is the process of identifying, assessing, and controlling risks to an organization's capital, earnings, and strategic goals (Investopedia, 2023, June 14). This process encompasses the establishment of strong internal controls, policies, and procedures designed to recognize, evaluate, and mitigate potential risks. (Reciprocity. (2023, June 16). Risk management is a comprehensive term that covers the entire endeavor of recognizing, evaluating, and addressing risks throughout an organization or project (TechTarget, 2023, January 17). Conversely, risk control pertains to the actions taken to alleviate or diminish the risks connected with a specific activity or circumstance. (Reciprocity, 2023, June 16). The risk management process involves five basic steps: identifying risks, analyzing risks, prioritizing risks, implementing solutions, and monitoring risks (360Factors, 2023, January 25). Risk management in healthcare is intricate framework comprising clinical and administrative systems, processes, procedures, and reporting structures. Its primary objective is to identify, monitor, assess, mitigate, and prevent risks to patients within healthcare organizations. (StatPearls Publishing, 2023, February 6). The risk management process comprises five fundamental steps: identifying, analyzing, prioritizing, implementing solutions, and monitoring risks.

Interest-free banking: Interest-free banking is a banking system where interests are prohibited (IGI Global,2023). It is a narrow concept within the Islamic banking system that denotes a number of banking operations that avoid interest (IMF eLibrary, n.d.). Under Islamic law, a Muslim is prohibited from paying and accepting interest on a predetermined rate (IMF eLibrary, n.d.). Interest-free banking evolved as a result of Islamic views about money that it should not be priced as it is done by Western or conventional banks operating around the world (The Indian Express, 2022). The adoption of interest-free banking remains a relatively new concept in numerous countries, Nigeria included. (The Indian Express, 2022).

Objectives of Interest-Free Banking

1. To provide financial services that are compliant with Islamic law: Interest-free banking aims to offer financial services in line with Islamic law, avoiding interest rates and utilizing equity participation systems instead (Hussain, Shahmoradi, & Turk, 2015).
2. Interest-free banking encourages risk-sharing between banks and customers through equity participation systems, where the bank and customer share the profit or loss of an investment (IMF eLibrary. (n.d.).

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3. Interest-free banking promotes ethical and socially responsible banking practices by avoiding investments in harmful industries like gambling, alcohol, and tobacco (The Indian Express, 2022).
4. Interest-free banking aims to enhance financial inclusion by offering financial services to individuals and businesses who may not have access to conventional banking, including microfinance (The Indian Express, 2022).
5. Interest-free banking aims to maintain economic stability by offering financial services with less reliance on economic fluctuations through equity participation systems based on profit and risk-sharing (JSTOR, n.d.).

Evolution of Free Interest Banking in Nigeria

According to "Interest-Free Banking in Nigeria: The Way Forward" (n.d.), interest-free banking, also known as non-interest banking or Islamic banking, is a relatively recent concept in Nigeria. The practice of interest-free banking is rooted in the Islamic perspective that money should not be priced, contrasting with the practices of Western or conventional banks worldwide. The theoretical discourse on interest-free banking initiated in Pakistan in the 1940s, preceding the Middle Eastern oil boom by decades (Saad,2021). In the pre-interest-free banking era, banking in Islamic communities worldwide operated on a capital economic system, involving interest payments on loans and deposits, leaning towards profit-oriented objectives (Saad, 2021). Money lenders were consequently exploiting the economically vulnerable by imposing various interest rates (Saad, 2021). The evolution and practice of non-interest or Islamic banking in Nigeria is aimed at promoting financial inclusion and sustainable economic development (Understanding Monetary Policy Series No 16 Non-Interest (Islamic) Banking, (n.d.). The Nigerian Islamic finance industry is nascent but has growth potential and is growing swiftly from a low base on the back of strong financing (Nigerian Islamic Finance Industry to Continue Growth on Policy Push, 2023, January 25).

Features of Interest-free banking Features/Principle of interest free bank

1. Prohibition of interest: Interest-free banking prohibits the charging or payment of interest on loans and deposits (Central Bank of Nigeria, n.d.).
2. Risk-sharing: Interest-free banking involves sharing risks between the bank and the customer. The bank and the customer share the risks and profits of the investment (Saad, 2021).
3. Asset-based financing: Interest-free banking is based on asset-based financing, where the bank buys assets and sells them to the customer at a profit (ARCN Journals, n.d.).
4. Ethical investments: Interest-free banking promotes ethical investments that are socially responsible and do not harm the environment or society (ResearchGate. (n.d.).
5. Profit and loss sharing: Interest-free banking involves sharing profits and losses between the bank and the customer. The bank and the customer share the profits and losses of the investment
6. No speculation: Interest-free banking prohibits speculation and gambling, which are considered unethical in Islamic finance

Modes of Operations of Interest-Free Banking

1. Mudarabah: This is a profit-sharing agreement between the bank and the customer, where the bank provides the capital and the customer provides the labour (Saad, 2021).
2. Musharakah: This is a partnership agreement between the bank and the customer, where both parties contribute capital and share profits and losses (Saad, 2021)
3. Murabahah: This is a cost-plus financing agreement, where the bank buys an asset and sells it to the customer at a profit (ResearchGate, n.d.).
4. Ijarah: This is a leasing agreement, where the bank buys an asset and leases it to the customer for a fee (Saad, 2021).
5. Istisna: This is a contract for the manufacture or construction of an asset, where the bank pays the manufacturer or contractor in installments and sells the asset to the customer at a profit (ResearchGate, n.d.)

Notable Risks of Interest-free Banking
Risk Management in Islamic Banking (2018) observes that **t**here are three major types of risks faced by Interest-free banking. These include:

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General Risks in Conventional and Islamic Banking:

General risks are inherent in both conventional and Islamic banking systems, reflecting common challenges faced by financial institutions. These risks necessitate robust risk management strategies to ensure the stability and resilience of the banks. The following risks are shared between both banking models:

1. **Financing Risk (Credit Risk):** Financing risk, commonly known as credit risk, prevails in both conventional and Islamic banks. It revolves around the potential default by borrowers, leading to financial losses for the bank. The risk of non-repayment is a universal concern, and both types of banks need to employ effective credit risk management practices to assess, monitor, and mitigate this risk (Mondaq, 2020, October 20).

2. **Market Risks / Interest Rate Risks:** Both conventional and Islamic banks are exposed to market risks, particularly those associated with fluctuations in interest rates and changes in exchange rates. Interest rate risk can impact the profitability of banks, affecting income from lending and investment activities. The management of these risks involves strategies to hedge against adverse market conditions and to adapt to changing economic environments (ResearchGate, n.d.).

3. **Liquidity Risks:** Liquidity risk is a shared concern for both banking models. This risk arises from the possibility of not being able to meet financial obligations promptly. It could result from unexpected withdrawals, changes in market conditions, or mismatches in the maturity of assets and liabilities. Effective liquidity management is essential for both conventional and Islamic banks to ensure ongoing operations and financial stability (Mondaq, 2020, October 20).

4. **Operational Risks:** Operational risks, stemming from inadequate or failed internal processes, human error, or external events, are universal in the banking sector. Both conventional and Islamic banks need to establish robust internal controls, invest in technology, and implement risk management practices to mitigate operational vulnerabilities. This includes measures to prevent fraud, errors, and disruptions in day-to-day operations (Mondaq, 2020, October 20).

In essence, shared risks highlight universal challenges across financial institutions, regardless of their banking model. Despite the unique risks introduced by Islamic banking principles, addressing common risks is crucial for the overall stability and success of banks, necessitating continuous monitoring, adherence to best practices, and a proactive risk management approach.

Specific Risks in Islamic Banking:

Islamic banking introduces unique risks associated with its operational and processing functions, reflecting the distinctive nature of Sharia-compliant financial transactions:

1. **Transactional Risks:** Particularly pronounced in Islamic Banking structures, transactions carry immense significance as part of the Aqad (contractual agreement) requirements. The meticulous adherence to Aqad conditions, such as the precise sequencing of a Murabahah transaction, is paramount. Failure to ensure compliance with Aqad may render transactions invalid, potentially resulting in the loss of income or redirecting funds to charitable causes (Risk Management in Islamic Banking, 2018).

2. **Valuation Risks:** Due to the unique nature of certain Islamic Banking contracts, especially those based on equity structures, challenges arise in valuing the portfolio accurately. Fluctuations in valuation pose a tangible risk, as a reduction can result in real financial losses for investors. Therefore, ensuring an accurate and fair valuation process becomes crucial for risk mitigation in Islamic banking (Risk Management in Islamic Banking, 2018).

3. **Displaced Commercial Risks (DCR):** Displaced Commercial Risk occurs when there is a misalignment between fixed obligations to depositors and uncertain returns on financing. This mismatch can lead to income insufficiency, making it challenging to meet obligations. For example, an Islamic Fixed Deposit commitment with a 4% contractual

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return requires careful management to prevent a 1% shortage in income from other portfolios, illustrating the potential impact of DCR on financial stability (Risk Management in Islamic Banking, 2018).

Thus, Islamic-specific risks emphasize the necessity for customized risk management strategies in Islamic banking. Due to the intricacies of Sharia-compliant transactions, meticulous attention to transactional adherence, precise valuation methodologies, and effective management of Displaced Commercial Risks are crucial. Islamic banks need to implement robust risk management frameworks to successfully navigate these unique challenges while upholding Sharia finance principles.

Shariah Risks – Non-compliance with Shariah decisions and instructions risks Certainly, let's elaborate further on the Shariah risks highlighted:

1. **Shariah Compliance Risks:** Shariah Compliance Risks in Islamic banking arise when interest-free bank operations are not fully aligned with Shariah principles. If certain departments or activities within the bank are deemed non-compliant, it poses a risk to the overall Shariah compliance of the institution. This risk emphasizes the importance of ensuring that every aspect of the bank's operations adheres strictly to Shariah guidelines to maintain the integrity of Islamic finance practices (Risk Management in Islamic Banking, 2018).

2. **Fiduciary / Ownership Risks:** Fiduciary and ownership risks stem from the unique requirements of Islamic contract structures. Islamic banks are compelled to operate beyond conventional financial intermediaries, engaging in activities like holding property, trading commodities, or leasing assets. This introduces distinctive roles and responsibilities, necessitating a clear definition and implementation of risks associated with ownership and fiduciary duties. Effective risk management in these areas is vital to ensure transparency, ethical conduct, and the proper functioning of Islamic financial transactions (Risk Management in Islamic Banking, 2018).

3. **Regulatory / Reputational Risks:** Regulatory and reputational risks in Islamic banking entail the need for swift adaptation to regulatory changes to uphold the bank's reputation. Rapid shifts in regulatory frameworks, especially those related to Shariah compliance, require proactive adjustments to maintain the institution's standing in the financial sector. Failure to navigate these changes effectively can lead to reputational damage, emphasizing the critical role of regulatory awareness and adaptability in preserving the bank's image and credibility (Risk Management in Islamic Banking, 2018).

In essence, the highlighted Shariah risks emphasize the critical need for robust risk management strategies in Islamic banking. Key elements include ensuring Shariah compliance across all operations, effectively defining and managing risks related to fiduciary duties and ownership, and maintaining adaptability to swiftly respond to regulatory changes. These measures are integral to securing the sustained success and reputation of Islamic banks in the dynamic financial landscape.

Modalities and Techniques of Risks Management in the Interest-Free Banking in Nigeria

It is pertinent to note the aim of risk management in interest-free banking is to maintain an institution's interest-rate risk exposure within self-imposed parameters over a range of possible changes in interest rates. (LogicManager, 2020) The objectives of risk management in interest-free banking include identifying and assessing risks, developing risk management strategies, implementing risk management strategies, and monitoring and reviewing risk management strategies (Bank for International Settlements, 2016). Thus, the modalities and techniques of risk management in Interest-Free Banking in Nigeria include:

1. **Develop a risk management objective and strategy:** The banks should develop a clear risk management objective and strategy that aligns with the bank's overall business objectives. This will involve identifying, measuring, and mitigating risks (Mondaq, 2020).

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2. **Improve credit risk management:** Banks should improve credit risk management to ensure that the bank's lending practices are sound and that it is not exposed to excessive credit risk. This can be achieved by implementing effective credit risk management policies and procedures (ScholarWorks | Walden University Research, n.d.).

3.. **Ensure compliance with regulatory guidelines:** Banks should ensure that the bank is compliant with regulatory guidelines on non-interest banking. This includes guidelines on corporate governance, product compliance, risk management, and capital adequacy (Mondaq, 2020).

4. **Monitor and review risk management practices:** Banks should monitor and review the bank's risk management practices regularly to ensure that they remain effective. This will involve reviewing risk management policies and procedures, identifying emerging risks, and implementing appropriate risk mitigation measures (MDPI, 2019).
5. **Use risk-sharing techniques:** Interest-free banks should use risk-sharing techniques to manage risks. This includes using equity participation systems, where the bank and the customer share the profit or loss of an investment based on a predetermined ratio (EconJournals.com, n.d.).

6. **Compliance with Shariah law:** Interest-free banking is based on the principles of Islamic finance, which prohibits the charging or payment of interest and promotes ethical investments. Banks that offer interest-free banking services must ensure that their operations comply with Shariah law and the principles of Islamic finance. Compliance with Shariah law can help mitigate legal and regulatory risks and prevent reputational damage (Swartz, 2013).

7. **Robust risk management practices:** Interest-free banking involves sharing risks between the bank and the customer, and the bank must have robust risk management practices to identify, assess, and control risks (El-Gamal, 2006). Good risk management practices can help prevent financial losses, reputational damage, and regulatory sanctions (Al-Tamimi, & Al-Mazrooei, 2007).
7. **Diversification of assets:** Interest-free banking promotes ethical investments that are socially responsible and do not harm the environment or society (Mounira,2012). Diversification of assets can help mitigate risks associated with a particular investment or sector (Mounira, 2012).

8. **Profit and loss sharing:** Interest-free banking involves sharing profits and losses between the bank and the customer. Profit and loss sharing can help align the interests of the bank and the customer and promote responsible risk-taking (Swartz, 2013).

By implementing these modalities and techniques, interest-free banks in Nigeria can effectively manage risks and improve the bank's security.

Conclusion

In summary, the conclusion emphasizes the need for a comprehensive and adaptable approach to risk management in interest-free banking in Nigeria. The discussed modalities, encompassing transactional adherence, accurate valuation, and Shariah compliance, underscore the complex nature of risks in Islamic finance. Fiduciary and ownership risks, coupled with the dynamics of regulatory and reputational challenges, highlight the importance of clear risk definitions and proactive responses to changes. As the interest-free banking sector evolves, continuous monitoring and adherence to best practices become crucial for sustained growth and success. The outlined risk management framework serves as a strategic imperative, ensuring resilience and trust within the unique context of Islamic finance in Nigeria.

Suggestions

- The board of directors should create a strategic risk management plan that aligns with the bank's overall business goals
- The bank should establish guidelines for managing interest rate risk in its banking book to effectively manage its exposure and maintain acceptable limits.
- The bank should enhance credit risk management to maintain sound lending practices and comply with regulatory guidelines on non-interest banking.
- The board of directors should regularly review and monitor the bank's risk management practices to ensure their effectiveness.
- The bank should educate customers about interest-free banking to boost awareness and understanding of its products and services, thereby attracting new customers and retaining existing ones.

- Federal Government of Nigeria should to give the Interest-free banks enabling environment to thrive.

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JUGGLING BETWEEN WORK DEMANDS AND ACADEMIC SUCCESS IN NIGERIA

BY

[1]Maryam Bala Adamu & [2]Akeem Olalekan Ayub

[1]Distance Learning Centre, Ahmadu Bello University, Zaria, Nigeria.
[2]Department of Sociology, Federal University Gusau (FUGUS), Zamfara State, Nigeria.
Email: maryamadamu2001@gmail.com

Abstract
This paper embarks on a comprehensive exploration of the intricate dynamics involved in harmonizing occupational demands with academic achievement, specifically within the context of working-class students in Nigerian tertiary institutions. Employing qualitative research and secondary data analysis, it sheds light on the challenges encountered by these students as they seek to reconcile work commitments with their pursuit of higher education. The findings reveal the substantial hurdles faced by working-class students in their quest to strike a harmonious equilibrium between their professional responsibilities and academic endeavours. This equilibrium is shaped by factors such as the intensity and relevance of their work commitments, as well as their individual circumstances. Working-class students are found to navigate a delicate balancing act between their vocational duties and academic responsibilities. This often necessitates difficult trade-offs, where students must weigh the benefits of economic stability against their pursuit of educational attainment, resulting in varying impacts on their academic performance. The study highlights the indispensable role of effective coping mechanisms, which enable individuals to adapt to their societal roles and facilitate the harmonious coexistence of various societal components. Recognizing the need for suitable coping mechanisms is of critical importance for universities and educational institutions. Tailoring support systems to address the specific challenges encountered by working-class students is essential to ensure their ability to navigate the complexities of modern higher education without compromising their academic potential. Despite inherent limitations arising from the availability and quality of existing literature, this research provides valuable insights into an increasingly relevant facet of higher education. It contributes to the academic discourse by emphasizing the significance of understanding the distinctive challenges and adaptive mechanisms intrinsic to working-class students as they endeavour to maintain a delicate equilibrium between their work and educational pursuits.
Keywords: Academic success, Challenges, Coping strategies, Work-study balance, Working-class students

Introduction

In recent years, an increasing awareness of the interconnected dynamics between work and academic performance has emerged. The relationship between occupational demands and academic achievements, influenced by the convergence of work and studies, has gained significant scholarly attention. This trend is particularly evident in Western Europe and North America, where the surge in working-class students has reshaped higher education. Formerly a minority, working-class students now constitute the majority on American college campuses (Fjortoff, 2015). This shift is reflected in statistics showing that nearly three-quarters of employed students devote at least 10 hours weekly to work (Pascarella et al., 2018). Concurrently, research by Riggert et al. (2016) highlights a substantial rise in students seeking employment during tertiary education, with over 50% of those under 24 engaging in work throughout the academic year. Tertiary institutions aim to cultivate accomplished graduates equipped with skills demanded by employers. However, the challenge of balancing work and studies, particularly for working-class students, can affect academic outcomes, resulting in lower GPAs and carryover courses (Hanson, 2020). While success drives students to manage work and academics, overwhelming demands may lead to students abandoning education or work. This challenges the ability to graduate skilled candidates meeting job market requirements. This situation highlights challenges arising from combining work and studies in tertiary education.

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Balancing work and studies involves a multitude of demands. Occupational demands involve role-specific responsibilities crucial for organizational functioning, while academic demands include attending classes, completing assignments, and exams. Inadequate balance may induce stress, impacting both work and academic performance (Quintini, 2015). Occupational demands are a significant source of issues faced by working-class students, hindering academic excellence (Abiola, 2022). While combining work and studies appears ideal, it has become a necessity due to economic changes and technology's pace (Neill, 2015). Students can no longer solely focus on academics. Research reveals varied reasons for student employment, from career exploration to financial support (Cheng & Alcantara, 2017). This prompts scrutiny of the work-study dynamic within the Nigerian context, considering local nuances.

Employment diverts focus from academics, impacting learning time for working-class students (Perna, 2020). Retention rates are higher for students working modest hours (ten to fifteen) compared to no work or excessive hours (Cheng & Alcantara, 2017). Debate surrounds whether occupational demands positively or negatively affect academic outcomes. This study addresses this ambiguity. In organizational structures, varying demands exist. Working-class students must excel academically while meeting employer expectations. While research has explored work-study dynamics globally (Beerkens et al., 2021; Neill, 2015; Pascarella et al., 2018), limited attention is given to the Nigerian context, especially the relationship between occupational demands and academic success (Abiola, 2022; Ibrahim, Freeman & Shelley, 2022). This study fills this gap by evaluating occupational demands and their impact on academic performance among working-class students in Nigerian tertiary institutions.

Literature Review

Challenges in balancing work demands and academic success among working-class students

The interaction between work and education has garnered extensive research, revealing a mix of advantages and disadvantages. Juggling studies and employment entails a trade-off, often leading working students to allocate less time to their academics. This duality can hinder learning, potentially resulting in academic setbacks and even dropout rates. Inadequate regulation of work-study combinations within universities can lead to prolonged time-to-degree. Research by Stinebrickner and Stinebrickner (2023) illustrates that while completion times for Master's degrees have improved slightly, they still exceed target durations by over a year. Work emerges as a key contributor to extended study periods, largely due to elevated unemployment rates curtailing job prospects. This highlights the negative impact of combining work and education on graduation rates. Pascarella et al. (2018) argue that occupational commitments disrupt labour supply dynamics, prolonging educational journeys and curtailing post-graduation careers. This suggests a potential mismatch in time allocation, where prompt study completion and higher-level job attainment could be more economically favourable. Stinebrickner and Stinebrickner (2023) agree, observing a negative effect of employment on college academic performance. In contrast, Hood, Craig, and Ferguson (2022) find that moderate workloads often correlate with higher grade point averages. Conversely, Ehrenberg and Sherman (2017) reveal positive effects of on-campus employment, contrasting with off-campus work's negative consequences.

Hunt, Lincoln and Walker's study (2014) highlights that work experience during schooling shapes graduate employment nonlinearly. Moderate in-school work experience aligns Finnish graduates with education-related jobs, but excessive experience yields reduced job alignment. Neither degree completion time nor credit count influences job quality. Aremu and Sokan (2023) demonstrate how students' coursework structure affects both work ability and academic success. Meanwhile, Hunt et al. (2014) contend student employment compromises academic goals. In contrast, Marsh (2021) suggests work-study synergy enhances character, skill development, and academic achievements. Hunt et al. (2014) assert working-class students, often from disadvantaged backgrounds, turn to employment to mitigate debt. Students report work's negative impact on academics (Goldrick-Rab, 2016; Hunt et al., 2014). However, they underline the potential decline in academic achievement due to compromised future earnings from work-study trade-offs, impacting skill acquisition. Many students work outside their desired fields. Fjortoff (2015) contradicts this, asserting that working-class students' academic performance is on par with peers', with employment fostering qualities that enhance academic success, countering adverse effects. Aper (2014) studies U.S. college students' work impact on outcomes, finding academic or career-related campus jobs yield greater gains than other roles.

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Canadian research focusing on high school students found that 'light' work, less than 15 hours per week, had minimal impact on academic time (Bachmann & Boes, 2014). However, more demanding jobs led to reduced leisure and sleep. Another study of high school students revealed that working beyond 15-20 hours weekly correlated with higher absenteeism, lower GPAs, and less time for homework (Auers et al., 2017). Among higher education students, working over 15 hours on campus is common. However, Pascarella et al. (2018) stress that exceeding 20 hours of off-campus work results in negative work-study consequences. Furthermore, a British study shows that 15+ hours of work weekly reduces homework time and academic performance (Davies, 2022). These findings highlight the complex balance between work commitments and academic achievement.

Additional factors beyond occupational demands can significantly influence academic achievement. Research from Australia suggests that students who hold primary responsibilities as breadwinners and child caretakers at home display heightened motivation, engagement in lectures, and dedication to planned educational activities (Zimitat, 2023). This subgroup appears more content with their academic pursuits compared to those with fewer familial commitments. Thus, it is evident that employment's impact on academic performance varies based on the type of job and weekly hours worked (Tur-Sinai, Romanov & Zussman, 2017; Van Dyke, Little & Callender, 2015). Work related to a student's field of study could be beneficial, especially when undertaken part-time (15 hours or fewer per week).

A UK survey revealed that most students perceived their jobs as having a negative impact on academic achievement (Davies, 2022). This sentiment aligns with the observations of Callender (2018), Hunt et al. (2014), and Auers et al. (2017). Their collective research underscores that employment correlates with reduced average grades, class attendance, and time available for independent study. Notably, full-time workers exhibit lower grades and attendance compared to part-time workers. Auers et al. (2017) identify significant factors influencing academic performance among working-class students, including age, year of study, gender, field of study, and employment status. Notably, employment status emerges as the most potent determinant of academic success, evaluated through GPA. Specifically, full-time working-class students experience notably lower grades compared to peers from other backgrounds. Part-time employment yields less drastic effects, especially when considering school-specific variables.

Research within the United Kingdom highlights how occupational commitments might adversely affect the academic performance of working-class students. Callender (2018) unearthed a striking discrepancy: students engaged in an average of 15 part-time weekly hours of work were 33% less likely to attain high-degree classifications (first or upper second) compared to non-working-class peers with equivalent admission tariff scores. This disparity is further substantiated by Hunt et al. (2014), who found that working-class students received grades three percentage points lower than their non-working-class counterparts. These findings underscore the impact of employment on academic achievement among working-class students in the UK. Employed students often anticipate and experience lower academic success compared to their non-working peers. Some students view work-study balance positively, especially if working five hours or less weekly, citing valuable experience or social aspects. However, this view is based on a small sample size, lacking data on actual academic achievement. The repercussions of combining employment and study on student health, subsequently influencing academic achievement, have garnered attention. Carney, McNeish, and McColl (2015) aimed to quantify this impact and found that working-class students, on average, reported worse physical and mental health compared to non-working-class peers of the same age in the general population. Additionally, debt and part-time enrolment exhibited modest yet significant adverse effects on mental and physical health. Moreover, increased work hours heightened the likelihood of perceiving negative academic performance impacts. The research illuminated a concerning cycle: elevated job expectations correlated with deteriorating mental health, contributing to heightened awareness of adverse job demands' impact on academic achievement. McGregor (2015) reinforced this narrative, highlighting that most students from working-class backgrounds believed that employment negatively influenced mental health, social life, and academic accomplishments. This body of work underscores the complex interplay between work, health, and academic success for students.

Apart from the motivations behind students seeking employment, another crucial focus of research delves into the vital issue of how combining work and studies influences academic outcomes. While much attention has been dedicated to understanding how work affects academic performance, the past decade has also seen substantial interest in assessing the broader effects of this combination. Callender (2018) conducted a study involving 1,000 students

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across six British universities, revealing that employment during studies detrimentally affects both yearly and cumulative academic achievements, regardless of the institution's type. Higher working hours were linked to poorer academic performance. Students maintaining an average weekly workload faced a 1/3 lower likelihood of achieving high grades compared to their non-working counterparts. This pattern was most evident for students with lower qualifications and income levels. Callender (2018) argued that work-study dynamics significantly shape perceptions of higher education. Triventi's (2014) Italian study revealed complex effects of student work on academic attainment. High-intensity work hindered learning outcomes, while low-intensity work affected specific groups' progress. A French study (Body, Bonnal, & Giret, 2014) mirrored this pattern, showing adverse impacts of work beyond 16 weekly hours. Public sector work had fewer negative effects than private sector roles due to flexibility. This underscores the importance of part-time, study-related jobs for skill validation. Slovenian research (Body et al., 2014) found 18 intense work hours weekly harmed academic performance. In Estonia, Beerkens et al. (2021) did not find work's detrimental impact on timely program completion. An Israeli study (Tur-Sinai et al., 2017) highlighted minimal employment influence, varying by age groups like no effect for 22-26 age group. These insights highlight contextual complexities in balancing work and academic progress.

Effective coping strategies for navigating the impact of work on academic achievement

Understanding the experiences of working-class students provides actionable strategies for their success in higher education. These include flexible course offerings during evenings, weekends, and through distance education, along with advance course scheduling (Cubie, 2019; Hanson, 2020; Karnad, 2023). Accessible academic advising and support services during unconventional hours, coupled with online course registration, cater to working students' needs (Cubie, 2019). Child-care options and designated study spaces address specific challenges faced by working parents (Hanson, 2020; Karnad, 2023). Colleges and universities can also facilitate career counselling and job placement to help students align their work experiences with their educational pursuits. This integration supports working-class students in balancing work and education (Karnad, 2023). Recognizing that many undergraduates struggle with the juggling act between employment, home responsibilities, and academics, institutions have a responsibility to ensure the success of all students, particularly those from working-class backgrounds.

Reframing employment as a potential enhancer of student learning and acknowledging the prevalence of student jobs within institutional policies are critical steps forward (Cubie, 2019). To create a supportive campus environment, Perna (2020) advises faculty and administrators to understand the unique needs of working-class students and adapt institutional structures accordingly. Local employment trends should be considered alongside national statistics to inform strategies that bridge occupational and academic experiences (Marsh, 2021). By embracing these measures, colleges and universities can effectively foster an inclusive environment conducive to the triumph of working-class students. Higher education institutions must evaluate their structures to ensure they cater to the diverse needs of students, including those working longer hours. Traditional models primarily tailored for full-time, on-campus students may not effectively serve working-class students (McGregor, 2015). Cultivating an institutional culture that supports the achievement of these students necessitates a collective effort across campus, involving administrators and educators. Faculty members play a pivotal role in this process. Pinto (2020) advocates for encouraging and aiding educators who adapt their teaching methods to better serve working-class students. Ibrahim, Freeman, and Shelley (2022) underscore the benefits of cooperative learning, setting high standards, and assigning tasks that prompt deep understanding. Collaborating with campus teaching centres can enhance these efforts. Facilitating meaningful interactions between professors and students, especially for working-class students, is vital for building a supportive campus community (Riggert et al., 2016).

Addressing the perception of being "out of place" on campus is crucial. Cheng and Alcantara (2017) suggest that personalized connections with faculty and administrators foster a sense of belonging and legitimacy, ultimately enhancing academic success. Beyond instructional adjustments, colleges and universities should explore strategies to further accommodate working-class students. To alleviate the need for extensive work, institutions can mitigate financial pressures through lowered tuition and increased need-based scholarships (Perna, 2020). Financial aid counselling that educates students about the implications of employment and alternative funding options can also be beneficial. However, given economic uncertainties and the intrinsic value of jobs for students, substantial employment

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may persist (Goldrick-Rab, 2016). In embracing these approaches, higher education institutions can create an environment where working-class students thrive, pushing boundaries and achieving academic success. Even in cases where student employment is limited in hours and predominantly on-campus, it is worth reconsidering how we perceive the relationship between work and education (Perna, 2020). While conventional wisdom suggests that working reduces study time, a shift in perspective can view employment as a tool to enrich learning. Both employment and formal education contribute to students' human capital. Thus, higher education institutions should explore ways to turn student jobs into intellectually valuable experiences. Strategies to transform employment's impact on education can be derived from understanding working-class students' demands and academic performance. Neill (2015) suggests connecting work experiences to coursework. Another approach involves awarding course credit for relevant job experience, demonstrated by organizations like the College Board's College-Level Examination Program and the American Council on Education's College Credit Recommendation Service.

Managing working time impacts mental health, and universities should prioritize balance (Carney et al., 2015). The concept of a "full-time student" should evolve to accommodate working-class students, and the positive effects of combining work and studies on grades should be communicated. Recognizing the challenges working students face can improve mental well-being. Students' requests for flexibility in coursework deadlines align with their time-critical jobs. Formal acknowledgment of work-study commitments can foster a supportive environment. Early access to course and exam schedules aids planning, and technology offers flexible learning options (Stinebrickner & Stinebrickner, 2023). "Learning from work" courses, even unrelated to a field, can teach valuable skills. Providing mechanisms to recognize employability skills acquired through employment could further enhance students' learning experiences.

Theoretical Framework: Structural Functionalism

Structural functionalism, a sociological theory originating in the early 20th century, was crafted to address the complexities of society. It finds its roots in the contributions of scholars like Emile Durkheim and Herbert Spencer. Durkheim's emphasis on social order, integration, and the role of institutions significantly shaped the theory. He laid its foundation in works such as "The Division of Labour in Society" (1893) and "Suicide: A Study in Sociology" (1897). Additionally, Talcott Parsons, another prominent figure, further refined and extended the theory's framework through writings like "The Structure of Social Action" (1937) and "The Social System" (1951). Structural functionalism asserts that society is a complex system composed of interrelated parts that work together to maintain social order and stability. Institutions, norms, and values contribute to maintaining this equilibrium. Society's institutions and components are interconnected, and each serves a specific function that contributes to the overall health of the system. Institutions exist to fulfil essential societal needs. Actions and institutions have both manifest functions (explicit and intended) and latent functions (hidden and unintended). Structural functionalism seeks to uncover both types of functions to understand their effects on society. Society seeks equilibrium and adapts to changes through mechanisms like socialization, social control, and institutions. Any disruptions are temporary and eventually resolved to restore stability.

Functionalism, a sociological theory, offers insights into exploring the objectives of balancing occupation-related demands and academic achievement among working-class students. It perceives society as a system with interconnected parts that work harmoniously for stability. Triventi's (2014) study demonstrates how the intensity of student work can hinder or facilitate learning outcomes. From a functionalist perspective, this can be understood as a balance between the functions of work and education. High-intensity work that hinders learning outcomes might be seen as disrupting the equilibrium between these two roles, potentially leading to a strained educational system. On the other hand, low-intensity work affecting specific groups' progress suggests a differentiation of functions based on individual needs and capabilities. The French study by Body, Bonnal, and Giret (2014) aligns with functionalism by revealing adverse impacts of excessive work hours beyond a certain threshold. This finding implies that there is an optimal level of work-study balance required to maintain the stability and efficiency of the education system. Public sector work's lesser negative effects further highlight the flexibility of roles in maintaining this equilibrium. The concept of part-time, study-related jobs as a means of skill validation underscores the functionalist view of education as a mechanism for preparing individuals for their roles in society. Functionalism emphasizes the role of education in

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transmitting necessary skills and knowledge to individuals, and these studies support this perspective by showing that aligning work with study can lead to better skill development and validation.

Slovenian research by Body et al. (2014) and the Estonian study by Beerkens et al. (2021) fit within functionalism by showcasing the interplay between work and timely program completion. These studies highlight how maintaining a balance between work commitments and educational progress is essential to ensure the efficient functioning of the educational system. The Israeli study by Tur-Sinai et al. (2017), indicating minimal employment influence with variations based on age groups, aligns with functionalism's emphasis on differentiation of roles within society. Different age groups might have varying levels of commitments and expectations, and these findings reflect how the education-work relationship needs to adapt to these diverse needs to ensure the overall stability of the system. In this paper, the challenges faced by working-class students in reconciling work demands and academic success disrupt this equilibrium. Functionalism posits education readies individuals for societal contributions, while work sustains economic needs. Overwhelming work commitments can disrupt this equilibrium, straining the educational system. Understanding these challenges illuminates ways to enhance the system for their benefit. Functionalism also illuminates challenges in balancing work demands and academic success, disrupting the education system's functioning. Education transmits vital skills and knowledge, preparing individuals for societal roles. If students from working-class backgrounds struggle to manage both work and education, it hampers skill acquisition, creating a gap between societal needs and individual capabilities. This imbalance ripples through the education system's stability and efficacy. In contrast, exploring effective coping strategies to navigate the impact of work on academic achievement aligns with functionalism's stability emphasis. Functionalism contends that society's parts collaborate for harmony. Similarly, uncovering strategies aiding students in juggling work and academics identifies mechanisms maintaining equilibrium between education and economic duties. These strategies reflect individuals' adaptation to societal roles, ensuring work and education harmonize. Functionalism underscores the harmonious operation of societal components. Identifying effective coping strategies for students to manage work's impact on academics sustains this harmony. When students effectively balance work and education, they enhance education system stability. These strategies act as mechanisms for individuals to adapt and fulfil societal roles, aligning with functionalism's cohesion focus within society.

Functionalism provides a lens through which to understand the subject matter. By highlighting the interplay between work, education, and societal roles, functionalism underscores the importance of maintaining equilibrium and harmony within the educational system. Structural functionalism offers a comprehensive framework for understanding the complex interactions within society, highlighting how institutions and components work together. The theory emphasizes social order and stability, highlighting the importance of shared norms and values in maintaining cohesion. Structural functionalism identifies how different components of society fulfil specific functions, helping to elucidate the purpose and role of institutions. Critics argue that structural functionalism tends to reinforce the status quo and maintain existing power structures, neglecting conflict and inequality. The theory's focus on equilibrium can oversimplify the complexities of social change and conflicts, ignoring the dynamic nature of societies. Structural functionalism might downplay individual agency and the role of human agency in shaping societal outcomes. The theory's focus on stability may struggle to explain social change and revolutionary movements.

Research Questions

i. What challenges do working-class students encounter in balancing work demands and academic success in Nigeria?
ii. What effective coping strategies can be identified for working-class students to navigate the impact of work on academic achievement in Nigeria?

Methodology

This paper employs a qualitative research approach, utilizing secondary data analysis to explore the challenges and strategies associated with balancing occupation-related demands and academic achievement among working-class students. Secondary data analysis involves the examination and synthesis of existing scholarly literature and research

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findings on the subject. The primary data source for this study consists of scholarly articles, research papers, and relevant publications that address the interplay between work commitments and academic success among working-class students. These sources have been identified through academic databases, such as JSTOR, Google Scholar, and EBSCOhost, based on the comprehensive review of the literature previously conducted. The selected secondary data are scholarly publications published within the last two decades to ensure the relevance and currency of the information. Articles that provide insights into the challenges faced by working-class students in balancing work and academics, as well as strategies employed to manage these demands, are included in the data pool. The research draws on a diverse range of studies conducted globally to capture various perspectives and contexts. The collected secondary data are analysed thematically. A systematic approach is used to categorize the challenges encountered by working-class students and the coping strategies they employ. Themes related to the impact of work on academic performance, factors contributing to success, and contextual nuances are identified and extracted from the selected sources. This analysis seeks to establish patterns, trends, and commonalities across the literature. Since this research relies solely on secondary data, ethical considerations related to data collection, privacy, and informed consent are not applicable. However, proper citation and attribution to the original authors and sources are ensured to maintain academic integrity. As with any secondary data analysis, this paper is limited by the availability and quality of the existing literature. The research is reliant on the accuracy and validity of the data collected from previously conducted studies. Additionally, the lack of primary data collection may restrict the depth of analysis and prevent the exploration of new insights that could emerge from direct engagement with participants.

Results

The literature review highlights the intricate challenges faced by working-class students in balancing work demands and academic success, revealing a mix of advantages and disadvantages in this delicate equilibrium. Research indicates that the interaction between work and education often leads to a trade-off, impacting academic performance and potentially leading to dropout rates. The study by Stinebrickner and Stinebrickner (2023) emphasizes the negative effect of employment on college academic performance, contributing to extended study periods and hindering graduation rates. The literature further explores the impact of work on academic achievement, revealing varying perspectives. While some studies find that moderate workloads correlate with higher grade point averages (Hood, Craig, & Ferguson, 2022), others show negative consequences, especially concerning the social and interactive aspects of education (Ehrenberg & Sherman, 2017). Moreover, the research underscores the complex interplay of factors influencing academic outcomes, including the type of job, weekly hours worked, and work-related to a student's field of study (Tur-Sinai, Romanov & Zussman, 2017; Van Dyke, Little & Callender, 2015). Theoretical frameworks such as structural functionalism offer insights into understanding the challenges in balancing work and academic success. These frameworks highlight the need for equilibrium between work and education for the efficient functioning of the educational system. However, the literature also acknowledges the need for effective coping strategies to navigate these challenges, with an emphasis on flexibility in course offerings, accessible support services, and personalized connections with faculty and administrators.

Discussion

The findings of this study illuminate the intricate challenges and opportunities arising from the interplay between work demands and academic success among working-class students. The research underscores the delicate balance required to navigate this relationship and its implications for educational outcomes. Juggling work and studies often leads to a trade-off, potentially hindering academic performance and extending time-to-degree. The negative impact of employment on college academic performance is evident in the prolonged completion times for Master's degrees (Stinebrickner & Stinebrickner, 2023). Economic factors, such as elevated unemployment rates, contribute to extended study periods and lower graduation rates (Pascarella et al., 2018). The study by Hood, Craig, and Ferguson (2022) presents a contrasting view, suggesting that moderate workloads may correlate with higher grade point averages. This divergence in findings underscores the complexity of the relationship between work and academic success. The challenges faced by working-class students extend beyond completion times and graduation rates, encompassing factors like work experience shaping graduate employment outcomes (Hunt, Lincoln, & Walker, 2014). The type and intensity of work, as well as its alignment with a student's field of study, play crucial roles in determining academic

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achievement. Notably, the study emphasizes the importance of considering individual needs and capabilities when exploring the impact of work on academic outcomes. Additionally, the research addresses the impact of student employment on mental health, emphasizing the potential adverse consequences and the cyclical relationship between employment, mental health, and academic achievement (Carney et al., 2015; McGregor, 2015).

Structural Functionalism provides a comprehensive lens through which to interpret these findings. Structural functionalism highlights the interconnectedness of societal components, emphasizing their collaborative efforts for social order and stability. The challenges faced by working-class students in balancing work demands and academic success disrupt this equilibrium, affecting the stability and efficacy of the educational system. The theory's emphasis on societal institutions fulfilling essential needs aligns with the study's exploration of how effective coping strategies can enhance the system for the benefit of working-class students. By identifying strategies that maintain equilibrium between education and economic duties, the study reflects individuals' adaptation to societal roles, contributing to the cohesion and stability of the education system. While recognizing the strengths of structural functionalism, it is important to acknowledge its limitations, including potential oversimplification of social complexities and a tendency to reinforce existing power structures. The study provides valuable insights for higher education institutions to adapt their structures, support mechanisms, and perceptions to foster an inclusive environment conducive to the success of working-class students.

Conclusion

This study has delved into the intricate relationship between occupation-related demands and academic achievement among working-class students. Drawing from a wealth of existing research and literature, the study has highlighted the challenges faced by these students as they strive to balance work commitments with their pursuit of education. It is evident that the interplay between work and academics can significantly impact students' ability to succeed academically, with varying consequences based on factors such as the intensity of work, sector relevance, and individual circumstances. The research has underscored the delicate equilibrium that working-class students must navigate and the potential trade-offs they encounter in their pursuit of both economic stability and educational attainment. The findings indicate that while some students perceive employment as beneficial to their studies, the delicate balance between work and academics can lead to strain and compromised academic performance. Moreover, the paper has revealed the importance of effective coping strategies in mitigating the negative impact of work on academic achievement. These strategies serve as mechanisms through which individuals adapt to their roles within society, striving to maintain the harmonious functioning of various societal components. Recognizing the need for suitable coping mechanisms becomes crucial for universities and educational institutions to better support working-class students and create an environment conducive to both work and academic success. In essence, this study has shed light on the dynamics of juggling work and academics for working-class students. It emphasizes the necessity for educational institutions to tailor their support systems to address the challenges faced by this demographic, enabling them to navigate the complexities of modern education without compromising their academic potential. By understanding the delicate balance between work and academic pursuits, institutions can foster an environment that facilitates both personal growth and economic advancement among working-class students, ultimately contributing to a more equitable and thriving educational landscape.

Recommendations

Educational institutions should establish comprehensive support services tailored to the needs of working-class students. This includes offering flexible scheduling options, providing academic advising during non-traditional hours, and creating spaces for studying while working. Such measures can help students effectively balance their work commitments with academic pursuits. Universities should consider integrating work-related learning experiences into the curriculum. This approach aligns with functionalism's emphasis on roles contributing to societal harmony. By incorporating practical skills gained from work experiences, students can enhance their academic learning and acquire valuable skills for future employment. Institutions should provide targeted career counselling for working-class students, focusing on aligning their employment choices with their academic and career goals. This guidance can help students make informed decisions about the type of work that complements their studies, reducing the risk of

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detrimental impacts on academic achievement. To address the challenges of managing work and academics, universities should offer flexible coursework schedules and provide students with early access to course and exam timetables. This enables students to plan their work commitments in advance and minimize potential conflicts between work and study responsibilities. Policymakers, educators, and institutions should collaborate to advocate for policies that recognize the academic and economic needs of working-class students. Raising awareness about the potential academic implications of work commitments and promoting policies that support work-study balance can contribute to more equitable educational opportunities for all students.

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INTEGRATION AND APPLICATION OF E-LEARNING TECHNOLOGIES TO ENHANCE TEACHING AND LEARNING EXPERIENCE IN BUSINESS EDUCATION PROGRAMS AT PUBLIC COLLEGES OF EDUCATION IN KWARA STATE

BY
Abdulrazak Mohammed, Sakariyahu Shehu & Abdullahi AbdulRafiu
Department of Business of Education, Faculty of Education, Al-Hikmah University, Ilorin. Kwara State

Abstract
The research delved into the examination of the presence and usage of e-learning technologies to enhance the teaching and learning experiences within the business education program across public colleges of education in Kwara State, Nigeria. Two specific research inquiries were raised to direct the investigation. The study targeted a population of 332 individuals, including 30 lecturers and 215 students enrolled in the Department of Business Education at three (3) public colleges of education in Kwara State, Nigeria, namely Kwara State College of Education, Ilorin, Kwara State College of Education, Oro and Kwara State College of Education, Lafiagi. A sample size of 181 was randomly selected through a simple random sampling technique. Employing a descriptive survey design, data was collected via a structured questionnaire utilizing four-point rating scale. The internal consistency of the instrument was verified using Cronbach Alpha reliability formula, yielding a reliability coefficient of 0.92. Analysis of the gathered data was conducted using the Statistical Packages for Social Sciences (SPSS), with mean, and standard deviation utilized to address the research inquiries. The study's findings indicated that several e-learning technologies are indeed available and utilized to a significant extent by both lecturers and students within the business education program. Consequently, it is recommended, among other suggestions that lecturers should be motivated to fully exploit the available e-learning resources in teaching all business education courses, and efforts should be made to encourage the preparation and utilization of e-books to foster students' engagement with electronic reading materials and journals.
Keywords: Integration, Application, E-Learning, Business Education, Teaching

Introduction

The integration of technology into education and training has had a profound impact globally, enhancing the processes of teaching and learning. In the 21st century, access to information and knowledge for both educators and learners has undergone significant transformation, largely due to advancements in Information and Communication Technology (ICT). The adoption of ICT in instructional delivery has given rise to a new approach to learning known as e-learning, which is now widely recognized across educational institutions worldwide. This shift represents a move from traditional, teacher-centered instruction to a more learner-centric model facilitated by e-learning technologies. As noted by Evarest and Laura (2019), e-learning, or electronic learning, is gaining popularity in tertiary institutions globally, driven by the opportunities presented by various technological innovations and an increasing number of students engaging with e-learning platforms and tools. According to the Organization for Economic Co-operation and Development (OECD, 2015), electronic learning, or e-learning, fundamentally involves the utilization of information and communication technologies (ICTs) to enrich and facilitate teaching, learning, and research endeavors. This definition underscores the pivotal role that ICTs play in enhancing educational processes and fostering academic advancement, as emphasized by Eteng and Ntui (2019).

The integration of Information and Communication Technology (ICT) into education has introduced a lexicon of new terms to describe innovative learning methodologies and delivery mechanisms. Newhouse (2019), among these terms are e-teaching and e-learning, which leverage internet-based platforms. The availability of the internet serves as the conduit for the utilization of electronic approaches in education, commonly referred to as electronic learning or e-learning (Akuchie 2018). In essence, e-learning entails the process of teaching and learning facilitated via computers

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and the internet. It encompasses the transmission of structured instructional materials from instructors (lecturers) to learners (students) through ICTs. According to Newhouse (2019), e-learning represents a significant shift towards learner-centered education, departing from the traditional teacher-centered approach. It enriches learning content and broadens access to information resources, offering immense potential for advancing knowledge. As noted by Newhouse (2019), fully harnessing the potential of e-learning could lead to expanded access, improved educational quality, and reduced costs.

E-learning technologies have the capacity to revolutionize the learning process, enabling learners to access educational content at their convenience (Erah, 2016). Various methods are employed in e-learning, including systematic feedback systems, computer-based networks, video and audio conferencing, internet resources, and computer-assisted instruction, as highlighted by Ajayi (2018). These delivery methods offer flexibility in terms of how, where, and when learners engage in lifelong learning, opening up new possibilities for just-in-time learning delivery. Both educators and learners are particularly enthusiastic about the transformative potential of e-learning, recognizing its ability to adapt to individual learning needs and preferences (Akinnusi 2017). This shift towards e-learning signifies a paradigmatic change in education, fostering a more dynamic and interactive learning environment conducive to continuous skill development and knowledge acquisition (Akinnusi 2017). E-learning technologies have gained increasing popularity in tertiary institutions, offering diverse functionalities such as tutoring, course management, simulations, course enrichment, programming, and problem-solving (Agboeze, (2021). The internet and computer applications serve as catalysts for the growth of e-learning, facilitating simulation and experiential learning. The abundance of free educational resources available on the worldwide web further enhances its effectiveness in education.

E-learning technologies encompass a range of tools and methods, including computers, the internet, blogs, YouTube, telephones, email, web browsers, virtual classrooms, television, projectors, interactive whiteboards, and more. Pirani (2014) emphasized the importance of adequate and reliable technical infrastructure for institutions to adopt e-learning successfully. Both teachers and students demand e-learning technology due to its cost-effectiveness, flexibility of access, elimination of distance barriers, support for just-in-time training, accommodation of individual differences, and facilitation of alternative pedagogies such as simulation, experiential learning, interactivity, and self-paced learning. Gold (2021) noted that e-learning technologies are applicable across all functional areas of business education, with the only limitation being the creativity of teachers in accessing and utilizing them effectively.

Despite its potential benefits, the adoption of e-learning technology has been relatively slow in many educational institutions, as pointed out by the Organization for Economic Co-operation and Development (OECD, 2015). Nwagbo and Ugwuanyi (2021) argued that the development and utilization of e-learning technologies in developing countries like Nigeria, particularly in the context of business education, lag behind those of developed countries. Business Education programs aim to equip students with the knowledge and skills necessary for success in the workplace. In today's business environment, proficiency in computer programs is essential. According to Newhouse (2019), utilization of e-learning technologies by students in tertiary institutions plays a crucial role in preparing them to effectively use computer and software applications in professional settings. The evolution of information and communication technology (ICT) has led to significant changes in instructional delivery methods. Olumese (2018) identifies three instructional delivery methods in business education: formal education, non-formal education, and informal education, all of which can incorporate ICT tools such as microcomputers, video conferencing, electronic mail, cyberspace, internet resources, teleconferencing, audio conferencing, hypertext, video text, communication satellites, and interactive cable television techniques.

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However, the availability of e-learning technologies in Nigerian colleges of education lags behind that of developed countries. Basic tools like computers, printers, scanners, internet access, projectors, websites, and interactive whiteboards are often in short supply and underutilized when available. Nwagbo and Ugwuanyi (2021), many Business Education lecturers lack computer skills beyond basic appreciation courses completed during their academic training, leading them to rely on traditional teaching methods. Olumese (2018), students often prefer using e-learning technologies for social communication rather than academic purposes, contributing to their low utilization in education. Addressing these challenges requires investments in infrastructure and capacity building for both educators and students to effectively leverage e-learning technologies for enhanced learning outcomes in Business Education programs.

Purpose of the Study

The purpose of this study is to evaluate integration and application of E-Learning technologies to enhance teaching and learning experience in business education programs at public Colleges of Education in Kwara State. Specifically, the study aims to achieve the following purposes:

1. To assess the integration of e-learning technologies aimed at improving the teaching and learning of business education programs in public Kwara State College of Education.
2. To determine the extent to which lecturers apply e-learning technologies to enhance the teaching and learning experience within business education programs in public Kwara State College of Education.

Methodology

The study targeted a population of 332 individuals, including 30 lecturers and 215 students enrolled in the Department of Business Education at three (3) public colleges of education in Kwara State, Nigeria, namely Kwara State College of Education, Ilorin, Kwara State College of Education, Oro and Kwara State College of Education, Lafiagi. A sample size of 181 was randomly selected through a simple random sampling technique. Employing a descriptive survey design, data was collected via a structured questionnaire utilizing four-point rating scale. The internal consistency of the instrument was verified using Cronbach Alpha reliability formula, yielding a reliability coefficient of 0.92. Analysis of the gathered data was conducted using the Statistical Packages for Social Sciences (SPSS), with mean, and standard deviation utilized to address the research inquiries.

Results

Table 1
Mean Ratings of Respondents on Integration of E-Learning Technologies for Improving Teaching and Learning of Business Education Programme in Public Colleges of Education in Kwara State.

S/N	Items	A	N/A	Remarks
1	Internet and web browser	75%	25%	Available
2	E-journals	71%	29%	Available
3	Interactive whiteboard	62%	38%	Available
4	Compact disk	83%	17%	Available
5	Digital library	23%	77%	Not Available
6	E-book	45%	55%	Not Available
7	Computer simulation	21%	79%	Not Available
8	Multi-media projectors	65%	35%	Available
9	PowerPoint	82%	18%	Available
10	Video/Teleconferencing	15%	85%	Not Available
11	Computers	90%	10%	Available

12	Smart phones	92%	8%	Available
13	Learning Management System	28%	72%	Not Available
14	E-mail	91%	9%	Available
15	Blog	73%	27%	Available

A= Available, N/A= Not Available

The findings presented in Table 1 indicate that out of the 15 items assessed, 10 items (items 1, 2, 3, 4, 8, 9, 11, 12, 14, and 15) garnered a percentage range of 62% to 92%. This suggests that a majority of the respondents agree that e-learning technologies are available within the business education programs offered by public colleges of education in Kwara State. On the other hand, the remaining five items (items 5, 6, 7, 10, and 13) received percentages ranging from 55% to 85%. This indicates that most respondents perceive these items as not readily available within the business education programs in public colleges of education in Kwara State.

Table 2

Mean Ratings of Respondents on the Extent of Apply of E-Learning Technologies by Lecturers for Improving Teaching and Learning of Business Education Programme in Public Colleges of Education in Kwara State

S/N	Item Statements		SD	Remarks
16	Lecturers use the internet to facilitate teaching and learning.	3.69	0.47	HE
17	Lecturers prefer the use of e-books/e-journals to offline/hardcopy books when sourcing for academic information.	1.80	0.75	LE
18	Video/teleconference is employed by lecturers to enhance teaching and learning. Lecturers use multi-media projectors to present lessons.	1.31	0.47	LE
19	Lecturers use learning management system to post academic information.	3.19	0.69	HE
20	Lecturers use blogs for research. Lecturers employ the use of e-mail in giving and receiving students' assignment.	1.27	0.45	LE
21	Lecturers use e-journals in the publication of journal articles. Lecturers employ	2.77	0.82	HE
22	the use of digital library in retrieving information	3.58	0.50	HE
23	Lecturers use interactive white board to record video or audio lectures for students.	3.58	0.87	HE
24	Lecturers use the computer to get information online via the internet.	1.58	0.50	LE
25	Lecturers use computer simulations to aid teaching and learning. Grand Mean	2.04	0.96	LE
26	Lecturers use interactive white board to teach abstract contents	3.92	0.27	HE
27	Lecturers use interactive white board to coordinate class teaching	1.27	0.45	LE
		2.50	0.16	HE

$\overline{X}$= Mean, SD= Standard Deviation, HE=High Extent, LE=Low Extent.

The findings presented in Table 2 provide insights into the responses regarding items 16 through 27, along with their respective mean ratings and standard deviations Items 16, 19, 21, 22, 23, and 26 exhibited mean ratings ranging from 2.77 to 3.92. These values suggest a high extent of utilization, as they surpass the midpoint of 2.50. Conversely, items 17, 18, 20, 24, 25, and 27 received mean ratings ranging from 1.27 to 2.04, indicating a low extent of utilization. The standard deviation for these items ranged from 0.27 to 0.96, suggesting varying degrees of dispersion around the mean ratings. The overall grand mean of 2.50 indicates that respondents generally agreed that e-learning technologies are utilized to a high extent within the context of the Business Education programs. These findings shed light on the level

of utilization of e-learning technologies within the program, highlighting areas of strength as well as areas requiring improvement.

Discussion

The research study focused on assessing the availability and utilization of e-learning technologies to enhance teaching and learning within the Business Education program in public universities. The study identified several e-learning technologies that are highly utilized by lecturers, including PowerPoint presentations, email communication, access to e-journals, computers, and multimedia projectors. However, other e-learning tools such as Learning Management Systems, computer simulations, digital libraries, video/teleconferencing, e-books, and interactive whiteboards for recording audio or video lectures are not widely utilized by lecturers. Contrary to the belief expressed by Maduabuchi (2018) that many Business Education lecturers lack computer skills beyond basic training, the findings of this study suggest that lecturers possess and utilize information and communication technology skills in training students. This finding aligns with the research conducted by Ezenwafor (2021), who also observed that Business Educators in tertiary institutions possess ICT skills and utilize them in their teaching practices.

Additionally, the study examined the extent of utilization of e-learning technologies by students within the Business Education program. The findings revealed that students highly utilize e-learning technologies such as smartphones, computers, compact disks, PowerPoint presentations, and email communication. However, other tools such as e-books, video/teleconferencing, and digital libraries are not as widely utilized by students. Despite the variations in utilization levels among different e-learning technologies, the overall grand mean of 2.71 indicates a high level of utilization by students. These findings support the observations made by Manir (2019) regarding the significant growth in computer equipment and internet utilization by both staff and students in Nigerian tertiary institutions. This updated perspective contrasts with the earlier findings of Ajadi, Salawu, & Adeoye (2018), who reported gross underutilization of e-learning technologies in Nigerian tertiary institutions at the time of their research. In summary, the findings of this study underscore the importance of assessing and enhancing the utilization of e-learning technologies within Business Education programs to promote effective teaching and learning practices in public universities.

Conclusion

The purpose of this study was to assess the availability and utilization of e-learning technologies within the Business Education program in public universities in Enugu State. The findings revealed that several e-learning technologies, such as internet and web browsers, interactive whiteboards, compact disks, multimedia projectors, PowerPoint presentations, computers, and smartphones, are readily available and highly utilized by both lecturers and students in the program. However, certain e-learning tools, including Learning Management Systems, digital libraries, computer simulations, electronic books, and video/teleconferencing, were found to be unavailable and consequently utilized to a low extent by both lecturers and student. The study underscores the significance of e-learning technologies within the realm of business education, emphasizing their pivotal role in teaching, learning, and research. Given the technological advancements of the 21st century, e-learning technologies have become indispensable tools in educational settings. Therefore, embracing these technologies fully is imperative for enhancing the quality of teaching, learning, and research within the Business Education program. In conclusion, the study highlights the importance of recognizing and leveraging the potential of e-learning technologies to improve educational outcomes and promote innovation within the field of business education.

Recommendations

Based on the findings and conclusion drawn from this study, the following recommendations were made:

1. Encouraging Lecturers to Utilize Available E-Learning Resources: It is imperative to motivate lecturers within the Business Education program to fully embrace and utilize the existing e-learning resources in their teaching practices, research endeavors, and student assessment processes. By leveraging e-learning tools effectively, lecturers can enhance the delivery of course content, engage students more dynamically, conduct

research efficiently, and provide timely feedback on student performance. This proactive approach can lead to improved learning outcomes and better preparation of students for their future career.

2. Preparation of E-Books and E-Journals: Business education lecturers should actively engage in the preparation and dissemination of e-books and e-journals to facilitate student learning and encourage independent study. By creating digital resources tailored to the specific needs of their courses, lecturers can provide students with access to comprehensive and up-to-date educational materials. Additionally, e-books and e-journals offer the flexibility of anytime, anywhere access, enabling students to deepen their understanding of course concepts and stay abreast of industry trends.
3. Optimization of E-Learning Platforms: Tertiary institutions' management should prioritize the optimization of e-learning platforms such as learning management systems, open courseware, and Moodle to streamline administrative processes and enhance the overall learning experience. These platforms offer robust features for content delivery, assessment management, communication, collaboration, and data analysis. By ensuring the optimal functioning of these platforms, institutions can facilitate efficient administration, documentation, examination, feedback provision, and reporting of both classroom and online events. This proactive approach will contribute to a more seamless and effective integration of technology in teaching and learning within the Business Education program.

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HUMAN CAPACITY BUILDING AND ACADEMIC STAFF EFFECTIVENESS IN OSUN STATE COLLEGES OF EDUCATION, NIGERIA

BY

Shittu, Afeez Adeshina, Sheu Omotosho Sulyman & Ajadi Bashir Ibrahim
Department of Educational Management and Counselling, Faculty of Education, Al-Hikmah University, Ilorin, Nigeria.
Email: shisay4life2010@gmail.com

Abstract
This study investigated human capacity building and academic staff effectiveness in Osun State Colleges of education, Nigeria. The research adopted a descriptive survey of correlation type. Stratified random sampling technique was used to 250 out of 370 academic staff of Osun State College of Education, Ila and academic staff of Osun State college of education, Ilesha. Two hundred and fifty respondents were used as sample. A research questionnaire entitled: "Human Capacity Building Questionnaire" (HCBQ) and Academic Staff Effectiveness Proforma (ASEP) were used to obtain data on students' final year results from between 2008-2013 academic sessions. The instruments were validated by three experts in the Department of Educational Management. One main hypothesis and four operational hypotheses were formulated to guide the study. Inferential statistic of Pearson product moment correlation statistic was used to test the main hypothesis and operational research hypotheses at 0.05 level of significance. The major findings showed that there was significant relationship between human capacity building and academic staff effectiveness in Osun state colleges of education, Nigeria. The findings also revealed that, there was significant relationship between in-service training and academic staff effectiveness in Osun state colleges of education. A significant relationship existed between workshop and academic staff effectiveness in Osun state colleges of education. There was significant relationship between seminar and academic staff effectiveness in Osun state colleges of education. There was significant relationship between supervision and academic staff effectiveness in Osun state colleges of education. Based on the findings, it was recommended that, training and re-training of academic staff should be made compulsory for all lecturers. Through this, academic staff effectiveness will be enhanced through dissemination of innovative practical skills, quality of teaching and learning will be improved and lecturers' knowledge of subject matter will also improve. Human capacity building should be initiated with long-term goals in mind and it will streamline implementation and maximize initial impacts to engage with instructional staff whose teaching will be impacted by comprehensive innovations that involve changing structures and policies.
***Keywords*:** Human Capacity Building, Academic Staff, Effectiveness

Introduction

Human capacity building in tertiary institutions is vital to national development. Hand tools, machines, instructional materials, and infrastructural facilities may be available in abundance but without the trained manpower that will manage these facilities, effective learning and staff academic effectiveness cannot take place in the school (Usoro, 2019). Virtually all stakeholders in education agree that at micro-level practitioners, teachers represent a centripetal force in most educational systems. There is also a consensus that their performance and effectiveness is inextricably linked to educational outcomes for both learners and the system itself. Human capacity building is central to sustain economic growth and development because human capital is the greatest asset of any organization. This explains why most developed and emerging economics focus on building human capital, as only those countries and enterprises that possess what it takes to be competitive will survive in the current global economy (Arong &Ogbadu, 2010).

According to Cranton (2014), the Nigerian economy has to be efficient and competitive in the new world order in which national frontiers no longer constitute barriers to human, material and capital flows. Capacity building has been defined in several ways. Generally, it entails the development of a workforce through the acquisition of technical and managerial efficiency and effectiveness in the overall performance of an organization (Delaney, 2012). Indeed, the

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efficiency of a workforce can only be enhanced and sustained through continuous capacity building. It could also be defined as the internalization of the knowledge, skills and processes that enable the formulation, implementation, monitoring and evaluation of set goals in an efficient manner. Yet, it could be viewed as a series of activities, which an organization, enterprise or even a nation needs to undertake to provide for itself, on a continuous basis, as well as the regular supply of skilled manpower to meet its present and future needs.

The goals education in Nigeria are to be pursued through: teaching, research, dissemination of existing and new information (put simply, publications), the pursuit of service to the community, and being a store house of knowledge. Human capacity building entails investment in human capital, institutions and practices necessary to enhance human skills, overhaul institutions and improve procedures and systems. This requires forecast of the manpower needs and other requirements of the economy over a period of time in respect of each industrial and occupational group, supported with policies and programmes that guarantee their sustainability. Capacity building thus enhances the ability of human resources and institutions to perform or produce. It can be likened to an industrial processing by which basic "ores and raw metals are converted into useful tools, through heating, molding, tempering, shaping and sharpening for some ultimate purposes". In the same manner, human beings can be fashioned to lead useful and happy lives and contribute to societal goals, through education and training (Onwuka & Glady, 2010). The issue of human capacity building in Nigerian colleges of education has been a burning one for some time, especially with regards to quality teaching, research, and service delivery. It has become an issue of grave concern because apart from the quality of graduates being turned out from these colleges, which are being speculated to be discriminated against in the international labour market, and also by many foreign colleges for those seeking higher degrees, majority of these colleges of education are not making any impact in the socio- economic and political development of a country like Nigeria that is yearning for development. Even though learning or teaching, and research take place in these colleges of education, the qualities are not assured.

In spite of the vast human and material resources available to Nigeria, the Nigerian government's investment in education is abysmally very low when compared with UNESCO's mandate to all governments of developing nation to invest as much as 26% of their annual budget on education sub sector. However, this relatively low investment resulting from low percentage of the nation's budgetary allocation to the education sector must not be taken as an excuse for the deterioration in scholarship in Nigerian colleges of education which is widely acknowledged (Erinosho, 2016). Based on the aforementioned statement, this study therefore, investigated human capacity building and academic staff effectiveness in Osun State Colleges of Education, Nigeria. Colleges of education as a means and part of the development process of any society can hardly be contested; as important as colleges of education is, every nation provides education to every individual in order not to be ignorant and dependent (Kassam, 2018).

Human capacity building in Nigerian colleges shall be referred to as the overall process of training whereby the quality of the products is highly assured. In this regard, every academic staff of any Nigerian colleges of education was not successfully empowered through quality teaching, learning and experiences, to take control over his/her own life and the overall environment. Such in-service training would necessarily help any individual particularly the academic staff to think more clearly, and also be able to examine the possible alternative causes of actions or realities. Thus, drawing from the words of Kassam (2018), the graduate of any Nigerian tertiary institutions would be: one who is considerably playing his/her full roles in the economic development of the country; .one who participates fully and meaningfully in the social, civil, political and cultural activities of the community; one who lives a self-fulfilling and optimal life style; one who is highly resistant to any form of oppression, exploitation and corruption; one who achieves his/her personal liberation and thus attain self actualizing goals and one who is empowered to address his/her present pressing problems. In Nigeria, these problems include, combating poverty, raising productivity level, minimizing incidents of electoral malpractices, corruption and cultism. Ndulu (2010) examined the negative impact of human capital flight on economic growth in Nigeria. The study reported that the challenge of human capital in Africa is not limited only to low level of education and training, but it also includes the current inability of the country to retain a large proportion of its skilled and professional personnel. Thus, Nigeria has been losing a significant proportion of her skilled and professional manpower in tertiary institutions. Therefore, the major problem of this study will be to investigate how, and/or the levels to which human capacity building and academic staff have aided the achievement of higher educational goals effectiveness in Nigerian colleges of education.

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Literature Review

Concept of Human Capacity Building

Human capacity building means the art of educating individuals in order to bring out their talents, potentials and innate abilities for the service of the society. Human capacity building refers to strengthening the skills, knowledge, competencies, and abilities in individual to survive, adapt and thrive in the fast changing world. Human capacity building efforts in tertiary institutions involve teaching and training of students. These provide the students with new skills, knowledge and attitudes for grappling with their jobs on graduation. While Etuk (2004) views human capacity building or manpower development as the process of educating and training people for productive employment role, Ushie (2004) describes it as a process which deals with the development of human competence, skills and attitude for meeting the demands of the nation occupationally, professionally, administratively and technically. Human capacity building is of great importance to any nation. In support of this fact, Alozie (2014) reiterates that a country which is unable to develop the skills and knowledge of her people and use them effectively in the national economy will be unable to develop anything else. Colleges of education are established to fulfill a statutory function of educating and training higher manpower to provide professional, technical and other socio-economic services for the development of the nation. It is against this understanding that the Federal Republic of Nigeria (2014) in its national policy on education states that, higher education provides the platform for preparing and producing young graduates, such as, engineers, doctors, architects, surveyors, accountants, lawyers, lecturers, and so on, as manpower needs in government, industry and other professions. The colleges of education are expected to produce graduates who are competent to meet the manpower demands in all sectors of the nation's economy to enhance effective implementation of national development programmes.

Capacity building entails investment in human capital, institutions and practices necessary to enhance human skills, overhaul institutions and improve procedures and systems. This requires forecast of the manpower needs and other requirements of the economy over a period of time in respect of each industrial and occupational group, supported with policies and programmes that guarantee their sustainability. Capacity building thus enhances the ability of human resources and institutions to perform or produce. It can be likened to an industrial processing by which basic "ores and raw metals are converted into useful tools, through heating, molding, tempering, shaping and sharpening for some ultimate purposes. Human capacity building has become a buzz word in education reform discourse internationally both in developed and emerging economies. However, despite its wide usage, it is an often misunderstood social construct. For conceptual clarity then, capacity building has to do with the allocation of, and investment in resources-physical, intellectual or human especially when other intervening variables have failed within a given institutional or social context. To a certain extent, a systematic focus on capacity building within a given social sector in most societies is an indication of disequilibrium within that particular sector even though capacity building should, ideally and proactively, be an integral part of strengthening social institutions and providing enabling conditions for premium performance by the individuals within the sector. According to McDonnell and Elmore (2011), the benefits of capacity building are consequential, "in the short term, [they accrue] to the specific individuals and institutions that are their recipients, but the ultimate beneficiaries are future members of society, whose interests cannot be clearly determined in the present". Crucially, for capacity building to be effective, it must respond to the growth and development needs of the individual as well as those of the relevant institutions. For all practical purposes, building teacher capacity is, ultimately, engendering development, growth and excellence within an education system.

Human capacity building according to Ogbaunya and Usoro (2019), is a process of improvement that embraces all those activities that are geared towards the growth and improvement of skills, knowledge and attitude of personnel. An academic staff in colleges of education who is not currently in tune with modern trend is dangerous to the system. Staff development in terms of continuing education appears rather very poor, haphazard, politicized, and lack needed continuity. Dryaklor (2014) stated that staff need to be retrained two or six times in lifetime to keep abreast with changes in their profession. Maduewesi (2015) stated that the issue of human capacity building is perhaps the upper most concern of educational planners and administrators while Onwuka and Gladys (2010) define human capacity building as the process of attaining professionalism through acquisition of necessary knowledge, skills, and attitudes for competence and effective performance in the job.

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Concept of Academic Staff Effectiveness

Effectiveness is related to attainment of stated objectives. It is a truism to assert that academic staff effectiveness can be said to be the ability of the staff to bring about achievement of educational objectives in the school system. Adebayo (2010) described that effective and efficient academic staff as a certain innate disposition which can take the forms of talent, aptitude, ability to sympathize, to empathize and also establish rapport with others, a helping spirit and imaginative decision making potential and in sum, a genial and charismatic personality. Effectiveness is used to describe the ability to bring the intended result. It involves the ability to adopt, utilize resources and achieve goals. Thus, effectiveness shows the relationship among purpose, efforts and accomplishment. The workshop model entails drawing participants out of their schools to a venue where they are exposed by experts to a core of information and skills. The workshop many be short-or long-term. The nature of skills and processes to be acquired also vary. The objectives of workshop are;

(a) To improve the teachers' professional knowledge and skills;
(b) To acquaint teachers with the most recent pedagogical techniques;
(c) To work out common strategies and or handling some common instructional problems and issues; and
(d) To provide a forum for the exchange of ideas among teachers, academic and management staff and specialist in the core subjects (Tahir, Umar and Buri, 2000).

Capacity Building through in-service training

Olude (2014) stated that in-service training as a veritable means of keeping teachers in Nigeria up-to-date in their areas, and as a lifelong education process for improvement of the teachers and the educational system. Fullan (2013) teachers and teacher educators do not know enough about subject matter, they don't know enough about how to teach, and they don't know enough about how to understand and influence the conditions around them. Teacher education from initial preparation to the end of the career- is not geared towards continuous learning. More still needs to be done in public and private school if in-service training is considered a fundamental right for teachers. Universal Basic Education Curriculum must begin with strengthening the capacity of existing teaching force through in-service training and retraining that will:

(a) Disseminate innovative practical skills that will enhance the teachers' effectiveness and thereby enhance the quality of learning;
(b) To update the teachers' knowledge of subject matter;
(c) To contribute to the development of positive attitudes and self-concept by the teachers; and
(d) To enable teachers make pupils perceive learning as an interesting, pleasant activity that promotes self-understanding, inquiry and critical thinking (Mohammed, 2016).

The importance of in-service education for teachers cannot be overemphasized. To teach is a life long process of learning. We already concluded that the quality of much of the pre-service education is poor. Opportunities for continuous in knowledge every day, facts are changing and the teacher has to be kept abreast of developments in knowledge in his/her subject area as well as in the methods of teaching. Thus, continuous professional development to update the teacher in both content and methods of teaching is crucial for the school system to keep good teachers and sustain quality education. In-service programmes in the forms of seminars, workshops and conferences should be seen as a priority so as to offer teachers opportunities to refresh their knowledge and skills after the initial pre-service education. Fadina (2014) suggested that more on-the-job and in-service training should be provided to raise the standard of teachers in Nigeria. Mkpa (2010) suggested innovations in the in-service programmes in Nigeria to include:

i. **Mentoring:** This is strategy in which highly experienced teachers in a school are assigned a number of less-experienced ones to serve as their mentors or professional guides. This is like the Peer In-Service Approach (PISA) which is a self-help in-service approach that drastically reduces the cost of financing training

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programmes for teachers within local government areas. Thus, the expertise of good/experienced teachers is utilized to up-date other teachers in neighboring schools in the same area (UNESCO, 2017).

ii. **Peer-Tutoring:** A colleague approaches the other to obtain or seek professional assistance or guide on any aspect of his/her discipline where he/she is defective. In this way, the area of professional competence of each colleague benefits the other eventually leading to each member of staff growing academically and professionally.

iii. Subject Lead-Teacher Approach: A Senior Teacher of the same subject leads the other teachers, overseeing all curricular programmes associated with that subject.

iv. Cluster Lead-Teachers Approach: Teachers in selected schools in a Local Government Area (five or less schools) come together to share experiences in certain subjects. A very good teacher in a particular subject lead the others. This cluster enhances mutual assistance among them, hence self improvement without necessarily going to any training institution.

Capacity Building through Supervision

Supervision is an important of school administration which is focused to ensure that each individual teacher is performing the duties for which he or she is employed to do. According to Ijaiya (1999), supervision is seen as process concerned with growth and development of both human (i.e. teachers, students and other school personnel) and material resources within the school for the ultimate benefit of the learner, teachers and the society. Adesina (1980) expressed that supervision serves as the nervous system of an organization because it is one of the basic requirement in administration that concerns with the tactic of efficient and proper management. Actual supervision involves getting guidance to members of the school system so that they can be self directing and function effectively with minimum supervision. Ogunsaju (2015) enumerated that supervision is to improve the effectiveness of teacher so that he can contribute maximally to the attainment of system goals. Other reasons according to him are;

(a) To know the performance of the teacher recruited to teach in the school system;
(b) To determine whether a teacher should be transferred, promoted, retained or dismissed;
(c) To improve the incompetent teacher;
(d) To discover special abilities possessed by teachers in the school;
(e) To provide for staff development;
(f) To determine the effectives of classroom management by the teacher;
(g) To know the direction of the school; and
(h) To assess the tone of the school and identify its most urgent needs.

Akpofure (2019) submitted that supervisors should always remember that their ultimate goal should be to enable the educational system fulfill its stared aims and objectives within the national system. The interaction between the supervisor and the teacher should be real so that professional efficiency and better academic performance by students can be achieved. Buremoh (2015) has maintained that if proper supervision is done, lazy teachers and those who do not have the skills would be easily detected. Also, supervision may help those to improve instruction, ensure educational policies and laws to be properly enforced. Teachers can also learn to isolate and analyze their own problems and the result of all these is that the performance of students may improve.

Purpose of the Study

The main purpose of this study was to investigate human capacity building and academic staff effectiveness in Osun State Colleges of education, Nigeria. Thus, the specific objectives were:

1. to examine the relationship between in-service training and academic staff effectiveness
2. to determine the relationship between workshop and academic staff effectiveness
3. to investigate the relationship between seminar and academic staff effectiveness
4. to establish the relationship between supervision and academic staff effectiveness

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Research Questions

In the pursuit of this research and to realize the objectives of the study, the following research questions were raised to guide the study:

1. To what extent does human capacity building influence academic staff effectiveness in Osun State Colleges of education, Nigeria?
2. Does in-service training have impact on academic staff effectiveness in Osun State Colleges of education, Nigeria?
3. How often do academic staff attend workshop in Osun State Colleges of education, Nigeria?
4. Does seminar improve academic staff effectiveness in Osun State Colleges of education, Nigeria?
5. What is the level of supervision on academic staff effectiveness in Osun State Colleges of education, Nigeria?

Research Hypotheses

The hypotheses generated to guide the study were:

Main Hypothesis

Ho: There is no significant relationship between human capacity building and academic staff effectiveness in Osun State colleges of education, Nigeria.

Operational Hypotheses

Ho_1: There is no significant relationship between in-service training and academic staff effectiveness in Osun State colleges of education

Ho_2: There is no significant relationship between workshop and academic staff effectiveness in Osun State colleges of education

Ho_3: There is no significant relationship between seminar and academic staff effectiveness in Osun State colleges of education

Ho_4: There is no significant relationship between supervision and academic staff effectiveness in Osun State colleges of education

Methodology

The population of this study comprised the two public colleges of education in Osun State, Nigeria. Stratified random sampling technique was used to select 70(46%) out of 150 academic staff of Osun State college of education, Ila and 180(81%) out of 220 academic staff of Osun State college of education, Ilesha. Thus, the total number of the entire respondents that were selected was 250 out of 370 to represent 67% that served as sample. Human Capacity Building Questionnaire" (HCBQ) and Academic Staff Effectiveness Proforma (ASEP) was used to obtain data on students' final year results from 2008-2013 academic sessions were used to collect data for this study from the respondents. The instrument was designed based on the indicators of the variable. The coefficient (r) of 0.68 was obtained in order to determine the reliability status of the research instrument. The research questions raised for the study were answered using descriptive statistics of mean and standard deviation. The research hypotheses formulated were tested using inferential statistics of Pearson Product Moment Correlation statistic at 0.05 level of significance. Pearson Product Moment Correlation statistic was used in order to determine the relationship between the two variables.

Results

Research Question 1: To what extent does the level of human capacity building influences academic staff effectiveness in Osun state Colleges of education?

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Table 1:

Level of Human Capacity Building on Academic Staff Effectiveness

Responses	Frequency	Percentage
Moderate	50	20.0
Low	10	4.0
High	190	76.0
Total	**250**	**100.0**

Table 1 shows the analysis of the responses given by the respondents to research question 1. Fifty of the total respondents representing 20% agreed to the fact that the level of human capacity building on academic staff effectiveness in Osun state Colleges of education was moderate, 10 of the total respondents representing 4% agreed that it was low while the remaining 190 representing 76% agreed that it was high. This implies that the level of human capacity building on academic staff was high and effective.

Research Question 2: Does in-service training have impact on academic staff effectiveness in Osun state Colleges of education?

Table2:

In-service Training and Academic Staff Effectiveness

Responses	Frequency	Percentage
Yes	185	74.0
No	65	26.0
Total	**250**	**100.0**

Table 2 shows the analysis of the responses given by the respondents to research question 2. One hundred and eighty five of the total respondents representing 74% agreed to the fact that, in-service training had impact on academic staff effectiveness in Osun state Colleges of education, while 65 of the total respondents representing 26% disagreed with that. This means that in- service training for academic staff will improve their effectiveness and performance.

Research Question 3: How often do academic staff attend workshop in Osun state Colleges of education?

Table3:

Attending of Workshop

Responses	Frequency	Percentage
Frequently	85	34.0
Seldomly	165	66.0
Total	**250**	**100.0**

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Table 3 shows the analysis of the responses given by the respondents to research question 3. Eighty five of the total respondents representing 34% frequently attended workshop while 165 of the total respondents representing 66% seldomly attended workshop. This means that the number of academic staff attending workshop was low.

Research Question 4: Does seminar improve academic staff effectiveness in Osun state Colleges of education?

Table4:

Seminar and Academic Staff Effectiveness

Responses	Frequency	Percentage
Yes	167	66.8
No	83	33.2
Total	**250**	**100.0**

Table 4 shows the analysis of the responses given by the respondents to research question 4. One hundred and sixty seven of the total respondents representing 66.8% agreed to the fact that seminar improved academic staff effectiveness in Osun state Colleges of education while 83 of the total respondents representing 33.2% disagreed with that. This means that attending seminar will improve academic staff effectiveness.

Research Question 5: What is the level of supervision on academic staff effectiveness in Osun state Colleges of education?

Table 5:

Level of Supervision on Academic Staff Effectiveness

Responses	Frequency	Percentage
Moderate	75	30.0
Low	95	38.0
High	80	32.0
Total	**250**	**100.0**

Table 5 shows the analysis of the responses given by the respondents to research question 5. Seventy five of the total respondents representing 30% agreed to the fact that level of supervision on academic staff effectiveness was moderate, 95 of the total respondents representing 38% agreed that it was low while the remaining 80 representing 32% agreed that it was high. This implies that level of supervision in those colleges was taken with levity.

Hypotheses Testing

Ho: There is no significant relationship between human capacity building and academic staff effectiveness in Osun state colleges of education

Table 6:

Human Capacity Building and Academic Staff Effectiveness

Variables	N	Mean	SD	df	Calculated	Critical	Decision

						r-value	r- value	
Human Capacity Building	250	22.19	12	.05	248	.418	.195	Ho Rejected
Academic Staff Effectiveness	250	42.78	13.45					

Table 6 shows that the calculated r-value of .418 is greater than the critical r- value of .195 at .05 level of significance for 248 degrees of freedom. Thus, the null hypothesis which states that there is no significant relationship between human capacity building and academic staff effectiveness in Osun state colleges of education was rejected. Thus, a significant positive relationship existed between human capacity building and academic staff effectiveness. This implies that human capacity building will significantly influence academic staff effectiveness. This finding is in line with Usoro (2019) who stated that human capacity building is hand tools that promote effective learning and staff academic effectiveness in tertiary institutions. Human capacity building is central to sustain economic growth and staff development because human capital is the greatest asset of any organization in order to accomplish the set goals (Arong &Ogbadu, 2010). Capacity building enhances the ability of human resources and institutions to perform or produce effectively and efficiently.

Ho_1: There is no significant relationship between in-service training and academic staff effectiveness in Osun state colleges of education

Table 7:

In-service Training and Academic Staff Effectiveness

Variables	N	Mean	SD	df	Calculated r-value	Critical r- value	Decision
In-service Training	250	15.22	7.04	248	.312	.195	Ho_1 Rejected
Academic Staff Effectiveness	250	42.78	13.45				

As shown in Table 7, the calculated r-value of .312 is greater than the critical r- value of .195 at .05 level of significance for 248 degrees of freedom. The null hypothesis which states that there is no significant relationship between in-service training and academic staff effectiveness in Osun state colleges of education was rejected. Therefore, significant relationship exists between in-service training and academic staff effectiveness in Osun state colleges of education. This means that in-service training will have effective impact on the effectiveness of academic staff. This is in line with Kassam (2018) who stated that in-service training would necessarily help any individual particularly the academic staff to think more clearly, and also be able to examine the possible alternative causes of actions or realities in order to improve on their academic effectiveness. Ushie (2014) stated that in-service as a process which deals with the development of academic staff competence, skills and attitude for meeting the demands of the nation occupationally, professionally, administratively and technically.

Ho_2: There is no significant relationship between workshops and academic staff effectiveness in Osun state colleges of education

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Table 8:

Workshops and Academic Staff Effectiveness

Variables	N	Mean	SD	df	Calculated r-value	Critical r- value	Decision
Workshops	250	16.02	7.54				
				248	.320	.195	Ho_2 Rejected
Academic Staff Effectiveness	250	42.78	13.45				

Table 8 shows that the calculated r-value of .320 is greater than the critical r- value of .195 at .05 level of significance for 248 degrees of freedom, the null hypothesis was rejected. This means that, there is significant relationship between workshops and academic staff effectiveness in Osun state colleges of education. That is, attending workshops by academic staff has positive impact on lesson delivery of the lecturers. Attending workshop significantly improves academic staff's professional knowledge, skills, pedagogical techniques and work out to handle some common instructional problems. Workshop facilities for creativity, hard work and discipline enhance the academic effectiveness of staff in schools. It provides a forum for the exchange of ideas among teachers, academic and management staff and specialist in the core subjects (Tahir, Umar & Buri, 2000).

Ho_3: There is no significant relationship between seminar and academic staff effectiveness in Osun state colleges of education.

Table 9:

Seminar and Academic Staff Effectiveness

Variables	N	Mean	SD	df	Calculated r-value	Critical r- value	Decision
Seminar	250	9.55	5.45				
				248	.218	.195	Ho_3 Rejected
Academic Staff Effectiveness	250	42.78	13.45				

As shown in Table 9, the calculated r-value of .218 is greater than the critical r- value of .195 at .05 level of significance for 248 degrees of freedom. Thus, the null hypothesis was rejected. Therefore, there is significant relationship between seminar and academic staff effectiveness in Osun state colleges of education. This implies that organizing seminars for academic staff by the school management will promote their effectiveness. This finding is in line with Iwuanyanwu (2000) who stated that attending and participating actively in seminars are tools used to improve the teaching and learning process of academic staff.

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Ho_4: There is no significant relationship between supervision and academic staff effectiveness in Osun state colleges of education.

Table10:

Supervision and Academic Staff Effectiveness

Variables	N	Mean	SD	df	Calculated r-value	Critical r- value	Decision
Supervision	250	9.98	5.50	248	.295	.195	Ho_4 Rejected
Academic Staff Effectiveness	250	42.78	13.45				

As shown in Table 10, the calculated r-value of .295 is greater than the critical r- value of .195 at .05 level of significance for 248 degrees of freedom, the null hypothesis which states that there is no significant relationship between supervision and academic staff effectiveness in Osun state colleges of education was rejected. As a result of this, significant relationship exists between supervision and academic staff effectiveness. That is, supervision has positive impact on academic staff effectiveness. According to Ijaiya (1999), supervision is seen as process concerned with growth and development of both human (i.e. academic staff, students and other school personnel) and material resources within the school for the ultimate benefit of the learner, staff and the society. Mover (1998) believed that supervision involves activities which primarily and directly focused on teaching and improvement of the academic environment in order to promote effective learning, growth of students and academic staff. The finding is in line with Ogunsaju (2005) who stated that supervision is to improve the effectiveness of teacher so that he can contribute maximally to the attainment of system goals.

Conclusion

This study has shown that human capacity building has a positive and significant relationship with academic staff effectiveness in Osun state Colleges of education. This implies that human capacity building in terms of in-service training, workshop and seminar will go a long way in improving academic staff effectiveness as well as students' academic performance. It is obvious that human capacity building will improve the knowledge of lecturers in such a way that the present standard at any level of our educational system will be enhanced. It can assist in planning online teaching and learning effectiveness which will also improve students' academic performance.

Recommendations

The following recommendations were made to enhance human capacity building and to improve academic staff effectiveness in Osun state colleges of education

(1) Training and re-training of academic staff should be made compulsory for all lecturers. Through this, academic staff effectiveness will be enhanced through dissemination of innovative practical skills, quality of teaching and learning will be improved and lecturers' knowledge of subject matter will also improve.

(2) Equal opportunities should be given to all categories of lecturers to fully participate in the capacity building progress.

(3) When academic staff have been trained and developed, they need to also be motivated so as to be able to apply the teaching and other relevant skills and competencies gained into teaching-learning process and classroom environment and thereby enhance better students' academic performance.

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(4) The idea of automatic promotion based on years of service should highly be discarded. Therefore, academic staff promotion should be tremendously based on number of workshops, seminars and conferences attended by staff and their job performance and other professional activities engaged in while in teaching service.

(5) School management should ensure that supervision should be given effective priority in order to enhance both the administrative and instructional supervision.

(6) Human capacity building should be initiated with long-term goals in mind and it will streamline implementation and maximize initial impacts to engage with instructional staff whose teaching will be impacted by comprehensive innovations that involve changing structures and policies.

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EXPLORING THE EXPERIENCES OF SURVIVORS OF RURAL BANDITRY IN ACCESSING MENTAL HEALTH SERVICES IN ZAMFARA NORTH WESTERN NIGERIA: A QUALITATIVE STUDY

BY

[1]Yalwa, T., [2]Balarabe, F., [3]Gomma, H. I. M., [4]Musa, H. A., [5]Sheikh, L. T., [6]Anyebe, E.E. and [&7]Lawali, Y.
[1]Department of Standard Quality Assurance, Zamfara State Office, National Health Insurance Authority.
[2,3&4]Department of Nursing Sciences, Faculty of Allied Health Science, Ahmadu Bello University Zaria-Nigeria.
[5]Department of Nursing Sciences, University Ilorin, Nigeria.
[6]Department of Psychiatry, Ahmadu Bello University Teaching Hospital, Zaria-Nigeria.
[7]Department of Nursing Sciences, Usman Danfodiyo University Sokoto-Nigeria.
Email:tasiuyalwa01@gmail.com

Abstract

There are several reports of armed-conflict resulting in to killings, kidnapping, sexual violence and destruction of properties in North West Nigeria. Banditry has been linked to mental health disorders including depression, anxiety and post-traumatic stress disorders. However, the provision of quality mental health services and psychological (QMHSP) interventions are essential in preventing development of mental health problems. The objective of this paper was to explore the experiences of accessing mental health services among survivors of rural banditry in North West Nigeria. Employing an interpretive phenomenological design**,** thirteen participants were purposively selected to the point of data saturation. Indepth interview was used as a data collection tool. Data collected were thematically analyzed using the Braun and Clarke six steps of thematic analysis supported by NVivo 12. Three major themes emerged: Accessibility to QMHPS; Factors influencing accessibility to QMHPS and Factors influencing utilization. Detailed findings from the study shall be presented. Overall, finding highlights a lack of awareness of the availability of mental health services, and a lack of accessibility and availability of quality mental health services within the geographical location. These may worsen the mental health problems of these survivors. Therefore, investing in provision of mental health services and the need for intervention strategies such as implementing policies, equipping the healthcare sector, and fostering partnerships to mitigate consequences of insecurity on the population. It is also important for the government to establish policies that may require home-based agencies to prioritize mental healthcare for those affected.

Keywords: Banditry, Mental Health disorders, Mental Health Services, Survivors' Experience**.**

Introduction

Armed conflicts and banditry in North West Nigeria have inflicted severe consequences, including killings, kidnappings, sexual violence, and property destruction (Adesina, M. A., Adesanya, T. and Olufadewa, I. 2020). Beyond the visible physical toll, these incidents have been associated with a silent yet pervasive impact on mental health especially in low-resource settings like Zamafara. Reports suggest a link between banditry and mental health disorders, with survivors experiencing conditions such as depression, anxiety, and post-traumatic stress disorders (PTSD) which deteriorates when quality mental health services are lacking (United Nation International Children Education Funds (UNICEF) 2019). Despite the evident need for intervention, the provision of Quality Mental Health Services (QMHS) and psychological support in the aftermath of such traumatic events is often inadequate.

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Armed conflicts in Zamfara have created a crisis marked by severe consequences, such as killings, kidnappings, sexual violence, and property destruction (Daramola 2019). World Health Organisation (2019) stresses that the nexus between banditry and mental health disorders, specifically depression, anxiety, and post-traumatic stress disorder, highlights the intricate interplay between conflict and psychological well-being coupled with the poor health management system. Research by Wainberg, Scorza, Shultz, Helpman, Mootz, Johnson, Neria, Bradford et al. (2017) highlights a critical gap in access to high-quality mental health services, particularly in low-income countries like Nigeria. Barriers such as stigma, understaffing, absence of standardized service delivery procedures, and inadequate research for policy change contribute to this gap, hindering progress toward universal health coverage, especially in mental health intervention (Wainberg et al. 2017). This causes the victims to be subjected to an unusual experience. Despite the evidence supporting the preventability and treatability of mental health disorders (Follwell et al., 2021), a substantial portion of the global burden of disease remains attributed to these conditions (Wainberg et al., 2017). Therefore, acknowledging the Quality Mental Health Services and Psychological (QMHSP) interventions as crucial factors that underscores the need for targeted efforts to prevent the development of mental health problems among affected populations.

A report by Wainberg et al., (2017) asserts that the geographical and cultural context of North West Nigeria adds complexity to the accessibility and utilization of mental health services. Factors such as remote locations, cultural beliefs, and the aftermath of armed conflicts contribute to the barriers survivors face in seeking and accessing appropriate mental health support. Although, the National Health Insurance Authority (NHIA) together with Primary Healthcare Development Agency and other Healthcare agencies plays a crucial role in the healthcare landscape of Nigeria, including mental health services. However, the experiences of survivors of rural banditry within the framework of the services by these Healthcare agencies remain largely unexplored. This qualitative study aims to delve into the nuanced and multifaceted aspects of accessing the quality mental health services among survivors in Zamafara, North West Nigeria. Understanding these experiences is vital for shaping targeted and culturally sensitive interventions, ensuring that the National health system effectively address the unique challenges posed by the aftermath of rural banditry. This study seeks to bridge the gap in knowledge by providing a qualitative exploration of the experiences of survivors within the National Health Insurance Ecosystem, shedding light on barriers, facilitators

The aftermath of conflicts and crisis, particularly in conflict-affected communities, has been identified as a significant contributor to mental health challenges. According to the World Health Organisation (WHO 2019), one in every eleven individuals in conflict-affected communities has experienced moderate or severe mental disorders in the last decade. Health interventions, as noted by Daramola (2019), often overlook psychosocial assessments, leaving internally displaced persons (IDPs) grappling with various mental health issues such as sadness, hopelessness, and suicidal tendencies. Despite the prevalence of armed conflicts and associated mental health issues, a notable gap exists in understanding the specific experiences of survivors in accessing mental health services. The limited awareness, accessibility, and availability of QMHSP within the geographical location contribute to the potential exacerbation of mental health problems among survivors.

In specific instances, like the rural banditry attack in Benue State in January 2018, where 70 native farmers lost their lives, and in Zamfara, where over 500 people died between 2011 and 2012, the trauma experienced by affected populations extends beyond physical and economic realms to emotional and social domains (Ameh, 2018; Nadama, 2019). Despite relief efforts from various entities providing tangible support, the psychological distress faced by crisis-affected individuals often goes unresolved, potentially leading to a spectrum of mental health disorders (WHO 2019, WHO 2020). This necessitate the drive for investigating and improving the mental health management system of this community. While relief interventions address immediate material needs, the emotional and social (psychosocial) needs of conflict-affected communities are often overlooked (Orrnert, 2019). The complexity of vulnerability to mental disorders within these populations is influenced by the stress experienced and the availability of resources to cope with that stress (Saxon et al., 2016). The crisis is described as "transmogrified" by Ibrahim (2016), highlighting the manifestation of symptoms and risk factors of mental illness among conflict-affected populations. The existing gap in considering provision of quality mental health services and psychosocial needs during relief interventions raises concerns about the long-term mental health implications for the affected communities. Urgent attention is required to

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incorporate mental health services, including psychosocial examinations, into interventions for survivors of conflict and crisis, aiming to minimize the risk and exacerbation of mental disorders.

Research Objectives:

1. To explore the experiences of survivors in accessing mental health services following rural banditry in North West Nigeria.

2. To explore the factors influencing accessibility to quality mental health services {QMHPS}.

3. To explore the factors influencing utilization of quality mental health services among the survivors of rural banditry in Zamfara State.

Literature Review

The concept of "Quality" in mental health services is inherently subjective, with varying perspectives among patients, their relatives, healthcare professionals, and governmental entities (Follwell et al., 2021). Psychiatric patients perceive quality as a means to reduce symptoms, empower resilience, and ensure dignity and respect for their autonomy and decision-making rights (Funk, Lund, Freeman, & Drew, 2009; Samartzis & Talias, 2020). On the contrary, the Institute of Medicine defines quality as the extent to which healthcare services enhance desired health outcomes, aligning with current professional knowledge (Wainberg et al., 2017). In essence, Quality Mental Health Services (QMHS) encompass accessibility, affordability, efficiency, effectiveness, recovery orientation, patient-centeredness, evidence-based interventions, and overall satisfaction (Follwell et al., 2021). The significance of mental health consumers' interpretation of QMHS cannot be overlooked, as it directly influences the efficiency, effectiveness, acceptability, and satisfaction of mental health interventions (Samartzis & Talias, 2020). Consequently, people's satisfaction with mental health interventions plays a crucial role in promoting acceptance, utilization, and recovery at all levels of care (primary, secondary, and tertiary). Poor-quality mental health services not only violate fundamental human rights but also lead to unfavorable treatment outcomes, decreased acceptance, and underutilization of both physical and mental health services (Samartzis & Talias, 2020). This situation can exacerbate existing mental health conditions and contribute to the onset of banditry-related psychotrauma (Funk et al., 2009; WHO, 2020). However, with effective quality improvement strategies and concerted efforts, there is potential for substantial improvement in mental health service provision.

The accessibility of Quality Mental Health Services (QMHS) for survivors of rural banditry (SRB) is influenced by various interconnected factors, including resource availability, geographic location, infrastructure, health policies, and cultural stigma (Kukoyi et al., 2022). SRB residing in remote or conflict-affected areas face challenges accessing healthcare facilities, leading to limited or no access to QMHS and an increased prevalence of mental health disorders such as anxiety, depression, and PTSD. Utilization of QMHS among SRB is influenced by factors such as stigma, mental health awareness, cultural beliefs, accessibility, availability, and affordability to QMHS (Kukoyi et al., 2022). The aftermath of rural banditry exposes affected communities to direct or indirect worries, resulting in mental and psychosocial traumas. Early and prompt mental health interventions are deemed crucial to prevent and mitigate the onset and deterioration of mental disorders (Colliard, 2018). However, barriers to accessibility and utilization, including substandard services, lack of trust, cultural factors, language barriers, and inadequate mental health personnel, hinder the provision of quality mental health and psychological services (Hansen et al., 2019). Stressors during humanitarian crises or conflict-associated traumatic events contribute to psychosocial problems, impacting physical and psychological well-being (Jovic et al., 2016). While the link between exposure to stressors and psychophysiological stress symptoms is established, correlations between stressors and post-traumatic stress disorder (PTSD) symptoms remain relatively low, requiring further substantiation. Repeated exposure to traumatic events and violence-related socio-economic stressors increases vulnerability to mental problems among conflict-affected populations, leading to common disorders such as depression, PTSD, and anxiety (Roberts et al., 2017). Given the high socio-economic stressors in Zamfara due to rural banditry, community mobilization and large-scale psychosocial interventions, including Mental Health and Psychological Services (MHPS) needs assessment, are crucial for

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addressing the mental health burden and supporting community development. Reliable epidemiological data on the mental health burden resulting from rural banditry in Zamfara is essential for guiding effective MHPS interventions (Roberts et al., 2017). This emphasizes the need to assess the challenges of providing quality mental health services and psychological support to survivors of rural banditry in Zamfara State. Research examining the impact of banditry on mental health underscores the heightened vulnerability of individuals exposed to such criminal activities. Banditry, characterized by violence and insecurity, has been linked to an elevated risk of mental health disorders, further emphasizing the urgency of targeted interventions and support services.

The Social-Ecological Model is a theoretical framework widely used in public health and psychology to understand and address the complex interplay between individual, interpersonal, community, and societal factors that influence mental health and well-being (Michaels, Blake, Lynn, Greylord, & Benning, 2022). Tengku, Sauter & Doosje (2022) recommended the application this model in exploring adversity, emotions and resilience of war survivors. By applying Bronfenbrenner's socioecological model, the study can uncover the intricate interplay between individual experiences, microsystems, mesosystems, exosystems, macrosystems, and chronosystems in the context of accessing mental health services among survivors of rural banditry in North West Nigeria. This comprehensive approach allows for a holistic understanding of the multifaceted challenges and opportunities within the ecological systems influencing mental health outcomes (Michaels, Blake, Lynn, Greylord, & Benning, 2022). The findings can inform targeted interventions at various levels, from individual support structures to broader societal and policy changes.

Methodology

Research Design

Utilizing an interpretive phenomenological design was a deliberate choice to delve into the subjective experiences of survivors of rural banditry in North West Nigeria. This design is particularly suited for exploring individuals' perceptions and meanings attributed to their experiences. Phenomenology allows for an in-depth examination of the unique and nuanced aspects of accessing mental health services in the aftermath of traumatic events (Creswell & Poth, 2018).

Participants

Thirteen participants were purposively selected, ensuring the attainment of data saturation. This methodological choice aligns with the qualitative research paradigm, aiming for depth rather than breadth in understanding the experiences of survivors. Purposive sampling ensures that participants possess relevant insights into the phenomenon under investigation, providing a comprehensive understanding of their lived experiences (Patton, 2015). The participants were reached at their various temporary Internally Displaced Persons' Camps across different host-communities where the IDPs were residing, except that of Anka LGA as they have Government designated IDPs' Camp in Anka Town, Zamfara State.

Data Collection Tool

In-depth interviews emerged as the preferred data collection tool for this study. The choice of in-depth interviews aligns with the qualitative nature of the research, allowing for the exploration of participants' narratives, emotions, and perspectives in a detailed manner (Creswell & Creswell, 2017). This methodological approach is essential for capturing the rich and context-specific information needed to address the research objectives effectively.

Trustworthiness

Audit trail was used of keeping a detailed record of research decisions, data collection, and analysis processes to ensure consistency and enable replication of this study by other researchers. Peer debriefing was performed where professional colleagues and experts in the field of psychiatry were engaged to validate the interpretation and findings. Member checking has been carried out where the research participants were involved in the research process, for example; they were allowed to review the findings and have provided feedback for accuracy. For transferability, rich

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and contextually detailed descriptions of the research setting, participants, and data collection methods have been provided to facilitate readers' understanding and application of findings to similar contexts. In addition, thick descriptions using quotes and narratives from participants to illustrate key points and capture the essence of the phenomenon have been done. Reflexivity section has been provide for transparency about the researcher's role and perspectives and whether his background and experience may or might have not influenced his interpretations. This was followed with peer review of the researcher's work to identify any potential biases or subjective interpretations. All ethical protocols were strictly adhered to especially those guidelines specific to qualitative research, including obtaining informed consent, confidentiality, and addressing any potential harm to participants. The ethical approval number ZSHREC00022022 was obtained from the Health Research Committee of Zamfara State Ministry of Health, Gusau.

Method of Data Analysis

Braun and Clarke's six-step thematic analysis, coupled with NVivo 12, was employed to ensure a robust and systematic analysis of the gathered data. Thematic analysis is well-suited for identifying, analyzing, and reporting patterns within qualitative data (Braun & Clarke, 2006). NVivo 12, as a qualitative data analysis software, enhances the efficiency and rigor of the analysis process, allowing for a more organized and comprehensive examination of themes and patterns (QSR International Pty Ltd, 2018). This methodological choice adds credibility to the study's findings by providing a transparent and replicable analytical process. Furthermore, the methodological choices align with the qualitative nature of the research, ensuring depth and richness in exploring survivor experiences. The use of thematic analysis and NVivo 12 enhances the credibility and rigor of data analysis.

Results:

Themes:

Accessibility to QMHPS: Unveils the challenges and barriers survivors face in reaching mental health services.

Factors Influencing Accessibility: Identifies obstacles that hinder individuals from accessing mental health services.

Factors Influencing Utilization: Explores the reasons impacting the utilization of mental health services.

Major themes

1. Accessibility to QMHPS

Seven (7) out of the participants have reported that there was lack of access to QMHPS. Some of the responses are as follows:

Sub-themes:

a) Availability of QMHPS

Quotes

'' No, I did not neither receive nor witness provision of QMHPS to any of my people in this community by either governmental or non-governmental agency" (Participant 1, Age)

"I doubt much if any one of us had ever receive any health service like that" (Participant 2, Age)

"There wasn't anybody to even comfort the victims, let alone provide QMHPS either during or after the banditry attack" (Participants 3, Age)

b) Easily accessible QMHPS

"I actually got so much concern as easy as possible after being hospitalized" (Participant 4, Age)

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"I was able to be assessed easily at the hospital after my Aunty who is also a medical personal had requested for that, and I was placed on some drugs which according a Nurse on duty, will calm my tension" (Participant 5, Age)

c) Affordability of QMHPS

"Well, one cannot say anything about the cost of these services as it was free for me" (Participant 4, Age)

"I was checked and treated free of charge" (Participant 5, Age)

d) Accessible QMHPS services

"I was treated with some drugs that I don't even know" (Participant 4, Age)

"I was injected before going to bed" (Participant 5, Age)

2. Factors influencing accessibility to QMHPS

Sub-themes:

a) Geographical location

"Well, we are actually far from cities and even from our neighboring villages that is why we often find getting these health services almost impossible" (Participant 6, Age)

"Even the security personnel are afraid of coming this remote area, let alone health personnel" (Participant 7, Age)

b) Road network

"A person who might have been affected and stays in here where roads are bad, how can he travel or keep on waiting for QMHPS" (Participant 8, Age)

*"Our roads are honestly bad enough to affect our accessibility to any program including heath (*Participant 1, Age)

c) Source of services

- Outreach/community-based services

"Nothing like that ever happen to this community" (Participant 9, Age)

"To be honest, health personnel don't like to be posted to work here even if requested" (Participant 10, Age)

3. Factors influencing utilization to QMHPS

Sub-themes:

a) Awareness to provision of QMHPS

- Presence of the services

"As for me, I never knew that these kinds of health services are being delivered to the victims of trauma except now" (Participant 2, Age)

"We were never told on this matter, so how can we get and even use this service" (Participant 11, Age)

b) Availability

"We don't have both the health facility and the health personnel" (Participant 12, Age)

"I have not any of the health services available" (Participant 5, Age)

c) Acceptability

"Why not accepting it" (Participant 13, Age)

"Personally, I wished that I was provided with these services, I would have use it" (Participant 3, Age)

Detailed Findings: Presents specific narratives, perspectives, and experiences shared by participants regarding the accessibility and utilization of mental health services. In essence, the results section outlines the key themes and detailed findings, providing a comprehensive overview of survivor experiences. This presentation enables readers to engage with the specific nuances of accessing mental health services in the context of rural banditry.

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Discussion

The identified themes and detailed findings in this research shed light on the complex landscape of accessing mental health services among survivors of rural banditry in North West Nigeria. The theme of "Accessibility to Quality Mental Health and Psychological Services (QMHPS)" underscores the significant challenges and barriers that survivors encounter in their attempt to reach mental health services. This resonates with existing literature emphasizing the impact of conflict-related factors on mental health service accessibility (Kukoyi et al., 2022). The geographical and logistical hurdles faced by survivors contribute to a critical understanding of the context-specific challenges in service delivery. In addition to accessibility, the theme "Factors Influencing Accessibility" delves into the obstacles hindering individuals from accessing mental health services. This aligns with the broader discourse on the multifaceted nature of barriers, including stigma, cultural factors, and resource limitations (Kukoyi et al., 2022). The exploration of these factors adds depth to the discussion, emphasizing the need for targeted interventions that address the specific challenges faced by survivors.

Furthermore, the theme "Factors Influencing Utilization" uncovers the reasons impacting the utilization of mental health services among survivors. This theme contributes valuable insights into the psychological, social, and structural determinants affecting individuals' decision-making processes regarding mental health service utilization. The nuanced understanding of these factors is crucial for tailoring interventions that resonate with the unique needs and circumstances of the survivors (Kukoyi et al., 2022). The "Detailed Findings" theme enriches the discussion by presenting specific narratives, perspectives, and experiences shared by participants. These qualitative insights provide a human dimension to the research, offering a deeper understanding of the emotional and contextual intricacies surrounding mental health service accessibility and utilization. Incorporating the participants' voices in the discussion adds authenticity and relevance to the findings, ensuring that policy and intervention recommendations are rooted in the lived experiences of the survivors.

Conclusion

In conclusion, the comprehensive overview of themes and detailed findings in the results section lays a foundation for an informed discussion on the challenges, barriers, and facilitators in the realm of mental health service accessibility and utilization for survivors of rural banditry in North West Nigeria. The study's contribution lies not only in the identification of these themes but also in the depth of understanding they provide, offering valuable insights for future research directions and evidence-based interventions.

This empirical literature review establishes the foundation for the study by providing a comprehensive overview of existing research on armed conflict, banditry, mental health disorders, and the provision of mental health services. By grounding the study in empirical evidence, it contributes to the growing body of knowledge that informs evidence-based interventions and policies aimed at addressing the mental health challenges faced by survivors of rural banditry in North West Nigeria.

Conclusion and Recommendations

In conclusion, this study calls for proactive nursing interventions to bridge the gaps in awareness, accessibility, and availability of mental health services for survivors of rural banditry. Nurses can serve as catalysts for change by engaging in community education, policy advocacy, capacity building, and fostering collaborative partnerships to ensure the well-being of those affected by the consequences of insecurity. Empirical evidence supports the proposed intervention strategies and policy recommendations. Investing in the provision of mental health services, coupled with implementing policies, strengthening the healthcare sector, and fostering partnerships, emerges as empirically grounded strategies to mitigate the consequences of insecurity on the population.

- There is urgent need for awareness campaign towards accessibility, availability and utilization of mental health services in regions affected by armed conflict
- The call for government policies mandating home-based agencies to prioritize mental healthcare aligns with empirical insights into the unique needs of those affected by rural banditry.
- Health care workers should also do more in educating the survivors of rural banditry on the possible coping styles considered to be effective and good for health.
- Lastly, there should be more researches of different approaches (quantitative, mixed method, qualitative and so on) regarding assessment of the implications of armed-conflict which eventually inform the interventions towards preventing development of mental disorders.

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INTEGRATING ARTIFICIAL INTELLIGENCE IN STUDENT SUPPORT SERVICES: A NECESSITY FOR NIGERIAN UNIVERSITIES

BY

Yusuf Suleiman
Department of Educational Management and Counselling Services, Faculty of Education, Al-Hikmah University, Nigeria
Email: yusufsueiman@alhikmah.edu.ng

Abstract
In the current landscape of Nigerian universities, the traditional mode of delivering student support services faces significant challenges that hinder the optimal development and success of students. The absence of advanced technological solutions, particularly the lack of integration of artificial intelligence (AI), contributes to several issues within the student support framework. As a result, there is a pressing need for Nigerian universities to adopt and integrate AI into their student support services. This paper explores the imperative need for the integration of artificial intelligence (AI) in student support services within the context of Nigerian universities. The rapid advancement of AI technologies presents a unique opportunity to enhance and revolutionize the way universities provide support to their students. By leveraging AI tools in various student-centric services, universities can significantly improve efficiency, accessibility, and overall student experience. The accessibility and responsiveness to be achieved through 24/7 AI-powered support services will mark a significant departure from traditional models, ensuring that students can access assistance at any time. This will not only reflect the adaptability of AI solutions but also addresses the diverse and evolving needs of the student population in Nigerian universities.
Keywords: Artificial Intelligence, Integration, Student Support Service, 24/7 Support, Nigerian Universities

Introduction

The integration of artificial intelligence (AI) in student support services is a global phenomenon that has gained momentum across universities worldwide. Many universities use predictive analytics powered by AI to identify students at risk of academic challenges. By analyzing historical and real-time data, institutions intervene early, providing targeted support to enhance student success and retention rates. The implementation of AI-driven chatbots and virtual assistants is a widespread global practice. Universities are adopting these tools to provide 24/7 support, enabling students to access information, guidance, and assistance at any time, fostering a more responsive and accessible support system (Hussain, 2023; Okagbue et al., 2023). In recent years, the landscape of higher education in Nigeria has witnessed significant changes, marked by an increased enrollment of students, diversification of academic programs, and the growing complexity of challenges faced by students (Abayomi et. al., 2021; Ajani, Tella, Salawu & Abdullahi, 2022; Akpomi, Nwile & Kayii, 2022). Nigerian universities, while striving to meet the demands of an expanding student population, often grapple with the limitations of traditional student support services in providing personalized assistance and timely interventions. The traditional approach to student support services in Nigerian universities primarily involves manual processes, face-to-face interactions, and conventional counseling methods. However, as the demands on these services intensify, there is a compelling need to explore innovative solutions that can effectively address the multifaceted needs of today's diverse student body (Onyejegbu, 2023).

The traditional student support services often provide a one-size-fits-all approach, lacking the ability to tailor support to the diverse learning styles, preferences, and challenges faced by individual students (Ali & Abdel-Haq, 2021; Yusuf, Zahyah & Thanslikan, 2018). According to Al-Malah, Jinah and ALRikabi (2020), students receive generic assistance that may not effectively address their unique needs, leading to suboptimal academic experiences and outcomes.

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Traditional support services operate within restricted hours and physical locations, making it difficult for students to access assistance promptly or seek guidance outside conventional working hours. Students often experience delays in receiving crucial information or support, affecting their ability to make timely decisions about their academic and personal development.

Artificial Intelligence (AI) emerges as a transformative force capable of revolutionizing the delivery of student support services in universities. AI technologies, including machine learning, natural language processing (Chatterjee & Bhattacharjee, 2020; Jha, 2023), and predictive analytics, offer the potential to create adaptive, personalized, and data-driven support systems that can significantly enhance the overall student experience. Universities cater to a diverse student population with varied academic backgrounds, learning styles, and support needs (Bearman, Ryan & Ajjawi, 2023; Bates, Cobo, Mariño & Wheeler, 2020). AI can provide tailored assistance, ensuring that each student receives the specific guidance required for their academic and personal development. The increasing number of students in Nigerian universities places strain on existing resources, making it challenging for traditional support services to keep pace with demand. AI solutions can automate routine tasks, freeing up human resources to focus on more complex and personalized aspects of student support (Lee, & Perret, 2022; Okunlaya, Syed Abdullah & Alias, 2022).

AI-powered systems can analyze vast amounts of data to create personalized learning paths, offer adaptive tutoring, and provide real-time feedback. This level of personalization is essential for meeting the unique needs of students, including those with different learning abilities and preferences (Nguyen et al., 2022; Olugbade et. al., 2022). Onyema (2020) opined that AI algorithms can analyze student data to identify patterns and trends, enabling universities to make informed decisions about resource allocation, intervention strategies, and program improvements. This data-driven approach enhances the efficiency and effectiveness of student support services. Internationally, universities are increasingly adopting AI in various aspects of student support, showcasing successful implementations and positive outcomes. Learning from these global trends can guide Nigerian universities in the effective integration of AI in their unique educational context. As Nigerian universities strive to provide a conducive and supportive learning environment, the integration of AI in student support services stands out as a necessity. In light of this, integrating artificial intelligence in student support services is not just a technological advancement; it is a necessity for Nigerian universities to address the shortcomings of traditional support models and ensure a more adaptive, personalized, and supportive learning environment for their students.

Brief History on University Education in Nigeria

University education in Nigeria has undergone significant transformations since the establishment of the first university in the country. As a critical component of the educational system, universities play a pivotal role in shaping the intellectual, cultural, and socio-economic landscape of the nation. Understanding the historical context and evolution of university education in Nigeria provides valuable insights into the challenges, achievements, and future prospects of higher education in the country (Abayomi et al., 2021; Olugbade et al., 2022). According to Onyejegbu (2023), University education in Nigeria is a formal, advanced level of learning that follows the completion of secondary education. It represents a higher tier of academic pursuit characterized by specialized and in-depth studies in various fields. Universities in Nigeria serve as institutions of higher learning, providing a platform for intellectual, professional, and personal development. University education is typically structured around degree programs, encompassing undergraduate and postgraduate levels, and plays a crucial role in preparing individuals for diverse roles in society. The University of Ibadan, established in 1948, marked the beginning of university education in Nigeria during the colonial era. It was founded to meet the growing demand for advanced education and to foster research and

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scholarship. Subsequently, other universities were established across the country, including Ahmadu Bello University (1962), University of Nigeria, Nsukka (1960), and Obafemi Awolowo University (1962), among others. The proliferation of universities continued over the years, with both federal and state governments establishing institutions to cater to the increasing demand for tertiary education. Nigerian universities typically follow a 4-6 year undergraduate program, depending on the discipline. Programs are structured into faculties, each offering a range of courses and academic specializations. Postgraduate studies, including masters and doctoral programs, contribute to the advancement of research and academic expertise (Akpomi, Nwile & Kayii, 2022).

Nigerian universities offer a diverse range of academic programs, encompassing humanities, sciences, engineering, social sciences, business, and health sciences. The National Universities Commission (NUC) oversees the accreditation and quality assurance of university programs, ensuring adherence to academic standards. Despite the growth in the number of universities, access to higher education remains a challenge due to the high demand and limited capacity. Infrastructure and Funding: Many universities face infrastructural deficits and financial constraints, impacting the quality of education and research facilities (Salau et al., 2022; Sanusi, Olaleye, Oyelere & Dixon, 2022). Ensuring consistent academic standards across institutions remains a concern, requiring continuous efforts in monitoring and accreditation. Nigerian universities have produced a significant number of skilled professionals, academics, and leaders who contribute to national development and global discourse. Research output has increased, with universities making notable contributions to scientific, technological, and social advancements. The history and current state of university education in Nigeria reflect both achievements and challenges. As the nation continues to prioritize education, strategic reforms and sustained investments are essential to ensure that Nigerian universities remain hubs of knowledge, innovation, and socio-economic development. The following are objectives of university education in Nigeria:

1. Knowledge Acquisition**:** To impart specialized and advanced knowledge in various academic disciplines. To foster a deep understanding of theoretical and practical aspects of chosen fields of study.
2. Critical Thinking and Problem-Solving**:** To develop critical thinking skills and the ability to analyze and solve complex problems and to encourage creativity and innovation in addressing challenges within and beyond academic domains.
3. Professional Competence: To equip students with the skills and knowledge necessary for professional practice in their chosen fields. To provide specialized training that aligns with the demands of the workforce.
4. Research and Innovation: To promote a culture of research and contribute to the advancement of knowledge. To cultivate an environment conducive to innovation and the development of new ideas.
5. Character Development: To instill ethical values, integrity, and a sense of responsibility in students. To foster social awareness, tolerance, and a commitment to community service.
6. Global Citizenship: To expose students to a diverse range of ideas, cultures, and perspectives. To prepare individuals to be global citizens capable of contributing to international dialogue and cooperation.
7. Leadership and Communication Skills: To cultivate effective communication skills, both written and oral. To nurture leadership qualities and the ability to work collaboratively in diverse teams.
8. Lifelong Learning: To instigate a passion for continuous learning and adaptation to evolving knowledge and technologies. To prepare individuals for a dynamic and ever-changing professional landscape.
9. Cultural and Social Awareness: To promote an understanding and appreciation of cultural diversity. To encourage social responsibility and active engagement in addressing societal challenges.
10. Personal Growth and Self-Discovery: To provide an environment for personal growth, self-discovery, and the development of a well-rounded individual. To empower students to become independent thinkers and lifelong learners.

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11. Contribution to National Development: To produce graduates who can contribute meaningfully to the socioeconomic development of Nigeria. To address societal needs through research, community engagement, and the application of knowledge.

University education in Nigeria, therefore, extends beyond the acquisition of academic knowledge; it encompasses the holistic development of individuals, preparing them for multifaceted roles in society and empowering them to make positive contributions to their communities and the nation at large.

An Overview of Student Support Services in Nigerian Universities

The global integration of artificial intelligence (AI) in student support services within universities reflects a transformative shift in higher education. This adoption is driven by the recognition of AI's potential to address challenges, enhance efficiency, and provide personalized support. Universities worldwide are leveraging AI to create personalized learning experiences for students. AI analyzes individual learning styles, preferences, and performance data to tailor educational content and support. This personalization enhances student engagement, promotes self-directed learning, and accommodates diverse learning needs on a global scale (Bearman, Ryan & Ajjawi, 2023; Bates, Cobo, Mariño & Wheeler, 2020).

Student Support Services in universities encompass a diverse range of intentional and structured initiatives designed to facilitate the holistic development, well-being, and academic success of students throughout their educational journey (Di Vaio, Palladino, Hassan & Escobar, 2020; Knox, 2020). According to Onyejegbu (2023), these services go beyond the traditional academic framework, recognizing that students thrive when they receive comprehensive support that addresses their academic, personal, social, and emotional needs. Student support services are integral components of the educational ecosystem, aiming to create an inclusive and nurturing environment conducive to learning and personal growth. Ouyang and Jiao (2022) are of the view that the overarching purpose of student support services is to foster an inclusive and supportive university environment that enables each student to thrive academically, socially, and personally. By addressing a spectrum of needs, universities aim to empower students to overcome challenges, make informed decisions, and maximize their potential as they progress through their educational journey and prepare for successful futures. In essence, student support services contribute significantly to the holistic development of students, ensuring they graduate not only academically proficient but also well-prepared for the complexities of life beyond the university setting. Nigerian universities offer a range of student support services to enhance the overall academic experience and well-being of students. These services cater to various aspects of student life, addressing academic, personal, and professional needs (Al-Malah, Jinah & ALRikabi, 2022). Yusuf (2017) highlights various student support services commonly found in Nigerian universities:

1. **Academic Advising:** Academic advisors provide guidance on course selection, program requirements, and career pathways. Assist students in planning their academic journey and achieving their educational goals.
2. **Counseling and Psychological Services:** Counseling services offer emotional and psychological support to students facing personal challenges. Provide counseling for stress management, anxiety, depression, and other mental health concerns.
3. **Library and Research Support:** Libraries offer resources, study spaces, and assistance in accessing academic materials. Research support services provide guidance on literature reviews, research methodologies, and citation styles.
4. **Career Development and Placement:** Career services offer guidance on career exploration, resume writing, and interview skills. Facilitate internship and job placement opportunities for students.

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5. **Student Health Services:** Health centers provide medical services, including basic healthcare, vaccinations, and health education. Promote overall student well-being through health awareness campaigns.
6. **Financial Aid and Scholarships:** Offer information on available scholarships, grants, and financial aid programs. Provide guidance on the application process for financial assistance.
7. **Student Organizations and Clubs:** Encourage student involvement through clubs, societies, and organizations. Foster social engagement, leadership development, and extracurricular activities.
8. **Disability Support Services:** Provide accommodations and support for students with disabilities. Ensure that academic and campus facilities are accessible to all students.
9. **IT and Technical Support:** IT services assist students with technical issues related to computer labs, internet access, and e-learning platforms. Provide training on using digital tools for academic purposes.
10. **Housing and Accommodation Services:** Assist students in finding suitable housing options on or off-campus. Address accommodation-related concerns and ensure a safe living environment.
11. **Student Grievance Redressal:** Establish mechanisms for students to address grievances and complaints. Ensure fair and transparent processes for conflict resolution.
12. **Language and Writing Support:** Offer writing centers and language support services for students seeking assistance with academic writing. Provide language proficiency programs for non-native speakers.
13. **Sports and Recreation Services:** Promote physical well-being through sports and recreational activities. Offer sports facilities, fitness programs, and intramural sports leagues.
14. **International Student Support:** Provide assistance to international students in matters related to immigration, cultural adjustment, and academic integration. Facilitate orientation programs for incoming international students.

Saibakumo (2021) opined that student support services collectively contribute to creating a conducive and supportive learning environment in Nigerian universities, fostering the holistic development of students. In summary, the comprehensive purpose of student support services in Nigerian universities is to create an inclusive, supportive, and conducive environment for students to thrive academically, emotionally, and personally. These services play a crucial role in addressing the diverse needs of students and promoting their overall well-being throughout their educational journey.

Concept of Artificial Intelligence

Artificial Intelligence (AI) refers to the interdisciplinary field of computer science that focuses on the development of intelligent machines capable of performing tasks that typically require human intelligence (Tyagi, Fernandez, Mishra & Kumari, 2020; Tzenios, 2020). These tasks encompass a wide range of cognitive functions, including learning, reasoning, problem-solving, perception, natural language understanding, and decision-making. The overarching goal of artificial intelligence is to create machines or systems that can emulate and, in some cases, surpass human intelligence in specific domains. AI systems leverage advanced algorithms, data, and computational power to simulate cognitive processes, enabling them to analyze information, adapt to changing circumstances, and perform tasks autonomously (Villegas-Ch, Arias-Navarrete & Palacios-Pacheco, 2020; Zhai et. al., 2021). The history of artificial intelligence (AI) is a fascinating journey marked by conceptual breakthroughs, technological advancements, and paradigm shifts. The fascination with artificial beings and intelligent machines can be traced back to ancient civilizations, including Greek mythology and ancient Chinese and Egyptian texts. Philosophers like Aristotle and automata builders in ancient Greece contributed to early discussions on the nature of thought and mechanism. The Renaissance saw an increased interest in automata, with inventors like Leonardo da Vinci designing complex mechanical devices. The Enlightenment period featured philosophical discussions on the nature of cognition, laying

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the groundwork for later AI concepts (Raffaghelli, Rodríguez, Guerrero-Roldán & Baneres, 2022; Renz & Hilbig, 2020). The Industrial Revolution introduced mechanization and automation, inspiring inventors to explore the possibilities of artificial machines. Charles Babbage's Analytical Engine (1837) is considered an early precursor to the concept of a programmable computer. Alan Turing's theoretical work on computation (1936) and the Turing Machine provided a foundational understanding of computation and algorithms. During World War II, Turing and others worked on code-breaking machines, laying the groundwork for electronic computing (King & ChatGPT, 2023; Kolog et. al., 2022).

The term "artificial intelligence" was coined by John McCarthy in 1956 during the Dartmouth Conference, marking the birth of AI as a distinct field. Early AI pioneers, including Marvin Minsky and Nathaniel Rochester, developed the first neural network, the Perceptron, in 1957. Cybernetics, with figures like Norbert Wiener, influenced early AI thinking, emphasizing feedback mechanisms and self-regulation. Early optimism in AI research led to the development of rule-based systems (symbolic AI), focusing on logic and knowledge representation. However, high expectations without corresponding technological breakthroughs led to a period known as the "AI winter," marked by funding cuts and skepticism. The 1980s saw a resurgence of interest in AI with the development of expert systems, which emulated human expertise in specific domains. Technologies like Lisp programming language and the development of knowledge-based systems contributed to this era (Bates, Cobo, Mariño & Wheeler, 2020; Chatterjee & Bhattacharjee, 2020). Researchers revived interest in neural networks, exploring connectionist models inspired by the structure and function of the human brain. Parallel processing and back propagation algorithms were developed, contributing to advancements in pattern recognition and machine learning. The 21st century witnessed a renaissance in AI fueled by advances in machine learning, particularly with the use of large datasets and improved algorithms. Deep learning, a subset of machine learning, gained prominence with breakthroughs in image and speech recognition, natural language processing, and gaming (Jha, 2023; Knox, 2020). AI applications have become integral to various industries, including healthcare, finance, transportation, and entertainment. Conversational AI, autonomous vehicles, and reinforcement learning are among the cutting-edge areas of research and development. Ethical considerations, bias in AI, and responsible AI practices have gained increased attention in discussions surrounding the deployment of AI technologies. The history of AI is a dynamic narrative marked by periods of excitement, setbacks, and persistent innovation. As technology continues to advance, AI's impact on society, industry, and daily life is expected to grow exponentially (Tzenios, 2020). According to Zhai et. al. (2021), the field of AI encompasses various subdomains, each addressing different aspects of intelligent behavior. These include:

a. **Machine Learning (ML):** ML is a subset of AI that focuses on the development of algorithms and statistical models that enable machines to learn from data and improve their performance over time without explicit programming.
b. **Natural Language Processing (NLP):** NLP involves the interaction between computers and human language, enabling machines to understand, interpret, and generate human-like text or speech.
c. **Computer Vision:** This field enables machines to interpret and make decisions based on visual information, akin to human visual perception. Computer vision is crucial for tasks such as image recognition and object detection.
d. **Robotics:** AI is applied to design intelligent robotic systems capable of autonomous or semi-autonomous operation, allowing them to interact with their environment and perform tasks.
e. **Expert Systems:** These are AI systems designed to mimic the decision-making ability of a human expert in a specific domain. They use a knowledge base and an inference engine to solve complex problems.
f. **Artificial Neural Networks:** Inspired by the structure of the human brain, artificial neural networks are computational models that process information in a way similar to the human nervous system. They are fundamental to deep learning.

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g. Autonomous Systems: AI is employed in the development of autonomous systems, such as self-driving cars and drones, capable of navigating and making decisions without human intervention.

The concept of artificial intelligence is not limited to mimicking human intelligence but extends to creating intelligent systems that can outperform humans in specific tasks, often through the analysis of vast amounts of data and the identification of patterns that may elude human cognition. As AI continues to evolve, ethical considerations, transparency, and responsible deployment are crucial aspects in ensuring that these technologies benefit society while minimizing potential risks (Idemudia & Makinde, 2022).

The Role of Artificial Intelligence in Student Support Services in Universities

The integration of artificial intelligence (AI) in student support services within universities is increasingly becoming a transformative force, revolutionizing the way institutions assist and engage with their students. The role of AI in student support services is multifaceted, encompassing various aspects aimed at enhancing efficiency, personalization, and overall student success. Here are key roles that AI plays in this context:

Personalized Learning Pathways: AI analyzes individual student data, including learning preferences, strengths, and weaknesses, to create personalized learning paths. Enables tailored educational experiences, optimizing student engagement and academic performance by addressing specific learning needs.

Adaptive Tutoring and Learning Assistance: AI-powered tutoring systems adapt to students' progress, providing real-time assistance, feedback, and additional resources. Enhances the effectiveness of learning support, offering immediate guidance to students, especially in challenging subjects.

Predictive Analytics for Student Success: AI algorithms analyze historical and real-time data to identify patterns that may indicate academic challenges or opportunities for success. Enables proactive interventions by identifying students at risk, allowing universities to provide timely support and resources.

Chatbots for 24/7 Support: AI-driven chatbots provide instant responses to student queries, offering guidance on various topics such as course information, enrollment, and deadlines. Enhances accessibility and responsiveness, ensuring that students have quick access to information and support outside regular office hours.

Automated Administrative Processes: AI automates routine administrative tasks such as enrollment, grading, and scheduling, reducing the administrative burden on staff. Frees up human resources for more personalized interactions with students, improving overall efficiency in university operations.

Career Guidance and Placement Assistance: AI analyzes student skills, preferences, and market trends to provide personalized career advice and guidance. Supports students in making informed career choices and facilitates smoother transitions from academia to the workforce.

Emotional Support and Mental Health Monitoring: AI tools monitor and analyze behavioral patterns to identify signs of emotional distress or mental health concerns. Allows for early detection and intervention in mental health issues, contributing to a supportive and well-being-focused campus environment.

Language Processing for Academic Assistance: Natural Language Processing (NLP) technologies enable AI to understand and respond to students' inquiries in natural language. Improves communication and accessibility, making it easier for students to seek assistance and engage with support services.

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Data-Driven Decision-Making: AI assists administrators in making data-driven decisions by analyzing large datasets related to student performance, engagement, and satisfaction. Enhances strategic planning, resource allocation, and policy development based on evidence-backed insights.

Early Warning Systems: AI identifies potential issues or challenges students may face and alerts support services to take proactive measures. It enables universities to address problems at an early stage, mitigating the risk of academic difficulties and improving student retention rates.

Taken together, the role of AI in student support services in universities is to augment and optimize existing processes, providing personalized, timely, and efficient assistance to students. By leveraging AI technologies, universities can create a more adaptive, supportive, and student-centric environment, ultimately contributing to enhanced academic success and overall well-being.

Strategies that can be adopted for AI Integration in Student Support Services in Nigerian Universities

The lack of AI integration prevents universities from effectively utilizing student data for predictive analytics, early intervention, and the identification of at-risk students (Birnin-Kudu, Awang & Osman, 2022; Mupaikwa, 2023). Without proactive measures based on data-driven insights, universities may struggle to identify and address academic challenges, potentially leading to increased dropout rates (Salas-Pilco, Xiao & Hu, 2022). Chaka (2023) and Christian (2022), the successful integration of artificial intelligence (AI) in student support services in Nigerian universities requires careful planning, strategic implementation, and a focus on ethical considerations. Here are strategies that can be adopted for effective AI integration in student support services:

1. **Needs Assessment and Stakeholder Engagement:** Conduct a comprehensive needs assessment to identify specific challenges and areas where AI can enhance student support. Involving all stakeholders, including students, faculty, and administrative staff, ensures that the adopted AI solutions address real needs and concerns.

2. **Infrastructure and Technology Readiness**: Assess and upgrade the technological infrastructure to support AI applications, including robust data management systems and high-speed connectivity. A technologically prepared environment is essential for the seamless implementation and functioning of AI-powered solutions.

3. **Capacity Building and Training:** Provide training programs for staff and faculty to enhance their understanding of AI technologies, their integration, and ethical considerations. It ensures that university personnel are equipped to leverage and manage AI tools effectively.

4. **Collaboration with AI Experts and Industry Partners**: Foster collaborations with AI experts, industry partners, and technology firms to leverage external expertise and stay abreast of AI advancements. Collaborative efforts bring in diverse perspectives, fostering innovation and ensuring the integration of cutting-edge AI technologies.

5. **Ethical Guidelines and Governance Framework:** Develop and implement clear ethical guidelines for the use of AI in student support services, addressing issues such as privacy, transparency, and fairness. Establishing ethical standards ensures responsible AI use and builds trust among students, staff, and other stakeholders.

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6. **Pilot Programs and Incremental Implementation:** Initiate small-scale pilot programs to test AI applications in specific areas of student support before full-scale implementation. Pilots allow for testing, refinement, and troubleshooting, minimizing the risk of large-scale implementation challenges.
7. **User-Friendly Interfaces and Accessibility:** Design AI interfaces that are user-friendly and accessible to diverse groups of students, ensuring inclusivity. A user-friendly interface encourages student engagement and adoption of AI-driven support services.

8. **Data Security and Privacy Measures:** Implement robust data security measures and privacy protocols to safeguard student information and comply with data protection regulations. Protecting student data is crucial for maintaining trust and ensuring compliance with legal and ethical standards.

By adopting the strategies mentioned above, Okagbue (2023) opined that Nigerian universities can navigate the complexities of AI integration in student support services, ensuring that the implementation is well-aligned with the needs of the university community and contributes positively to the overall student experience. Furthermore, integrating artificial intelligence (AI) into student support services in Nigerian universities requires a comprehensive approach that involves the development and implementation of various facilities and resources. Here are key facilities required for successful AI integration in student support services as suggested by Bates, Cobo, Mariño and Wheeler (2020):

Table 1: Facilities Required for Successful AI Integration in Student Support Services in Nigerian Universities

S/N	Facility	Purpose	Component
1	High-Performance Computing Infrastructure	To support the processing demands of AI algorithms, universities need robust computing infrastructure, including powerful servers and high-performance clusters.	Servers with GPUs (Graphics Processing Units) or TPUs (Tensor Processing Units), storage solutions, and network infrastructure.
2	Data Storage and Management Systems	AI relies on vast datasets for training and analysis. Adequate data storage and management systems are essential.	Centralized databases, data warehouses, and data management platforms that ensure data security and accessibility.
3	AI Development and Research Labs	Dedicated spaces for researchers and developers to design, test, and optimize AI algorithms and applications.	Workstations equipped with AI development tools, simulation environments, and access to relevant software libraries.
4	Collaboration Spaces	Spaces for interdisciplinary collaboration among AI experts, data scientists, educators, and student support professionals.	Meeting rooms, collaboration tools, and interactive spaces for cross-disciplinary teamwork.
5	Network Infrastructure for Connectivity	Ensure seamless connectivity between AI systems, databases, and user interfaces.	High-speed internet, secure network protocols, and communication infrastructure.
6	Training and Development Centers	Train staff and students on AI technologies, ethical considerations, and best practices.	Training materials, workshops, and access to online courses or certifications related to AI.
7	Security and Privacy Infrastructure	Ensure the security and privacy of student data processed by AI systems.	Secure access controls, encryption protocols, and compliance with data protection regulations.

8	AI-enabled Student Portals and Platforms	Provide students with user-friendly platforms that leverage AI for personalized support and guidance.	Web portals, mobile applications, and interfaces that integrate with AI-driven chatbots and virtual assistants.
9	Cloud Computing Services	Access scalable computing resources and storage solutions for AI applications without the need for extensive on-premises infrastructure.	Partnerships or subscriptions with cloud service providers offering AI capabilities.
10	AI Integration Support Teams	Provide ongoing technical support and assistance for the integration and maintenance of AI systems.	Trained IT personnel, data scientists, and AI specialists available for troubleshooting, updates, and system optimization.
11	Ethical AI Committees	Ensure that AI applications adhere to ethical standards and address potential biases.	Committees or teams responsible for reviewing AI algorithms, monitoring ethical considerations, and ensuring responsible AI practices.
12	Monitoring and Evaluation Systems	Regularly assess the performance and impact of AI-integrated student support services.	Evaluation metrics, key performance indicators (KPIs), and feedback mechanisms for continuous improvement.
13	User Training and Support	Provide training and support for staff and students to effectively utilize AI-driven tools and services.	Training programs, documentation, and helpdesk support for users.
14	Partnerships with AI Solution Providers:	Collaborate with external AI solution providers to access cutting-edge technologies and expertise.	Partnerships, collaborations, or contracts with AI companies offering specialized services.

By establishing these facilities and resources, Nigerian universities can create an environment conducive to the successful integration of AI into student support services, ensuring that the benefits of AI are maximized while addressing potential challenges.

Potential Benefits of AI Integration in Student Support Services in Nigerian Universities

The integration of artificial intelligence (AI) in student support services in Nigerian universities offers a myriad of potential benefits, enhancing the overall educational experience and contributing to the success and well-being of students (Chaka, 2023; Idemudia & Makinde, 2022). The integration of AI in student support services in Nigerian universities holds significant potential to positively impact student success, well-being, and the overall effectiveness of support systems. These benefits contribute to creating a more responsive, personalized, and supportive learning environment for students (Birnin-Kudu, Awang & Osman, 2022). Here are key advantages associated with AI integration in student support services:

1. ***Efficient Academic Advising****:* AI-driven chatbots and virtual advisors provide instant and accurate information on course selection, program requirements, and academic policies. It streamlines academic advising processes, ensuring students receive timely guidance on their academic journeys.

2. ***Early Identification of At-Risk Students*****:** Predictive analytics in AI identify patterns that may indicate academic challenges, allowing for early intervention with at-risk students. It improves student retention rates by providing timely support and resources to those who may be facing academic difficulties.

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3. ***24/7 Access to Support Services*:** AI-powered chatbots offer around-the-clock assistance, providing instant responses to student queries and concerns. Enhances accessibility and responsiveness, ensuring that students can seek support at any time, including outside regular office hours.

4. ***Improved Student Engagement*:** AI-driven platforms facilitate interactive and engaging learning experiences, increasing student participation and motivation. It fosters a positive and dynamic learning environment, contributing to higher levels of student engagement and satisfaction.

5. ***Efficient Communication and Feedback*:** AI-driven communication tools enable efficient and personalized communication between students, faculty, and support services. Facilitates timely feedback, creating a more responsive and communicative university ecosystem.

6. ***Accessibility for Special Needs Students*:** AI solutions can be tailored to support students with disabilities, providing accessibility features and adaptive technologies. It promotes inclusivity, ensuring that all students have equal access to educational resources and support services.

7. ***Faster Response to Student Queries:*** AI-powered chatbots respond instantly to student queries, reducing wait times for information and support. It enhances the overall student experience by providing quick and efficient assistance.

Furthermore, Okagbue, et al. (2023) submitted that the integration of AI in student support services extends beyond academic realms to encompass mental health and well-being. The ability of AI tools to monitor and analyze behavioral patterns for early detection of emotional distress underscores a commitment to nurturing a supportive and holistic campus environment. According to Owolabi et al. (2022), the automation of administrative processes, coupled with adaptive tutoring and learning assistance, streamlines university operations and enhances the effectiveness of learning support. AI's role in facilitating efficient communication, feedback, and accessibility for special needs students further cements its position as a catalyst for positive change in the educational landscape. AI's role in career guidance and placement assistance is pivotal, providing students with data-driven insights into market trends and skills development. This not only prepares students for the workforce but also aligns educational offerings with the demands of the job market, contributing to improved employability.

Potential Obstacles to AI for Student Support Services in Nigerian Universities

While the integration of artificial intelligence (AI) in student support services in Nigerian universities brings about numerous benefits, it also poses several potential challenges that should be considered and addressed as opined by Hussain (2023). Here is a comprehensive overview of potential challenges associated with AI integration in student support services:

1. Unequal access to technology among students, particularly those from economically disadvantaged backgrounds, may limit the effectiveness of AI-driven support services.

2. The collection and analysis of large volumes of student data raise privacy concerns. Ensuring the secure handling of sensitive information is crucial to maintaining trust.

3. Ensuring the ethical use of AI in student support services, including preventing bias in algorithms, avoiding discriminatory practices, and maintaining transparency.

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4. Resistance from staff, students, or administrators to adopt new AI technologies due to unfamiliarity, skepticism, or concerns about job displacement.
5. The initial cost of implementing AI systems, including acquiring technology, training staff, and maintaining infrastructure, may pose financial challenges for some universities.
6. A shortage of skilled professionals, including data scientists and AI experts, who can develop, implement, and maintain AI systems in the university context.
7. Compatibility issues and integration challenges with existing university systems, databases, and platforms may hinder the seamless adoption of AI.
8. AI algorithms may inadvertently perpetuate biases present in historical data, leading to unfair treatment of certain student groups. Ensuring fairness is a critical consideration.
9. The potential for overreliance on AI-driven support services, leading to a reduction in human interactions and personalized attention, which is crucial in support services.

Addressing these challenges requires a strategic and collaborative approach involving university leadership, AI developers, educators, and students to ensure the ethical, equitable, and effective integration of AI in student support services.

Conclusion

In conclusion, the integration of artificial intelligence (AI) into student support services in Nigerian universities will represent a transformative leap forward, promising to redefine the educational landscape and significantly enhance the overall student experience. The comprehensive benefits offered by AI integration underscore its potential to address multifaceted challenges and cultivate a dynamic, student-centric environment. The personalized learning experiences facilitated by AI-driven technologies will not only cater to diverse learning styles but also empower students to navigate their academic journeys with informed choices. The early identification of at-risk students through predictive analytics fosters a proactive support system, demonstrating AI's potential to positively impact student retention rates and academic success. While celebrating the numerous advantages, it is essential to acknowledge the need for responsible AI practices. Ethical considerations, data privacy, and continuous monitoring to mitigate biases are crucial aspects that must be addressed in the ongoing integration of AI into student support services. In essence, the integration of AI into student support services in Nigerian universities will herald a new era characterized by innovation, efficiency, and student-focused solutions. By harnessing the potential of AI, universities in Nigeria can not only overcome existing challenges but also create an educational ecosystem that is adaptive, inclusive, and geared towards fostering the holistic development of each student. The journey towards the widespread adoption of AI in student support services represents a commitment to advancing education, empowering students, and preparing them for the opportunities and challenges of the future.

Recommendations

The successful integration of artificial intelligence (AI) in student support services within Nigerian universities requires careful planning, strategic implementation, and ongoing evaluation. Here are recommendations for university management to effectively ensure the integration of AI in student support services: Specifically, they need to:

- Prioritize a thorough needs assessment to identify specific challenges, opportunities, and requirements within the student support services. Understanding the unique needs and existing infrastructure will guide the strategic deployment of AI technologies to address specific areas of improvement.
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- Clearly define the objectives and goals of integrating AI in student support services, aligning them with the overall mission and strategic priorities of the university. Having well-defined goals ensures that AI implementations are purposeful and contribute to the overarching vision of the institution.

- Create a detailed roadmap outlining the stages of AI integration, including pilot programs, scaling strategies, and timelines for full implementation. A phased approach allows for controlled testing, gradual adaptation, and continuous refinement based on feedback and outcomes.

- Provide training programs for faculty and staff to familiarize them with AI technologies, ethical considerations, and effective utilization in student support services. A well-trained workforce is essential for the successful implementation and ongoing management of AI systems.

- Implement robust data security and privacy measures to safeguard student information and comply with relevant regulations. Maintaining the confidentiality and integrity of student data is critical for building trust and compliance with legal and ethical standards.

- Formulate ethical guidelines for the development and use of AI in student support services. Establish a governance structure to oversee ethical considerations. Ethical guidelines ensure responsible AI practices, mitigate biases, and promote transparency in decision-making processes.
-
- Foster collaboration between academic departments, IT specialists, data scientists, and student support professionals to ensure a holistic and integrated approach. Interdisciplinary collaboration ensures that AI solutions are well-informed, address diverse perspectives, and meet the needs of all stakeholders.

- Ensure that AI solutions are designed with inclusivity in mind, considering diverse learning styles, languages, and accessibility requirements. Inclusivity ensures that all students, including those with special needs, can benefit from AI-driven support services.

- Maintain transparent communication with the university community about the goals, benefits, and potential impacts of AI integration. Transparent communication builds trust, manages expectations, and addresses concerns, fostering a positive reception of AI initiatives.

- Establish mechanisms to stay informed about emerging AI technologies, trends, and best practices, ensuring the continuous evolution and improvement of student support services. The field of AI is dynamic; staying adaptive allows the university to harness new opportunities and technologies as they emerge.

By following these recommendations, Nigerian universities can navigate the complexities of integrating AI in student support services effectively, ensuring a seamless and impactful transformation that benefits students, faculty, and the institution as a whole.

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HYBRIDIZATION OF MULTILAYER PERCEPTRON AND GENETIC ALGORITHM FOR LUNG CANCER DISEASE DIAGNOSIS USING MICRO-ARRAY DATASET

BY

[1]Ahmed Abiodun Taofik, [2]Issah Abolaji Yusuf & [3]Muhammed Kamaldeen Jimoh
[1&2]Department of Computer Science, School of ICT and Management Science, Kwara State College of Arabic and Islamic Legal Studies, Ilorin.
[3]Department of Educational Technology, University of Ilorin, Ilorin, Nigeria.
Email: ahmedtaophic1@gmail.com

Abstract
This paper attempt a shift in paradigm from conventional methods by formulating hybridizing model of genetic algorithm and Multilayer perceptron for optimization of relevant features of the genes and classification of lung cancer disease respectively. Microarray data is to be considered as a dataset. The paper therefore, adopt hybridize model of Genetic Algorithm and MLP, it was developed and simulated in Weka environment using microarray cancer dataset. The solution found by the combined Genetic Algorithm and Multilayer Perceptron performed effectively well. The results presented in this paper revealed that the proposed hybridization of Genetic Algorithm and Multilayer Perceptron performs better with over 90% accuracy when used for classification of microarray dataset of lung cancer.
Keywords: Cancer, Diagnosis, Genetic Algorithm, Multilayer Perceptron, Hybridization

Introduction

Early detection of cancer disease is the key of its cure. The automatic diagnosis of cancer is an important, real-world medical problem. Cancer is one of the most common and deadly diseases in the world Ganesan, et al., (2020). The conventional diagnostic techniques are not always effective as they rely on the physical and morphological appearance of the tumor. According to Khalid and Atif (2020), early stage prediction and diagnosis is difficult with those conventional techniques. Moreover, these techniques are also costly, time consuming, requires large laboratory setup and highly skilled persons. It is well known that cancers are involved in genome level changes. Thus, it implies that for a specific type of cancer there could be pattern of genomic change. If those patterns are known, then it can serve as a model for the detection of that cancer and will help in making better therapeutic decisions Singh, et al., (2019) as quoted in Khalid and Atif (2020). Cancer is one of the most common deadly diseases in the world. The conventional diagnostic techniques are not always effective as they rely on the physical and morphological appearance of the tumor (Jimoh, 2015). Artificial intelligence is a branch of computer science and a discipline in the study of machine intelligence that is, developing intelligent machines or intelligent systems imitating, extending and augmenting human intelligence through artificial means and techniques to realize intelligent behavior. Its techniques offer advantages such as adaptation, fault tolerance, learning and human-like behavior over conventional computing techniques. The idea is to combine the pathological, intelligent and statistical approaches to enable simple and accurate diagnosis and prognosis. Artificial intelligence has been used in various areas such as cancer diseases diagnosis. It was revealed by American Cancer Society (2020) that cancer begins when cells in a part of the body start to grow out of control. There are many kinds of cancer, but they all start because of out-of-control growth of abnormal cells. Cancer cell growth is different from normal cell growth. Instead of dying, cancer cells continue to grow and form new abnormal cells. Cancer cells can also invade (grow into) other tissues, something that normal cells cannot do. Growing out of control and invading other tissues are what makes a cell a cancer cell American Cancer Society (2020).

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The ability of the physicians to effectively treat and cure cancer is directly dependent on their ability to detect cancers at their earliest stages. According to World Health Organization –WHO (2021), cancer is a generic term for a large group of diseases that can affect any part of the body. Other terms used are malignant tumours and neoplasms. Cancer is a leading cause of death worldwide, accounting for about 10 million deaths in 2020. The most common causes of cancer death are cancers of lung (about 3 million deaths), liver (about 1million deaths), stomach (1 million deaths), colorectal (about 1 million deaths), breast (more than 521 000 deaths) and oesophageal cancer (more than 400 000 deaths) (WHO, 2020). Projections based on the GLOBOCAN 2020

The scope of this research is to apply Multilayer Perceptron and genetic algorithms techniques to Health care, specifically to the diagnosis of lung cancer patients. Also, it involves formulating and implementing a neural-genetic crossbreeding model to develop a system for diagnosing lung cancer disease using microarray data. A comprehensive study of the process of neural network such as (learning process, transfer function, back-propagation algorithm, feed-forward networks, network layers, perceptron, selection of weights, data description and training of data) and main ingredients of genetic algorithm such as chromosome, fitness, selection and crossover / Mutation were explored and implemented.

Literature Review

According to American Canser Society (2021), cancer can be described as a group of diseases characterized by the uncontrolled growth and spread of abnormal cells. If the spread is not controlled, it can result in death. Cancer is caused by both external factors (tobacco, infectious organisms, chemicals, and radiation) and internal factors (inherited mutations, hormones, immune conditions, and mutations that occur from metabolism). These causal factors may act together or in sequence to initiate or promote the development of cancer. Ten or more years often pass between exposure to external factors and detectable cancer. According to Cancer Research UK (2020), bodies receive oxygen through the lungs and pass it into the bloodstream so that it can circulate to everybody cell. The muscles of our chest and a large flat muscle under the lungs (the diaphragm – pronounced di-a-fram) are used to draw air into the lungs. The diaphragm is at the base of the chest cavity, just above the stomach. The chest cavity is sealed so that when you breathe in and the muscles make it bigger, this creates a vacuum inside, which draws air in through your nose and down into the lungs. Khalid and Atif (2020) presented a comprehensive evaluation of machine learning techniques for cancer class prediction based on microarray data,various techniques were implied on prostate cancer dataset in oder to accuratly predict cancer class. The reserchers applied combination of statistical techniques such as inter-quartile range and t-test, which has been effective in fitering significant genes and minimizing noies from data. However, each technique were handle monolthically on the prostate cancer dataset and this approch does not uselung cancer dataset. Shelly, et al., (2011) conducted a survey on various data mining classification techniques for enhancing breast cancer diagnosis and prognosis. The reserachers also summarized various related articles on breast cancer diagnosis and prognosis. However, this work does not consider development of an enhanced approach for lung cancer diagnosis. Vitoantonio, et al., (2006) proprosed approch of combining two techniques which are genetic algorithms and atificial neural networks to analyse microarray data as a distributed approach. In the research work, the researchers address the problem of gene selection using a distributed genetic algorithm that evolves populations of possible solution and uses an artificial neural network in order to test the gane signatures and ability to correctly classify cases belonging to the test set. The researchers did not apply these techniques to solve the problem of cancer disease diagnosis

Genetic algorithms (GAs) “were invented by John Holland in the 1960s and were developed by Holland and his students and colleagues at the University of Michigan in the 1960s and the 1970s. In contrast with evolution strategies and evolutionary programming, Holland's original goal was not to design algorithms to solve specific problems, but

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rather to formally study the phenomenon of adaptation as it occurs in nature and to develop ways in which the mechanisms of natural adaptation might be imported into computer systems. Multilayer Perceptron have had a unique history in the realm of technology. Unlike many technologies today which either immediately fail or are immediately popular, neural networks for popular for a short time, took a two-decade hiatus, and have been popular ever since (Eric, 2020). The first step toward artificial neural networks came in 1943 when Warren McCulloch, a neurophysiologist, and a young mathematician, Walter Pitts, wrote a paper on how neurons might work. They modeled a simple neural network with electrical circuits. Reinforcing this concept of neurons and how they work was a book written by Donald Hebb. Every cell in the human body carries an individual's genetic information in DNA, of which genes are specific parts that encode for proteins to allow biological activity to occur. Whether certain genes are active or not can be measured using microarrays, which can probe tens of thousands of genes simultaneously (Tom, 2005). The first arrays, created in the mid80s, were called macro arrays. They were fabricated by spotting DNA probes on a membrane-type material with spot sizes of about 300 microns, which limited the density of the spots to about 2000 probes.

Research Objectives

The objectives are:

i. to formulate genetic- multilayer perceptron for lung cancer disease diagnosis;
ii. to implement the formulated model in WEKA (Waikato Environment for Knowledge Analysis) development environment;
iii. to validate the efficiency of the model
iv. to know he accuracy of the model

Methodology

Proposed System Framework

The proposed system consists of different modules and divided into two stages as shown in Figure 1 and 2 Stage one describe how the complexity of microarray data is reduced using Genetic Algorithm while stage two involves the use of Neural Network for cancer diseases classification.

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Stage 1: Genetic Algorithms to reduce the complexity of the microarray data

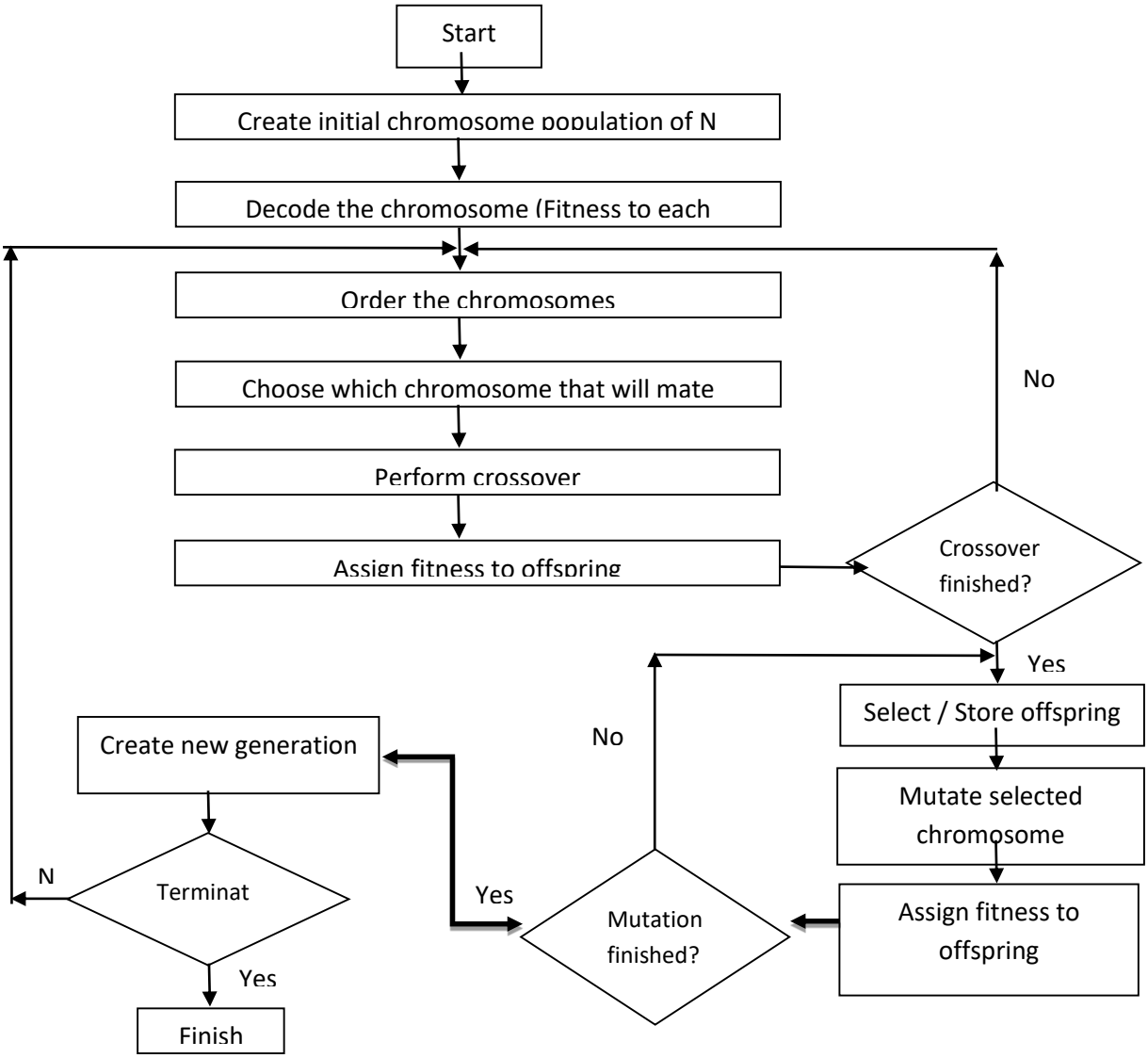
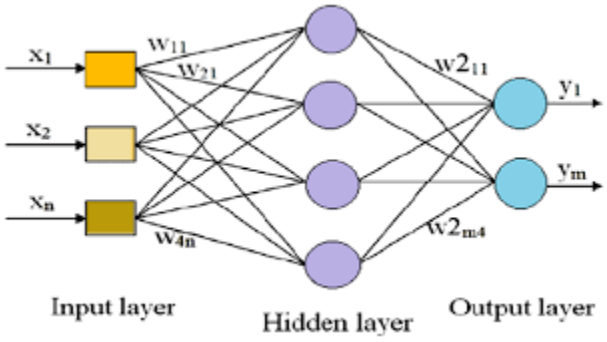


Figure 1

Proposed system framework (Genetic Algorithm)



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Figure 2 Proposed system frame work (Multilayer Perceptron)

The above process is repeated until some condition is satisfied (Rahul, Narinder, and Yaduvir, (2019)). Algorithmically, the basic genetic algorithm (GAs) is outlined as below:

Step 1: Generate initial Population P(0) at random, and set i=0;
Step 2: repeat
Step 3: Evaluate the fitness of each individual in P(i)
Step 4: Select parents from P(i) based on their fitness in P(i)
Step 5: Apply crossover to create offspring from parents
Step 6: Apply mutation to the offspring
Step 7: Select generation P(i+1) from current offspring, O(i), and parents P(i)
Step 8: Until finished

Findings and Discussion

The goal of this research is to hybridize genetic algorithm and Multilayer Perceptron for lung cancer disease diagnosis based on examine data. Genetic algorithm reduces complexity of microarray dataset, that is, feature selection of the most relevant attributes and MLP does the classification. The implementation was carried out using Weka (Waikato Environment for Knowledge Analysis) which was developed at the University of Waikato, New Zealand. Weka is written in Java and commonly used for machine learning. Its features include preprocessing, classification, clustering, association, feature selection and visualization among others. The experiments were carried out on a 64-bit operating system with Windows 8.0, Intel(R) Core(Tm) i7- 3632QM CPU @ 2.20GHz and 8Gb of RAM. Due to the iterative nature of the experiments and resultant processing power required, the Java heap size for Weka version 3.6.12 was set to 1024MB to assess the effectiveness of the algorithms. The dataset used in this work is lung cancer dataset and was taken from biomedical dataset repository (http://www.chestsurg.org/microarray.htm) for the classification between malignant pleural mesothelioma (MPM) and adenocarcinoma (ADCA) of the lung. There are 149 tissue samples (15 MPM and 134 ADCA). The training set contains 69 (46.31%) of them, 10 MPM and 59 ADCA. The rest 80 (53.69%) samples are used for testing as shown in figure 3. (a and b) and 4 (a and b) respectively. Each sample is described by 12533 genes and figure 5 shows the visualization of the microarray dataset. Figure 6 show the spreadsheet copy of both training and testing dataset respectively.



Figure 3(a): The training set contains 69 of tissue samples, 10 MPM and 59 ADCA

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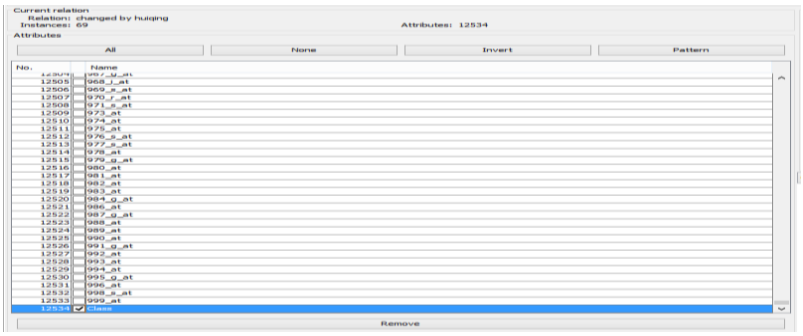


Figure 3 (b): The training set contains 59 of tissue samples and each sample is described by 12533 attributes plus class attribute making total of 12534 attributes

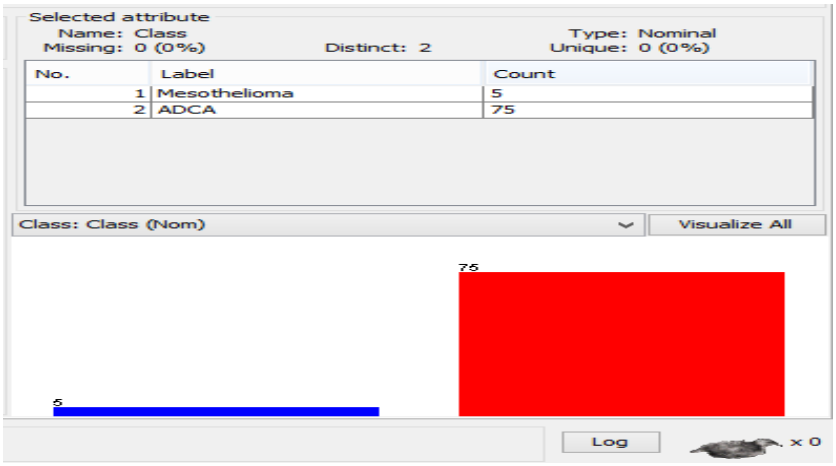
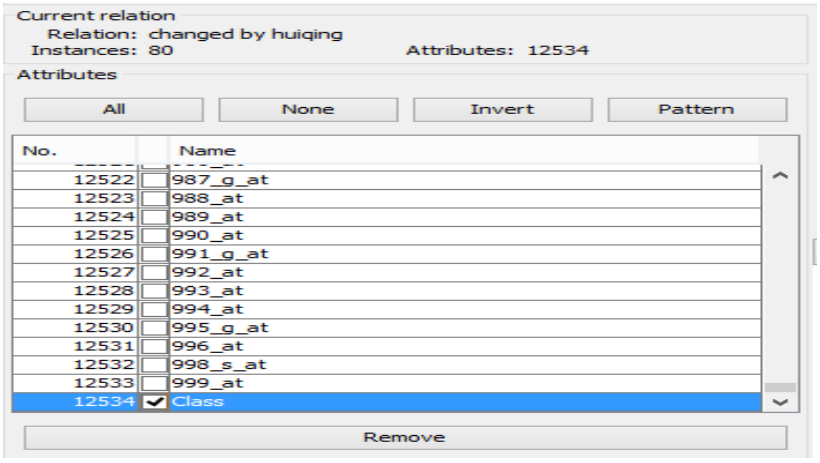


Figure 4(a): The testing set contains 80 of tissue samples,5 MPM and 75 ADCA



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Figure 4(b): The testing set contains 149 of tissue samples and each sample is described by 12533 attributes plus class attribute making total of 12534 attributes

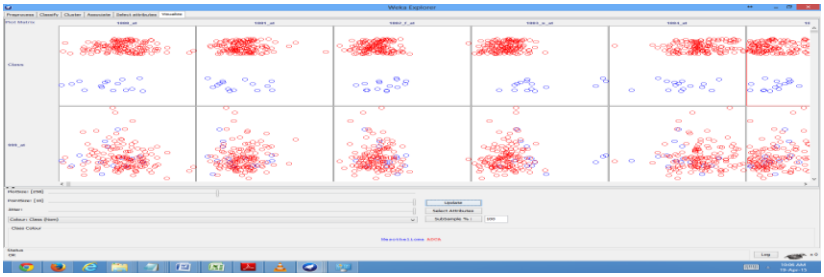


Figure 5: The visualization of the microarray dataset

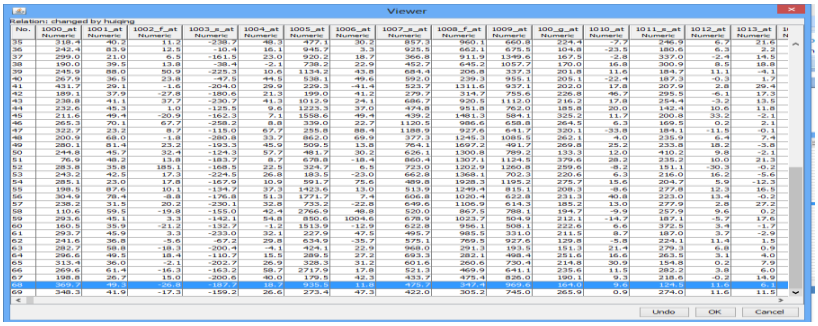


Figure 6: Spreadsheet of the training microarray dataset

Genetic Algorithm

All the 12533 genes of 69 instances for training dataset were subjected to genetic algorithm for the purpose of reducing high dimensionality of the dataset (Feature Selection) using Weka. Weka uses its attribute selection called "Genetic Search", the mutation probability rate was set at 0.033 for all features present and crossover probability to 0.6. The population size was set at 20 individuals. These parameters are summarized in figure 6

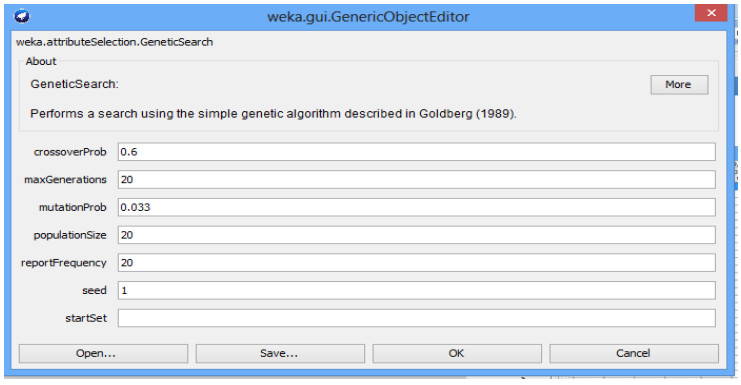


Figure 7: The Genetic Search Parameters

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After setting the parameters for the genetic algorithm as shown in figure 7, Genetic Search module reduces 12533 features for both training and testing datasets to 748 features. This constitutes 94.03% reduction of the total features in the two datasets. Figure 8 shows the overall generated initial population subsets using the Genetic Algorithm. Figure 9 shows the 20 generations obtained during the process of executing the Genetic Search module and Figure 10 shows the reduced features as the final output of the Genetic Algorithm feature selection process.



Figure 8: Generated initial population subsets

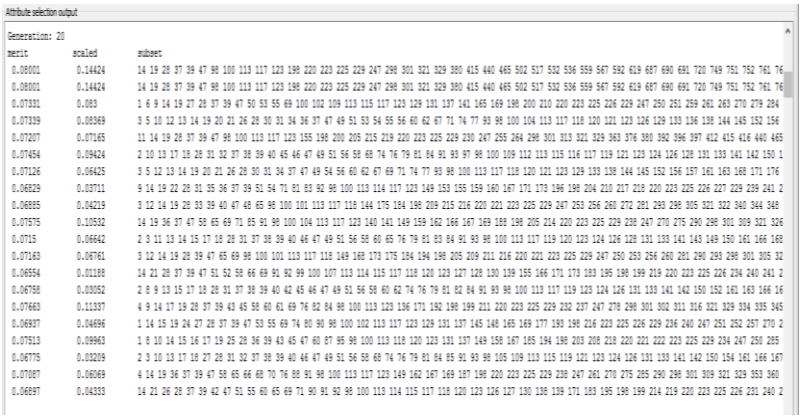


Figure 9: Subset of 20 Generations

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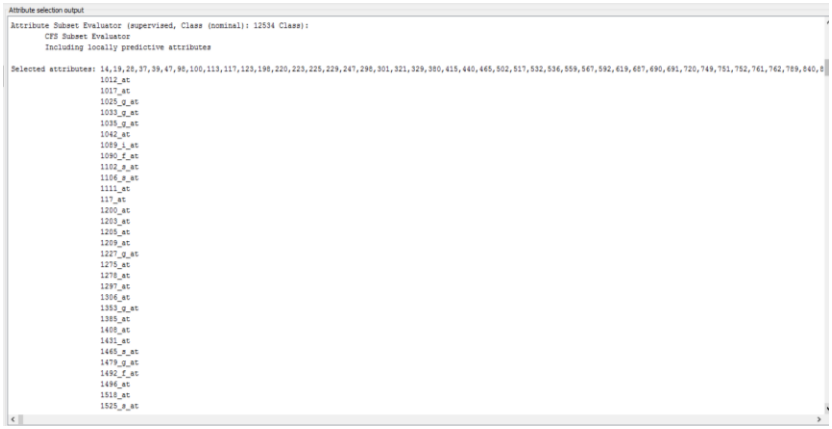


Figure 10: Final reduced features

Multilayer Perceptron

The performance of a good classifer become more pronouced when subjected to a number of salient features. The reduced features presented in the final output of the Genetic algorithm were supplied as input to the multilayer perceptron accessed through the Classify feature of Weka. MLP model was trained with 69 instances consisting of 748 reduced attributes.Figure 11 shows the weight adjustement during the training of the multilayer perceptron neural network classifer. Figure 12 shows the neural network classifer during training with 100% correctly classified instances. The figure 13 also shows the number of incorrectly classified instances, Kappa statistic, Mean absolute error, Root mean squared error, Root relative squared error and total number of instances used for the training. The detailed accuracy by class section in figure shows that the classifer received good training with 100% accuracy and it is much ready for classification with testing dataset.

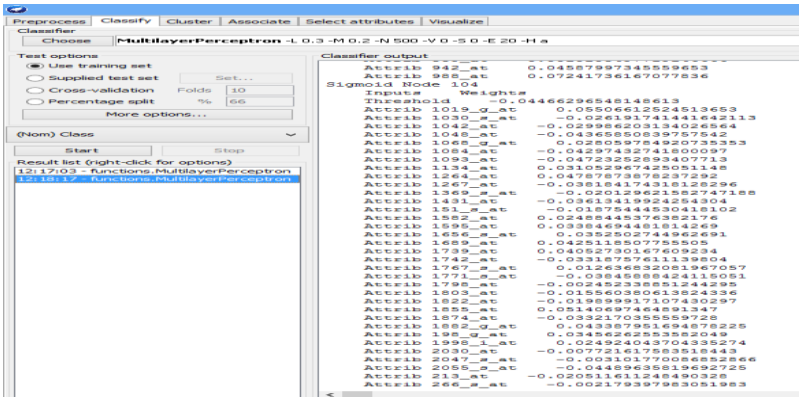


Figure11 : Adjustment of weight during training of the model

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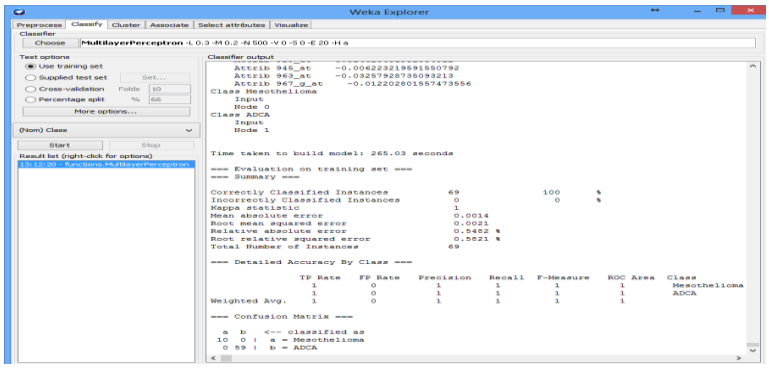


Figure 12: Trained neural network classifier

Figure 12 shows the accuracy of the neural network classifier when subjected to testing dataset. The classifer acheived accuracy of 97.5% with false positive (FP) rate 1.3%. The confusion marix is shown in Figure 14 .Seventy eight (78) instances were correctly classified out of the 80 instances used for testing. The model also achieved good true positive (TP) rate, FP rate,precision, recall, f-measure and receiver operating characteristic (ROC) area.

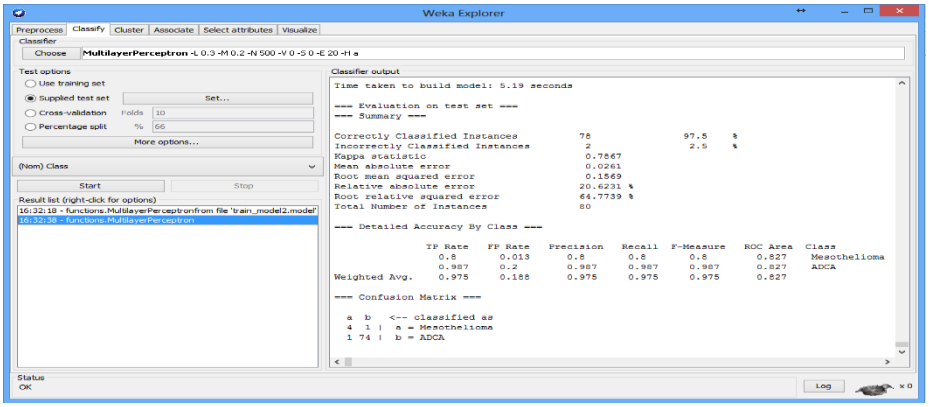


Figure 13: Performance of neural network classifier

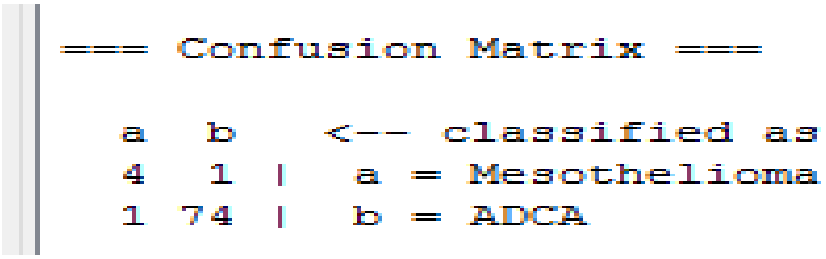


Figure 14: Confusion matrix

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Conclusion and Recommendations

A major genetic algorithm parameter change would be to increase the population size. By increasing the population size, the algorithm would perform a more thorough search of the solution space and would be more likely to locate the global minima. The results presented in this research revealed that the proposed hybrid GA/MLP performs better with over 90% accuracy when used to classify microarray dataset of lung cancer. Detection of cancer disease is an important issue in the research community. A lot of efforts have been committed to develop models that are capable of diagnosing cancer. However, these models have one issue or the other that are needed to be addressed. In this dissertation, a hybrid model that combines the optimization power of Genetic algorithm for reduction of high dimensional microarray data and MLP for classification between malignant pleural mesothelioma (MPM) and adenocarcinoma (ADCA) of the lung was proposed. The solution found by the combine Genetic Algorithm (GA)and Multilayer Perceptron (MLP) algorithm performed effectively well. The GA only focuses on the reduction of high dimensionality of microarray dataset and NN focuses on the accurate classification. The mutation probability rate of the GA was set to 0.033 for all features present and crossover probability to 0.6. The population size was set at 20 individuals. The GA reduced the 12,533 attributes in the microarray dataset to 748 attributes. The reduced microarray dataset was used to train the multilayer perceptron NN classifier. The trained classifier achieved 97.5% accuracy when evaluated with the testing microarray dataset. To further improve the proposed model presented in this paper for hybridization, the following recommendations may prove useful.

1. Different parameters can be used to configure the Genetic algorithm for the purpose of improving its feature selection process.
2. The proposed model can be further validated using different microarray cancer datasets in order to ascertain its efficiency.
3. For quicker feature selection, filter and wrapper methods in Weka can be employed to perform feature selection due to the complexity and robustness of the Genetic algorithm.
4. Apart from the feed-forward back propagation algorithm used in this work for training, other algorithms can also be employed to train the multilayer perceptron, neural network classifier.

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ASSESSMENT OF EFFECTIVE LIBRARY AND INFORMATION SERVICES IN PROMOTING MENTAL HEALTH AWARENESS AMONG UNDERGRADUATE STUDENTS OF FEDERAL UNIVERSITY GUSAU

BY
[1]Akeem Olalekan Ayub, [2]Insikak Mfon Inam & [3]Sherif Kunle Yusuf
[1]Sociology, Federal University Gusau (FUGUS), Zamfara, Nigeria.
[2]Nigeria Centre for Disease Control and Prevention (NCDC).
[3]University Library, Federal University Lokoja, Nigeria.
Email: ayubakeemola@fugusau.edu.ng

Abstract
The study explores how university libraries can enhance mental health awareness and inclusion, focusing on their roles. It highlights the potential of libraries to address mental health challenges and improve student well-being. Research objectives encompass mental health literacy enhancement, assessing disability-related information accessibility, librarian roles in well-being, and community-building strategies. Using a quantitative approach, the study employed surveys to extract data from 400 students, although analysis was based on 395 retrieved and valid questionnaires. Ethical guidelines were upheld. Findings underscore the importance of library resources and collaboration, aligning with libraries' innovation. The study also highlights university libraries' capacity to foster mental health awareness. Findings align with existing literature, emphasizing libraries' roles in mental health support, resource use, and accessibility. Diverse resources and collaborations resonate with libraries' innovative potential. Challenges mirror inclusivity discourse. The study underscores university libraries' untapped potential in fostering mental health awareness. In conclusion, the study highlights university libraries' contributions to mental health awareness and inclusion. Recommendations include diverse resources, collaborations, enhanced accessibility, extended hours and librarian training. These actions position libraries as key contributors to mental health awareness and student well-being, fostering a supportive campus environment.
Keywords: Inclusion, Mental health awareness, Promoting mental health, Student well-being, University libraries

Introduction

The global burden of mental health crises and disabilities is a significant challenge, as highlighted by various studies and reports. The World Health Organization (WHO, 2023), reported that mental and substance use disorders are a leading cause of disability in children and youth, accounting for a quarter of all years lived with disability (YLDs) and a substantial number of disability-adjusted life years (DALYs) lost. Accordingly, it also reported that around 14% of adults aged 60 and over live with a mental disorder, which accounts for 10.6% of the total DALYs among older adults. A study published in The Lancet estimates that 16% of global DALYs are attributable to mental disorders (Arias, Saxena & Verguet, 2022). The WHO (2024) defines mental health as a state of well-being in which an individual realizes their own abilities, can cope with the normal stresses of life, can work productively, and is able to contribute to their community. This definition emphasizes that mental health is not just the absence of mental disorders but is an integral and essential component of health, underpinning an individual's ability to build relationships, work, and contribute to society. A mentally healthy individual demonstrates qualities such as effective coping with stress, productive engagement, and positive interpersonal interactions (WHO, 2024). Conversely, mental health disorders, as outlined by the American Psychiatric Association (2013), encompass a diverse range of conditions, such as schizophrenia, anxiety disorders, and eating disorders, underscoring the complexity of mental health challenges.

Despite the extensive research on mental health and disabilities, there is a lack of exploration into the potential of libraries to enhance mental health. However, the valuable role that libraries can play in improving mental health and addressing broader health concerns is often overlooked. In this context, libraries emerge as versatile resources with untapped potential to contribute to mental health and well-being. Whitney et al. (2017) emphasize libraries' ubiquity,

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trustworthiness, and educational role in health literacy. Various types of libraries, including public, hospital, and academic health centres, possess distinct strengths that can be harnessed to address health challenges. Notably, digital libraries have expanded accessibility, making valuable health information available to a broader audience, particularly in settings like schools, community centres, and healthcare institutions (Smith, 2011). However, the linkage between libraries and mental health remains underexplored. To bridge this gap, this study focuses on Federal University Gusau's central library as a case study to investigate its potential in promoting mental health awareness and inclusion. By analysing library services, resources, and programs, as well as the roles of librarians, this research seeks to uncover strategies for utilizing libraries to enhance mental health literacy, address disabilities, and contribute to healthier and more supportive campus communities. The study's structured exploration encompasses areas such as access to health-related knowledge, utilization of library services, and the potential impact on individual and community well-being. Through a comprehensive examination, this research aims to illuminate the ways in which university libraries can effectively contribute to mental health awareness and create an inclusive environment for all students.

Literature Review

One study carried out by Gulliksen and Gustafsson (2018) which focused on the role of librarians in public libraries in Sweden. The researchers found that librarians were seen as trusted professionals who could provide information and support on mental health issues. They also found that librarians played a key role in reducing stigma around mental health and promoting well-being through various programs and services. In a study by Pinto and Sales (2019), the researchers explored the impact of bibliotherapy programs offered by librarians on individuals' mental health. They found that participating in bibliotherapy programs led to improvements in individuals' well-being, including reduced symptoms of anxiety and depression. Furthermore, a study by Cooper and Crumpton (2020) examined the role of librarians in promoting mental health literacy among library patrons. The researchers found that librarians were effective in providing information and resources on mental health, increasing individuals' knowledge and understanding of mental health issues. These studies, along with others in the field, highlight the significant role of librarians in promoting mental health and well-being. They demonstrate the positive impact of librarians' interactions, programs, and services on individuals' mental health outcomes.

One study conducted by Kumbhar and Kumbhar (2017) examined the accessibility of library services for visually impaired students in Indian universities. The study found that while some universities had made efforts to provide accessible services, many were still lag behind. In another related study conducted by Abdul Razak (2017) the study highlights the importance of physical accessibility in university libraries for individuals with disabilities. The result shows that physical accessibility for disability related includes accessible entrances, ramps, elevators, and designated parking spaces. Hui-Yun Sung (2018) investigated the accessibility of library services for patrons with disabilities in academic libraries across the United States. The researchers collected data on library policies, staff training, assistive technology availability, and collaboration with disability services offices. Nevertheless, they offer numerous opportunities for learning that can tangibly influence economic, social, and cultural development, with a ripple effect on individual health. Borrowing a book from a local library transcends the act itself; it becomes a gateway to learn how to alleviate various health concerns such as malaria, typhoid, HIV/AIDS, and even improve personal well-being (Green, 2020). This access to quality information has the power to transform both individual lives and society. National copyright systems facilitate this access, allowing libraries to bridge the gap between restricted works and eager learners. Libraries, as gatekeepers of valuable health information, offer critical services that promote informed decision-making and health literacy. By providing access to biomedical information for healthcare professionals, libraries enhance the accessibility of health-related knowledge to the public (National Health Services, 2021).

Kitzie and Steeves (2019) stated that librarians can develop and deliver mental health literacy programs that aim to increase students' understanding of mental health issues, reduce stigma, and promote help-seeking behaviours. These programs can include workshops, information sessions, and awareness campaigns. Pisano and Saylor (2019) observed that librarians often collaborate with mental health professionals to provide specialized services. This may involve hosting therapy sessions, partnering with local mental health organizations, or inviting guest speakers to address mental health topics. Finding from their research has shown that such collaborations enhance the effectiveness of

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mental health initiatives in libraries. In addition, Cox and Osterhaus Trzasko (2018) reported that librarians receive training to better understand mental health issues and provide appropriate support. Many libraries offer mental health literacy programs for librarians to enhance their knowledge and skills. The result from the study showed that there is positive impact of such training on librarians' ability to address mental health needs. University libraries play a crucial role in promoting health information literacy by teaching students and community members how to critically evaluate health information and make informed decisions about their health (Bostick et al., 2018). Also, Libraries can offer workshops and training sessions on finding reliable health information online and using evidence-based resources (Haddow et al., 2019). Furthermore, University libraries can promote physical health by providing access to fitness resources, such as exercise equipment, fitness classes, and wellness programs (Baker et al., 2017).

Research Objectives

The main objective of this study is to assess the effectiveness of library and information services in promoting mental health awareness among undergraduate students of Federal University Gusau. However, the specific objectives are to:

i. To examine the role of libraries in enhancing mental health literacy among students:
ii. To assess the accessibility of disability-related information and services in university libraries:
iii. To investigate the role of librarians in promoting mental health and well-being among students
iv. To analyse strategies for building healthy communities through university libraries.

Methodology

The study was conducted at Federal University Gusau, located in the urban setting of Gusau, Zamfara State, Nigeria. This setting allowed for exploration of the role of university libraries in promoting mental health awareness within the context of the city's diverse population and cultural influences. The university's integration within the urban landscape offered a dynamic atmosphere for learning and engagement, contributing to the study's insights. To comprehensively explore the role of university libraries in promoting mental health awareness and inclusion for students at Federal University Gusau, a quantitative research approach was employed for data collection and analysis techniques, allowing for a well-rounded understanding of the research topic. The quantitative phase, a structured survey was conducted among a representative sample of students from Federal University Gusau. The survey comprised closed-ended questions designed to gather quantitative data on students' perceptions, attitudes, and experiences regarding the role of university libraries in promoting mental health awareness and inclusion. The study's sample size was determined statistically, resulting in a total of 400 participants, although analysis was based on 395 retrieved and valid questionnaires. A random sampling technique was employed, selecting individuals from the student population to minimize bias and enhance representation. A random sampling technique was utilized to select participants from the student population at the institution. This ensured a diverse representation across various academic disciplines and demographic backgrounds within the university community. Researchers engaged with participants individually in person, explaining the study's purpose, inviting participation, and distributing the printed questionnaires. Participants were encouraged to complete the questionnaires on the spot, with researchers available to address any queries and ensure clarity. The collected quantitative data underwent statistical analysis. Descriptive statistics such as frequencies, percentages and means were used to summarize the survey responses. The data were analysed using Statistical Package for Social Science, version 25.

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Results

Table 1:
Sociodemographic Characteristics of Respondents

Variables	Responses	Frequency	Percent
Gender	Male	199	50.4
	Female	196	49.6
	Total	**395**	**100.0**
Age	18-20 years	38	9.6
	21-23 years	121	30.6
	24-26 years	179	45.3
	27+ years	57	14.5
	Total	**395**	**100.0**
Academic Discipline	Faculty of Education	130	32.9
	Faculty of Management and Social Sciences	133	33.7
	Faculty of Sciences	132	33.4
	Total	**395**	**100.0**
Academic Year	Freshman / 1st Year	67	17.0
	Sophomore / 2nd Year	85	21.5
	Junior / 3rd Year	112	28.4
	Senior / 4th Year or higher	131	33.1
	Total	**395**	**100.0**
Ethnicity	Hausa	189	47.8
	Fulani	91	23.0
	Yoruba	54	13.7
	Igbo	35	8.9
	Other Nigerian ethnicities	21	5.3
	Non-Nigerian	5	1.3
	Total	**395**	**100.0**
Residential Area	On-campus housing	37	9.3
	Off-campus housing (within Gusau)	272	68.9
	Off-campus housing (outside Gusau)	86	21.8
	Total	**395**	**100.0**
Previous Experience with Mental Health Resources	Regularly used university mental health resources	33	8.3
	Used university mental health resources occasionally	65	16.5
	Aware of but never used university mental health resources	109	27.6
	Not aware of university mental health resources	188	47.6
	Total	**395**	**100.0**

Table 1 presents the sociodemographic characteristics of the respondents, outlining the foundational makeup of the study's participant cohort, comprising 395 individuals. Gender distribution demonstrated near parity, with 50.4% identifying as male and 49.6% as female. Age distribution revealed that a significant portion of respondents, constituting 30.6%, belonged to the 21-23 years age group, while 45.3% were within the 24-26 years range. Academic disciplines displayed a balanced distribution, with roughly equal representation across faculties: 32.9% from the Faculty of Education, 33.7% from the Faculty of Management and Social Sciences, and 33.4% from the Faculty of Sciences. Examining academic years, the higher classes, particularly senior students (33.2%), held the largest share, followed by junior students (28.4%). Ethnicity analysis highlighted the prominent presence of Hausa participants (47.8%), followed by Fulani (23.0%) and Yoruba (13.7%). Residential areas depicted a diverse distribution, with 68.9% residing off-campus within Gusau, 21.8% off-campus outside Gusau, and 9.4% in on-campus housing. Turning

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to experiences with mental health resources, 8.4% indicated regular usage, 16.5% occasional usage, 27.6% awareness but non-usage, and 47.6% reported being unaware of these resources. These sociodemographic insights provide a comprehensive snapshot of the participant cohort's varied backgrounds, which lay the groundwork for deeper exploration into their perceptions and patterns of engagement with mental health resources.

Table 2:
Perceptions and Engagement in Library Mental Health Initiatives

Perceived impact of library resources on understanding of mental health topics	**Frequency**	**Percent**
Significantly improved my understanding	69	17.5
Moderately improved my understanding	84	21.3
Had little impact on my understanding	187	47.3
No impact on my understanding	55	13.9
Total	**395**	**100.0**
Discussing mental health concepts with fellow students using information obtained from library resources	**Frequency**	**Percent**
Yes, frequently	54	13.7
Yes, occasionally	85	21.5
No, I have not	256	64.8
Total	**395**	**100.0**
Extent to which exposure to mental health resources from the library has positively influenced attitudes towards mental health	**Frequency**	**Percent**
High	103	26.1
Low	261	66.1
Neutral	31	7.8
Total	**395**	**100.0**

Table 2 highlight the impact of library resources on understanding mental health topics, the types of specific resources accessed, and ways libraries could further contribute to improving students' mental health literacy. Regarding the perceived impact of library resources, the results indicate that 17.5% of respondents felt their understanding of mental health topics significantly improved, while 21.3% reported a moderate improvement. A substantial proportion (47.3%) indicated that these resources had a limited impact on their understanding, and 13.9% felt no impact. Regarding discussions on mental health using library resources, findings revealed that 13.7% of respondents engage frequently, 21.5% occasionally, while the majority (64.8%) have not participated. Examining the influence of library resources on attitudes, 26.1% reported a high positive impact, 66.1% indicated a low impact, and 7.8% expressed a neutral stance. These outcomes suggest varying degrees of engagement and impact, underscoring the potential for university libraries to enhance mental health awareness and attitudes among students.

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From multiple response on the specific mental health resources accessed from the library, books were the most frequently accessed (75.4%), followed by articles (24.6%). Online resources (19.2%), workshops or presentations (16.2%), pamphlets (9.1%), podcasts (5.6%), and videos/DVDs (5.1%) were also utilized. Similarly, the multiple responses on ways libraries could further contribute to improving students' mental health literacy, many students expressed interest in a more diverse collection of mental health resources (72.4%) and collaborative mental health programs (53.9%). Additionally, 84.1% of respondents emphasized the importance of increased visibility of mental health materials, while 87.3% believed workshops on mental health topics would be beneficial. Peer-led mental health discussion groups (72.7%), mobile apps for mental well-being (78.7%), and creative writing contests focused on mental health themes (51.1%) were also seen as valuable ways to enhance mental health awareness and inclusion. These findings provide insights into the ways university libraries can play an instrumental role in fostering mental health literacy and inclusion among students, thereby contributing to the overall well-being of the university community.

Findings from the multiple responses on specific challenges encountered while using library resources, reveal that 12.9% face difficulty locating relevant mental health materials, signalling a need for improved organization. A significant 53.7% encounter limited mental health-related resources, emphasizing the demand for a more inclusive collection. Around 17.0% lack awareness of available resources, necessitating enhanced communication. Outdated information affects 56.2%, underscoring the importance of up-to-date content. Stigmatization, noted by 55.2%, indicates the need for a non-judgmental borrowing environment. Inadequate guidance in digital resources impacts 72.7%, warranting improved user support. Desire for varied formats (84.1%) underscores catering to diverse learning preferences. A substantial 87.3% point to limited opening hours as a constraint, suggesting potential benefits from extension.

Table 4:
Accessibility and Support Services for Students with Disabilities

Encountered instances of inaccessible library resources for disabilities	**Frequency**	**Percent**
Yes, I've encountered such instances	345	87.3
No, I have not	50	12.7
Total	**395**	**100.0**
Witnessing library efforts in promoting inclusivity and accessibility for students with disabilities	**Frequency**	**Percent**
Yes, I've seen such efforts	206	52.2
No, I have not	122	30.8
Not sure	67	17.0
Alignment of library staff knowledge of disability services	**Frequency**	**Percent**
Yes, strongly aligns	89	22.5
Somewhat aligns	123	31.1
Neutral	150	38.0
Does not align	33	8.4
Total	**395**	**100.0**

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Table 4 unveils insights into accessibility and support services for students with disabilities. An overwhelming 87.3% of respondents have encountered instances of inaccessible library resources for disabilities, underscoring the need for improved accessibility measures. Conversely, 12.7% have not reported such instances. A significant portion of students (52.2%) have positively acknowledged the university library's endeavours to foster inclusivity and accessibility. This recognition signifies that the library's initiatives are being appreciated by a considerable number of students. However, around 30.9% of students have not observed these efforts, with 17.0% uncertain. The library's efforts in promoting inclusivity garner notable recognition, emphasizing the importance of ongoing initiatives and communication. Addressing uncertainty might involve enhancing communication channels to clarify ongoing inclusivity measures and their impact. The perceptions of students regarding the alignment of library staff knowledge with disability services showed that 22.5% agreed that library staff knowledge "strongly aligns" with disability services, while 31.1% believed it "somewhat aligns." A significant proportion, 38.0%, remained "neutral" about the alignment. On the other hand, a relatively smaller fraction of 8.6% thought that library staff knowledge "does not align" with disability services. The findings suggest that there is a mixed perception among students about the alignment of library staff knowledge with disability services. While a notable portion sees alignment to some extent, the presence of both "neutral" and "does not align" responses highlights a need for attention in this area.

Regarding specific services/resources collated through multiple responses, accessible study spaces were reported by 55.9%, while assistive technology, braille materials, and sign language interpretation were mentioned by 59.2%, 64.8%, and 67.6% respectively. Personalized accessibility consultations were identified by 75.4%, and 50.1% noted captioned videos. Text-to-speech software and resources were reported by 53.2%, and 32.7% mentioned screen magnification tools. Accessible formats for visually impaired students were recognized by 67.1%, and 47.1% acknowledged subtitles for library events. Quiet sensory-friendly areas were indicated by 50.4%, and 41.5% mentioned adjustable furniture. Resources in simplified formats were reported by 50.9%, and accessible virtual reality experiences were noted by 41.5%. The high percentage of instances of inaccessible resources calls for enhanced accessibility measures. The diverse availability of support services indicates the library's efforts to cater to varied disabilities. There is room for further enhancement in providing services like accessible virtual reality experiences. Notably, services like assistive technology and personalized consultations hold substantial importance.

Table 5:
Perceptions and impact of librarian involvement in mental health support

Experience of positive librarian involvement in mental health support	**Frequency (395)**	**Percentage (100.0)**
Yes, the librarian provided valuable guidance	86	21.8
No, I have not had such an experience	233	59.0
Not applicable to me	76	19.2
Librarian's knowledge preparedness for mental health conversations		
Yes, they are knowledgeable	102	25.8
Somewhat, but more training is needed	183	46.3
No, they lack the expertise	34	8.7
Not sure	76	19.2
Impact of participation in library-led events or programs related to mental health and well-being		

Increased my awareness	15	3.8
Provided practical tips	21	5.3
Created a supportive environment	36	9.1
No impact	11	2.8
Not applicable	312	79.0
Importance of librarians' role in reducing mental health stigma on campus		
Extremely important	310	78.6
Moderately important	27	6.8
Slightly important	43	10.9
Not important at all	15	3.8
Influence of librarians' presence in conversations about mental health awareness		
Yes, it fosters a welcoming atmosphere	189	47.8
No, it doesn't make a difference	154	39.0
Not sure	52	13.2

This study examined perceptions and impacts of librarian involvement in mental health support among respondents. Findings indicate that 21.8% reported positive interactions with librarians, where they provided meaningful guidance in mental health matters. However, 59.0% lacked similar positive experiences, suggesting room for improvement or limited reach. Moreover, 19.2% found this aspect irrelevant to them, possibly due to varying experiences or awareness. The varied interactions highlight the importance of enhancing librarian involvement. Regarding librarians' preparedness for mental health conversations, 25.8% deemed them knowledgeable, while 46.3% desired additional training, implying a perceived expertise gap. A smaller group (8.6%) noted a lack of skills, and 19.2% were uncertain, emphasizing diverse perspectives and potential training needs. Participation in library-led mental health events yielded varied outcomes. 3.8% gained awareness, 5.3% practical tips, and 9.1% noted a supportive environment. However, 2.8% saw no impact, and 79.0% found these events inapplicable, indicating varying relevance and effectiveness. Regarding librarians' role, 78.5% considered it extremely important, while 47.8% believed their involvement fosters a welcoming atmosphere for mental health discussions. Yet, 39.0% saw no discernible impact, revealing mixed perceptions on librarians' influence in promoting mental health awareness. This underscores the complex dynamics of librarians' role in this context.

Regarding multiple responses from the respondents on the attributes or skills that librarians should possess to effectively support students' well-being, the highest percentage of respondents (81.3%) indicated that "Mental health first aid training" is a crucial attribute, emphasizing the importance of being equipped to handle mental health concerns. Additionally, "Empathy and active listening" (73.7%) ranked second, signifying the value of emotional connection and understanding. The results also highlight the significance of "Cultural competence and sensitivity" (54.7%) and a "Non-judgmental approach to diverse needs" (72.7%), demonstrating the need for librarians to be attuned to various cultural backgrounds and to treat all students inclusively. The survey underscores the importance of librarians having "Knowledge of available resources" (57.5%) and strong "Communication skills" (44.6%), as well as being prepared for "Crisis management" (40.0%). These attributes collectively contribute to librarians' capacity to

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provide effective support for students' well-being. Furthermore, "Confidentiality and privacy awareness" (47.8%) emerged as a vital attribute, highlighting the trust that students place in librarians to safeguard their personal information while seeking assistance. In conclusion, this table illustrates the nature of attributes necessary for librarians to support student well-being comprehensively. It emphasizes the significance of mental health training, empathy, cultural competence, and other essential skills in creating a supportive and inclusive library environment.

Table 5:
Exploration of library's role in fostering community and engagement

Impact of community-building library events attended by respondents	**Frequency**	**Percent**
Facilitated interaction with peers	57	14.4
Introduced me to diverse perspectives	45	11.4
Created a shared learning experience	67	17.0
Didn't contribute to a sense of community	5	1.3
Not applicable	221	55.9
Total	**395**	**100.0**
Effectiveness of library spaces in fostering healthy interactions and connections among students	**Frequency**	**Percent**
Yes, they provide a conducive environment	132	33.4
No, they are not suitable for such interactions	216	54.7
Not sure	47	11.9
Total	**395**	**100.0**
Library-Led Activities and Students' Participation in Campus Wellness Events	**Frequency**	**Percent**
Yes, I'm more likely to participate	186	47.1
No, it doesn't affect my decision	121	30.6
Not sure	88	22.3

Table 5 examines the role of the library in promoting community and engagement among students through various variables. The findings highlight the impact of community-building library events, the effectiveness of library spaces for interactions, and the influence of library-led activities on student participation in campus activities. Regarding the impact of community-building library events, 14.4% of respondents noted that these events facilitated interactions with peers, while 11.4% felt they introduced them to diverse perspectives. Additionally, 17.0% mentioned that these events created shared learning experiences, and 1.3% felt that they did not contribute to a sense of community. Furthermore, 55.9% found such events not applicable in this context. Regarding the effectiveness of library spaces in fostering interactions, 33.4% of respondents found that these spaces provide a conducive environment for healthy interactions and connections among students. In contrast, 54.7% felt that library spaces are not suitable for such

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interactions, and 11.9% were unsure about their effectiveness. Considering the influence of library-led activities, 47.1% of students expressed that these activities make them more likely to participate in social or wellness-related campus activities. In contrast, 30.6% indicated that library-led activities do not affect their participation decisions, and 22.3% were unsure about the influence. The table provides insights into the library's role in fostering community and engagement, emphasizing both positive and mixed perceptions among the student population.

The findings on the multiple responses on the perceived evolution of library spaces for enhancing student mental well-being, revealed that a significant proportion of respondents expressed a positive perception of the implementation of well-being initiatives within the library. Specifically, the provision of relaxation zones was reported by 53.7% of respondents as contributing to their sense of mental well-being. Hosting well-being workshops was identified as beneficial by 30.9% of participants. Additionally, 59.2% of respondents acknowledged the positive impact of having access to healthy food options within the library premises. In terms of physical activities, 45.1% of students found organizing fitness activities to be conducive to their mental well-being. Similarly, the availability of meditation and mindfulness corners was recognized as contributing to mental well-being by 45.6% of respondents. Creative elements also played a role, with 44.3% of participants appreciating the presence of interactive art and creativity zones to enhance their mental well-being. Furthermore, accessible and comfortable seating areas were identified by 54.7% of students as positively influencing their mental state while studying. The incorporation of outdoor seating and green spaces within the library environment was perceived as promoting mental well-being by a substantial 67.1% of respondents. Finally, the concept of technology-free zones for mental breaks was well-received, with 67.8% of participants acknowledging their positive influence on their overall mental well-being. These findings collectively underscore the significance of creating a library environment that caters to students' mental well-being through a range of thoughtfully designed features and initiatives. Multiple responses on the specific themes for library exploration that contribute to future students' health and well-being programs, revealed that stress management emerged as a prominent concern, with 86.6% expressing interest in this topic. Nutrition and healthy eating followed, garnering 70.4% interest. Mindfulness and meditation, considered essential for mental wellness, were of interest to 53.9% of respondents. Building positive relationships, a vital aspect of overall well-being, captured the attention of 41.8% of participants. Sleep hygiene and techniques for improving sleep quality, crucial for academic success, resonated with 67.6% of respondents. Time management and productivity, pivotal for balancing academic demands, were found to be relevant by 54.7% of participants. Coping with academic pressure, a common challenge, was indicated as significant by 76.5% of respondents. Developing resilience and mental strength, essential skills for navigating academic and personal challenges, attracted the interest of 72.7% of participants. Finally, financial well-being and budgeting, a practical concern for students, were acknowledged by 56.5% of respondents. This data emphasizes the nature of student well-being, providing insights into the themes that resonate with the student population. The results underscore the importance of comprehensive health and well-being programs that encompass these diverse dimensions.

Multiple responses reflect the mean scores of various collaboration strategies in promoting mental health awareness and inclusion among students. The mean decisions were interpreted based on a total of 395 respondents, where a mean score above 0.50 indicates a more suitable strategy, and a mean score below 0.50 indicates a less suitable strategy. The results show that awareness campaigns ($\bar{x}$: 0.539) received a mean score above 0.50, indicating that this strategy is perceived as suitable for promoting mental health awareness and inclusion among students. Similarly, collaborative scholarship opportunities for disabled students ($\bar{x}$: 0.727) received a mean score well above 0.50, suggesting that it is a highly suitable strategy. On the other hand, collaborative workshops ($\bar{x}$: 0.311), cross-departmental accessibility training ($\bar{x}$: 0.306), and accessible campus-wide events ($\bar{x}$: 0.389) received mean scores below 0.50, indicating that these strategies might be considered less suitable for achieving the desired outcomes. Resource sharing with disability services ($\bar{x}$: 0.423), shared assistive technology resources ($\bar{x}$: 0.539), and accessible recreation and sports events ($\bar{x}$: 0.435) received mean scores relatively close to 0.50, suggesting a mixed perception of their suitability. Interestingly, coordinated accessible transportation services ($\bar{x}$: 0.873) received the highest mean score, indicating strong support for this strategy as an effective means of promoting mental health awareness and inclusion among students

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In examining the ways of enhancing the visibility of disability resources, findings on multiple responses revealed that the respondents' perceptions vary across different variables. The variables with mean scores above 0.50 include "Prominent signage for accessible facilities" ($\bar{x}$: 0.592), indicating that this method is generally considered suitable for enhancing resource visibility. Similarly, "Regular communication about available services" ($\bar{x}$: 0.813) and "Interactive digital maps indicating accessible areas" ($\bar{x}$: 0.813) received relatively high mean scores, suggesting that these methods are well-regarded as effective ways to promote the visibility of disability resources. On the other hand, variables with mean scores below 0.50 include "Clearly labelled resource areas" ($\bar{x}$: 0.536), "Dedicated web portal for disability resources" ($\bar{x}$: 0.501), "Accessible virtual library tour for online users" ($\bar{x}$: 0.339), and "Informational videos featuring disabled student experiences" ($\bar{x}$: 0.422). These mean scores indicate that these methods might be perceived as less suitable for enhancing the visibility of disability resources among the respondents. Lastly, variables such as "Disability-focused library tours or orientations" ($\bar{x}$: 0.362) and "Inclusive artwork and displays representing disabilities" ($\bar{x}$: 0.309) received the lowest mean scores, suggesting that these methods might be considered less effective in enhancing the visibility of disability resources based on the perceptions of the respondents. It is important to note that mean scores above 0.50 indicate a more favourable perception, while mean scores below 0.50 suggest a relatively less favourable perception, all based on the total of 395 respondents.

Discussion

The findings of this study align with and extend the existing literature on the roles of libraries, especially in the context of mental health support and inclusivity. This finding is in agreement with the study of Cooper and Crumpton (2020) who stated that librarians were effective in providing information and resources on mental health, increasing individuals' knowledge and understanding of mental health issues. These studies, along with others in the field, highlight the significant role of librarians in promoting mental health and well-being. With respect to accessibility and support services for students with disabilities, the findings from the study revealed that majority of students have encountered inaccessible of library resources for disabilities. The finding is in line with Kumbhar and Kumbhar (2017) who found that while some universities had made efforts to provide accessible services, many were still lag behind. In addition, the results of this study were in disharmony with Abdul Razak (2017) who discovered that there was physical accessibility such accessible entrances, ramps, elevators, and designated parking spaces for individuals with disability related in university libraries. The call for ongoing inclusivity initiatives and clearer communication aligns with the literature's emphasis on the importance of promoting accessibility (Green, 2020). The emphasis on the importance of library resources resonates with the recognition of libraries as gatekeepers of valuable health information by National Health Services (2021). The prevalence of book usage as a primary resource aligns with Green's (2020) observation that borrowing a book from a library can serve as a gateway to health-related knowledge and personal well-being. The demand for diverse resources and collaborative programs, along with the identification of specific tools like peer-led discussions and well-being apps, is consistent with the work of Green (2020) who emphasised on libraries as platforms for innovation and support.

The discussion on strategies for building healthy communities through university library. The exploration of librarian involvement in mental health support extends the literature's understanding of librarians' roles beyond traditional bookkeeping to encompass mental health advocacy and support (Green, 2020). These study's findings contribute to the existing literature by providing empirical evidence of the ways in which university libraries can play a crucial role in mental health awareness, addressing disabilities, and creating inclusive campus environments. This align with Bostick and Furlough (2018) and Haddow and Galvin (2019) who stated that university libraries play a crucial role in promoting health information literacy by teaching students and community members how to critically evaluate health information and make informed decisions about their health. Libraries can offer workshops and training sessions on finding reliable health information online and using evidence-based resources

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Conclusion and Recommendations

This study comprehensively explores librarian involvement in mental health support and its impact on students. Sociodemographic insights reveal diverse participant backgrounds, crucial for understanding their engagement with mental health resources. Exploration of library resources highlights their potential in enhancing mental health awareness. Challenges in resource utilization and accessibility point to areas for improvement, including comprehensive collections and better support for students with disabilities. Collaboration strategies for mental health awareness present a distinctive perspective. Librarian attributes and skills, library's role in fostering community and well-being, and themes for future programs are key findings. Overall, the study contributes valuable insights into promoting mental health awareness and inclusivity among students through libraries. Enhancing mental health support in libraries involves diversifying resources with a variety of materials. Collaborative programs, workshops, and peer-led discussions can foster a sense of community and awareness. Prioritizing accessibility for students with disabilities includes assistive technology, personalized consultations, and diverse formats. Extending library hours and offering user support for digital resources can address challenges in utilization. Training librarians in empathy, crisis management, and mental health first aid equips them to create a welcoming environment for discussions. Implementing these recommendations positions libraries as key contributors to mental health awareness, community building, and student well-being.

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INFRASTRUCTURAL ASSET AND FINANCIAL PERFORMANCE OF DEPOSIT MONEY BANKS

BY

[1]Muhammed, L.S., [2]Ismail, B.S., [3]Saliu, O.A & [4]Latifat, T.B.
[1]Department of Accounting and Finance, Kwara State University, Malete.
[2]Department of Accountancy, Kwara State Polytechnic, Ilorin
[3]Kwara State Internal Revenue Service, Ilorin.
[4]Kwara State Universal Basic Education, Ilorin.

Abstract
Over the past decade, the profitability of banks in Nigeria has faced considerable challenges, with financial reports showing declining profitability, negative retained earnings, net losses, and fluctuating net profits. These financial strains have led to the acquisition of some banks by others, as well as mergers due to an incapability to meet stakeholders' needs, resulting in the eventual wind-up of several banks. This has significantly diminished the positive impact of deposit money banks in Nigeria. It is against this backdrop that the inspiration for this study arose. The primary purpose of this study is to examine the impact of infrastructural assets on the financial performance of deposit money banks listed in the Nigerian Exchange Group from 2014 to 2023. Secondary data were obtained from the audited annual reports of selected listed banks in Nigeria spanning from 2014 to 2023. The study employed multiple linear regression techniques to analyze the data collected, focusing on the relationship between infrastructural assets and financial performance.The analysis revealed that infrastructural assets have an insignificant negative effect on the financial performance of deposit money banks listed in the Nigerian Exchange Group, with a P-value of 0.497 and a t-value of -0.680. This suggests that infrastructural assets do not significantly influence the financial performance of the banks during the period under study. Based on these findings, the study concludes that infrastructural assets have no significant impact on the financial performance of deposit money banks listed in the Nigerian Exchange Group from 2014 to 2023. Therefore, the study recommends that banks should invest more in other intellectual capitals, such as human capital and capital employed efficiency, to enhance the financial performance of deposit money banks in Nigeria.
Keywords: Profitability, Infrastructural Assets, Financial Performance, Deposit Money Banks, Nigerian Exchange Group

Introduction

Over the past decade, the profitability of banks in Nigeria has faced significant challenges. Financial reports from this period consistently show declining profitability, negative retained earnings, net losses, and fluctuating net profits. According to the Nigeria Exchange Group (2019), Nigerian banks reported an average net loss of N196.6 billion between 2010 and 2019. Despite this general trend, certain banks like UBA experienced profit fluctuations with profits of N20.486 billion in 2014, N15.885 billion in 2016, and N12.839 billion in 2017. On the other hand, GTB reported negative retained earnings ranging from N85 billion in 2011 to N51 billion in 2012. Fidelity Bank and FCMB also reported fluctuating profits and negative retained earnings during this period (Nigeria Exchange Group, 2019).

The poor performance of several banks, such as Oceanic, Intercontinental, Afri, and Fin, led to their acquisition by other banks as reported by the Central Bank of Nigeria Bulletin in 2010. Skye Bank's underperformance resulted in its takeover and subsequent renaming to Polaris Bank (Central Bank of Nigeria Bulletin, 2008). More recently, Access Bank's poor performance led to its acquisition and rebranding as Diamond Bank (Central Bank of Nigeria Bulletin, 2019). Furthermore, the banking sector in Nigeria witnessed a reduction in total headcount from 96,975 at the end of 2019 to 94,498 by June 2020, with approximately 2,477 employees laid off in the second quarter of 2020 (National Bureau of Statistics, 2022).

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Given the highlighted poor performance of banks and the decision-making surrounding financial choices, there is a pressing need to address the impact of infrastructural assets on the profitability of Nigerian banks. Duru, Okpe, and Nwosu (2018) argued that infrastructural assets, organizational image, and research and development are crucial resources in the knowledge economy. Despite the shift from the industrial age to the information age, many companies still struggle to identify, measure, and manage their infrastructural assets effectively. Traditional accounting models, which were developed for industrial economy companies, often overlook these intangible assets, leading to a growing gap between market value and book value (Duru, Okpe, & Nwosu, 2018).

In the knowledge-intensive banking industry, infrastructural assets play a vital role in the value creation process. Conventional performance measurement techniques, based on traditional accounting principles, may not accurately capture the performance of companies with significant investments in infrastructural assets (Duru, Okpe, & Nwosu, 2018). Therefore, it is crucial to investigate whether conventional financial performance measurement techniques are influenced by infrastructural asset performance. The present study aims to explore the relationship between infrastructural asset performance and the financial performance of banks in Nigeria.

Infrastructural assets are perceived as the hidden value missing from financial statements, providing organizations with a competitive advantage. With the increasing gap between market value and financial performance, there is a growing recognition of the importance of including infrastructural assets in financial performance measures. The absence of infrastructural asset information in financial statements raises concerns about the reliability and adequacy of traditional accounting methods in the current age.

Wealth maximization is the primary objective of every business entity, and this can only be achieved through efficient utilization of both physical and infrastructural assets. Financial performance, proxied by net profit margin, serves as the measurement indicator in this study. Prabath (2022) argued that infrastructural assets, organizational image, and research and development are critical factors for firms to achieve their financial targets. The absence of these elements can hinder the performance of human capital in organizations.

Given the mixed and inconclusive findings from studies conducted in advanced economies, there is a need for further research using country-specific data to substantiate existing findings (Ifeanyi, 2022). Therefore, this study aims to answer the question: to what extent does the impact of infrastructural assets (organizational image, research & development, and physical infrastructure) affect the financial performance of listed deposit money banks in Nigeria.

Literature Review

Infrastructural Asset (IA)

Daniel (2019) defined infrastructural asset as an asset that serves as a tool, equipment and machine that enhance human capital in functioning well in an organization. It is a weapon and devices that when default, it absolutely results to failure of human capital in performing is duties in an organization. Infrastructural assets refer to all tangible asset that provide utilities or services to deposit money banks customer, which include software, hardware, telephone, data base and technology (Aggies, 2019). Infrastructural asset refers to long lasting capital asset that add value to land and tend to be part of a larger system, infrastructural asset is long lived capital asset that are stationary in nature and normally preserved for a specifically greater number of years than most capital asset (Jennifer, Bennett & Robert, 2019). Infrastructural asset comprises the basic system and services of banking industry such as computer, information, server and network, Automated Teller Machine (ATM), Point of Sales machine (Kornfelt, 2018). These assets need to be in place before the commencement of business by any sector of an organization. Infrastructural Assets play a paramount

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role in banking industry, in which their role cannot be overemphasis. Virtually, almost every bank in the banking industries invest huge amount on infrastructural asset so as to make them relevant in the industry and to be persistently compete among the competitor in the industry (Jerel, Slaughter & Jonathan, 2020; Khavandkar, 2018). The current (international public sector accounting standard IPSAS guidance) does not define infrastructural asset but specified that these assets meet the definition of property, plant and equipment and should be accounted for in accordance with IPSAS17 (Aggies, 2019). The standard also states that infrastructural assets usually display some or all of the following characteristics: they are part of system or network, they are specialized in nature and do not have alternative uses, they are immovable and they may be subject to constraints in disposal (Florin, Lubatkin & Schulze, 2019). Infrastructural asset in an organization includes: email system, telephone and communication system, personal computer, wireless devices, accounting, payroll and other enterprises system (Jerel, Slaughter & Jonathan, 2020).

Financial Performance Measurement

Financial performance is an indicator of the firm attainment of economic and financial objectives. The financial performance can be categories into profitability and market value measures. Profitability indicate efficiency with which operation of business are carried out, which can be measures with return on asset, return on equity, return on capital employed, return earned on fund and net profit margin etc. this study employed the net profit margin to measure the financial performance (Prabath, 2022; Meritt, 2023; Abeysiriwardana, 2022). Net profit margin ratio is a financial ratio used to calculate the percentage of profit a company product produces from its total revenue. It measures the amount of net profit a company obtain per naira of revenue gained. Net Profit margin is an instrument used to measures management efficiency that may be used to push firms toward better efficiency by presenting it as a major yardstick for assessing management efficiency (Meritt, 2023; Harward & Upton, 2012). Profit measuring is an inevitable aspect to every organization which cannot be ignored in every organization. In order to evaluate whether the standard level of performance has been met, the basic performance measurement can be assesses in various ways likes return on asset, return on investment, return on profit, return on average asset, return on average investment and net profit margin. This study uses net profit margin in measuring financial performance of deposit money banks in Nigeria.
Ifeanyi, (2022) Opined that financial Performance of the banking sector is a major subject that has received much attention in recent years. Many studies have evaluated the financial performance of banks under various operating parameters, thus; better quality management of resources is the main factor contributing to bank performance, as evidenced by numerous studies on the U.S. banking system and other western developed countries (Gan and Saleh, 2008, Stewart, 2020). Firm performance can be measured through different tools based on the financial and non-financial aspects. Performance measurement tools can help businesses evaluate their resource allocation processes to determine how resources can be better managed and distributed to the appropriate channels (Chen et al, 2005). Traditionally, many performance measures have been based around financial aspects, omitting important non-financial aspects including the importance of dynamic capability through accumulating research and development as well as marketing capability over time, to further enhance firm performance (Mondal & Ghosh, 2012). Besides that, the evaluation of the performance of banks, for example, usually employs financial indices, providing a simple description of the bank's financial performance alone is not enough for management to deal with the changing business environment. Kurfi (2017) financial statements are a common measure of banks generally in terms of financial health over a given period and they can be used to compare similar banks across the same industry or to compare industries or sectors in aggregation. The performance can be measured by using various methods such as accounting-based techniques, which consist of Return on Asset (ROA) and Return on Equity (ROE) (Meressa 2016). Another study by Poh (2018) shows that management researchers would prefer to use various accounting-based measures to measure performance. The most common variables are ROA and ROE. Ifeanyi (2022) in a study tried out several alternatives by gathering data on Return on Assets (ROA), Return on Equity (ROE), and Return on Investment (ROI).

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Theoretical Review

Resource Based View Theory

Wernerfelt (1984) proposed the resource-based theory (RBT), which was further – refined by Barney in 1991 and heavily borrows on Penrose's earlier work (1959). The core idea behind RBT is that a business is nothing more than the sum of its valuable, scarce, non-substitutable, and difficult-to-replicate resources and abilities (Barney, 1991). According to this theory, which is supported by studies of successful business strategies, a company's success is more likely to stem from its own unique set of assets than from any particular industry's structure (Guthrie, et al., 2004). Hall (1992) and Grant (1996) divided resources into three categories: tangible assets, intangible assets and human resources, with human beings being considered the most valuable asset. In terms of potential investment and effective resource usage, RBT elucidates the study's underlying issues. The core idea behind resource-based theory is that every company has its own special collection of assets that provide it an edge over rivals in the long run. Edom et al. (2015) provided a useful framework by classifying an organization's assets as either material or human. Human resources include of employees' experience, knowledge, skills, and social interactions, whereas physical assets include plants, technical equipment, land, and buildings. Organizations are heterogeneous entities that rely on particular knowledge assets to improve their financial and nonfinancial performance, and advocates of the Resource-Based Theory argue that efficient utilization of intangible assets can lead to competitive advantage and improved financial performance (Lazzolino & Laise, 2013). This research is based on the resource basis idea and capture both independent and dependent variable.

Score Card Theory

Balanced scorecard theory was propounded by Robert Kaplan and David Norton (1992) postulated the theory of a balanced scorecard which assumes that there are four perspectives in which the performance of a company can be measured. These perspectives include financial, customer, internal, and learning perspective (Farshad, 2012). This theory can be understood as a management system, which is structured according to the logic of the management circle ("plan–do-check-act"). Kaplan and Norton position the balanced scorecard as a tool for organizations to translate strategies into action. When conceiving the balanced scorecard, Kaplan and Norton, maintained that companies lack sophisticated tools for the management of intangible or qualitative asset (e.g., customer satisfaction, processes quality, infrastructures, knows how). Intangible assets, however, seem vital in order to stay competitive in the future. It is a theory that enables management to translate an organization strategy into performance objectives, measure, target and initiatives (Macro, 2006). Balance scorecard is a strategy performance management tool – a well structure report that can be used by managers to keep track of the execution of activities by the staff within their control and to monitor the consequences arising from these actions. The phrase balanced scorecard primarily refers to a performance management report used by a management team and typically this team is focused on managing the implementation of a strategy or operational activities. (2GC balanced scorecard usage 2020 survey). This theory is a management system that enables organization to translate the vision and strategy into action (Chakrabarty, 2007). This system provided feedback on internal business processes and external outcomes to continually improve organization. Financial data reflect an organization past performance; therefore, they may not accurately represent the current state of the organization or what is likely to happen to the organization in the future. The theory was originally developed and propounded by Robert Kaplan and David Norton in (1992). In 1990, Kaplan and Norton led a research study of a lot of companies with the purposed of exploring the new method of performance measurement. The scorecard theory primarily aims as measurement system which is concern with performance of an organization be it nonprofit and public organization. This theory is strictly on the measurement of private company, public company and nonprofit organization financial performance which is the key and backbone of any organization or company (Nicholas, 2006).

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This theory was developed to anchor the financial perspectives, customer perspective, internal perspective and learning perspective. The aforementioned above are the primary objective of the theory. Furthermore, the theory is used to accomplish the following management process; clarifying and translating vision and strategy, communicating and linking strategies objectives and measures, planning, setting target and aligning strategic initiatives and enhancing strategic feedback and learning, both dependent and independent variable are capture by this theory.

Empirical Review

Cliffort, Etonye, Siminalayi and Ngoze (2023) investigate intellectual capital on the financial performance of deposited money banks in Nigerian. The model and collected data were analyzed using simple regression analysis. The research revealed a significant relationship between structural capital and return on asset; it also found a significant association between human capital and earnings per share. Akinsulire (2022) investigate intellectual capital cost on performance of selected deposit money banks quoted in Nigerian. Expo factor design was employed and multiple regression techniques were used to determine the existence of relationship between the variables. The result revealed that human capital adequacy, relational capital adequacy and capital employed adequacy were all positively and significantly related to return on asset. Ogunbanjo (2022) examined structural capital and performance of small scale business in Alaba International Lagos State. Correlation analysis was employed as method of data analysis. The result indicated that structural capital has a positive and significant relationship with operational performance and growth of small business in Alaba International Market. Lambe, Ame and Dzugwahi (2022) examine the effect of intellectual and natural capital on financial performance of listed multinational companies in Nigerian. Multiple regression analysis was used for the data analysis. The result revealed that intellectual capital enhances financial performance. Awotomilusi, Donatus and Ogunleye (2022) examined intellectual capital and financial performance of selected consumer goods of manufacturing firms in Nigerian. Multiple regression analysis were used for the data analysis. The result revealed that human capital, structural capital and relational capital significantly and positively affect the financial performance of Nigerian consumer goods manufacturing companies. Salman (2022) examined intellectual capital on financial performance of Nigerian companies. Pearson correlation and regression analysis were used for the data analysis. The study revealed positive and significant relationship between structural capital efficiency, return on equity and return on asset. The study concluded that intellectual capital efficiencies influence companies' performance. Aminat, Anthonia and Wakeel (2022) examined intellectual capital efficiency of listed banks in Nigerian. Tobit regression technique analysis was used for data analysis. The result reveals that banks sizes and director shareholding positively impact intellectual capital efficiency, while market and ownership concentration debar the attainment of optimum intellectual capital efficiency. Seyedeh, Kamran, Seyed, Hakimeh and Yeser (2022) examined effect of intellectual capital on business performance through the use of customer knowledge management in the branch's banks in Iran. The study used Likert scale to analyses the data obtain, the finding revealed that intellectual capital which comprises human capital, structural capital and relational capital have a significant impact on business performance.

Husham and Ghodratallah (2022) examined relationship between intellectual capital and financial performance of companies listed in Iraq stock exchange. Data obtain was tested using regression model. The result revealed there is no significant difference according to the finding of this study. Shahid, Ghulam and Martina (2022) examined intellectual capital and financial performance. Modified value-added intellectual coefficient model regression analysis is performed. The result revealed that structural capital and capital employed have a significant impact on Pakistani and Indians firms. Hesniati and Erlen (2021) examined the influence of intellectual capital on organization performance of rural bank in Batam city. The study used path coefficient test to analyses the data obtain from 54 director of the rural bank. The result of this empirical study indicates that there is a significant relationship between structural capital, customer capital, human capital, technology capital and spiritual capital on organization

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performance in Batam city. Meanwhile, social capital and spiritual capital show no significant relationship to organization performance in Batam city. Gallegos, Contreras, Vargas, Prada and Yucra (2021) examined the impact of intellectual capital on financial performance of electricity industry in Argentina. The estimates are considered using a panel analysis and the generalized methods of moments and the fixed effect are used. The results are not conclusive when estimating a contemporary relationship between human capital, relational capital and structural capital and financial performance. However, a significant positive relationship is observed when lagged measures are used for each proposed measure of intellectual capital. Xiao-bing, Tran and Eugene (2021) examined the impact of intellectual capital value – added intellectual capital (VAIC) and its component on financial performance in term of return on asset and return on equity. A total of 149 Vietnamese firms comprising of 108 financial firms and 41 pharmaceutical firms were examined. The finding revealed VAIC and HCE show beneficial impact on both financial performance measures.

Hadeel and Asma (2021) assess intellectual capital and financial performance of market banks in Jordanian. Two empirical models were designed to test the effect of intellectual capital. The result revealed that there is a significant and positive relationship between intellectual capital and banks profitability presented by return on asset. Aziz, Ejaz and Anan (2021) investigate intellectual capital efficiency on banks performance the study employed two step system generalized of moment estimator to analyze the data collected from 129 Islamic Banks. The result indicate that structural capital efficiency and relational capital efficiency are the essential drivers of value in achieving high performance at Islamic banks while human capital efficiency negatively affect the performance of Islamic banks.

Sylvia, Mariolin and Rudiawie (2021) examined the role of intellectual capital on financial performance of SME in Jayapura city. The study consists of 54 respondent who had business fields consisting of culinary businesses, fashion, daycare services, lodging services and futsal fields. The analytical tools is used in Smart PLS 3 by looking at the measurement of the outer model and inner model. The result shows that the component of human capital and relational significantly affect the financial performance of SME. Jian and Yizhang (2021) investigate intellectual capital measurement matter in financial performance in Chinese agricultural listed companies. The paper used the original value added intellectual coefficient model and the modified model to measure intellectual capital. The result shows a positive and significant relationship between intellectual capital and financial performance. Adiputra, Suprastha and Affandi (2020) investigate the influence of intellectual capital on the market value of food and Beverage Company in Indonesia. The study used purposive sampling method with 34 total sample companies and applies the value added intellectual capital method in carrying out its measurements. The data was analyze using convergent validity, heterotrait ratio and path analyses. The result shows that intellectual capital as a whole has significant positive effect on market value. Human capital has significant positive effect on market value. Structural capital does not significantly affect the market value of the company. Capital employed has significant negative effect on the market value.

Alqershi, Zakaria and Sany (2020) assessed the intervening effect of structural capital on the relationship between strategic innovation and manufacturing of small and medium enterprises in Yemen. The study sample is 284 of small and medium enterprises of manufacturing company in Yemen, the data obtained from the various manufacturing company were analyze using partial least squares – structural equation modeling. The result revealed there is a significant influence of strategies on performance so as structural capital too. Abdelmohsen and Gehan (2020) investigate impact of intellectual capital on firm's financial performance. The study employs canonical correlation analysis as a unique statistical method to analyze data gathered from 29 sampled companies, representing 145 firm-year observations over the five years. The finding revealed that the component (human capital, customer capital and structural capital) have positive correlation with firms performance except for the labor costs variable which has a negative correlation with firms performance. Human capital is also found to be the most significant component of the intellectual capital, while structural capital is reported as the lowest effect on the firms' performance. Gunadi, Wiksuana, Purbawanaga and Rahyuda (2020) evaluated the impact of structural capital and company size on growth

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of firm value through financial performance with good corporate governance on real property estate business in Indonesia. Data collection is done by distributing questionnaires offline and online using Google form that has been tested, the data analyses techniques used is partial least square – structural equation modeling (PLS – SEM) and descriptive statistic. The finding revealed that the mechanism of good corporate governance in the form of board affiliation, the size of the board of directors, and the presence of an audit committee moderate the decision of capital structure and firm size that influence financial performance and firm value.

Hafiz, Sadia, Faiza, Abdul and Nazish (2020) examined impact of intellectual capital on financial performance of food and personal care and textile sectors in Pakistan. Data obtain was analyze using multiple regression analysis and paired sample T-test. The finding proposes direct and significant influenced of capital employed efficiency on selected firms' financial performance. Dulanjani and Priyanath (2020) evaluated intellectual capital and business performance of self – employers in Sri Lanka. The data were collected from 115 self – employers in Ingiriya divisional secretary division in Sri Lanka, the data were analyzed using partial least square – structural equation modeling (PLS-SEM). The findings revealed that human capital and relational capital have a positive and significant impact on the business performance of self – employers except structural capital. Reza (2020) examined relationship between intellectual capital and financial performance in Iranian companies. Value added intellectual coefficient method has been used for measuring the value based performance of the company. The intellectual capital (human capital and structural capital) and physical capital of the company have been analyzed and their impact on corporate performance has been measured using multiple regression technique. The findings from the empirical analysis indicate that the relationship between the performance of a company intellectual capital and profitability, employee productivity and growth in sales are informative. Hapsah and Bujang (2019) assessed the intellectual capital influence on financial performance of construction, finance and plantation firms in Malaysian. Data were drawn from a panel consisting of 108 firms and the data were analyses using descriptive analyses and Pearson correlation matrix. The findings revealed significant and positive association between intellectual capital and financial performance in construction and finance. Whereby, in plantation, the result indicated significant but negative association. On the component of intellectual capital, the finding revealed that firms in finance employ human capital and structural capital to create value. On the contrary, a negative relationship was documented between human capital, structural capital and financial performance in construction and plantation. Nevertheless, the result indicated that capital employed is significant and positively associated with financial performance in all the three industries implying that physical capital remained the most influential value drivers in generating firms profitability regardless of the industries types.

Wiagustini, Artini and Ramantha (2019) examined intellectual capital as a base for determining capital structure and financial performance of handicraft industry in Indonesia. The sampling company is 82 of small handicraft in Gianyar Bali in Indonesia. The analyses model used was Partial least square, the finding revealed that intellectual capital which comprises human capital, structural capital and relational capital has a positive effect on capital structure and financial performance; and capital structure has a positive effect on financial performance. Mohammad (2019) investigated the effect of intellectual capital on financial performance of non-financial firms in Pakistan. The study sample 100 non-financial firms listed on Pakistan stock exchange between 2007 to 2016, the study also used ordinary least square regression in analyzing the data obtain from Pakistan stock exchange. The finding revealed firm performance has positive and significant impact on intellectual capital of non-financial firms of Pakistan.

Mohammad, Shah, Khan and Afridi (2019) evaluated intellectual capital on financial performance of banks in Pakistan. The data is obtained from annual report of banks listed in Pakistan stock exchange; the data were analyzed using multiple regression techniques and Pearson correlation. The findings revealed that value added intellectual capital is positively associated with return on asset, while the three component of value added intellectual capital showed mixed result on banks performance. Christian and Oscar (2019) examined the impact of intellectual capital on financial performance and value added of the production in Chile. Multivariate techniques was used to test the data

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obtain; the finding revealed value added coefficient of intellectual capital is a determining factor in the financial performance of companies. Jian and Binghan (2018) examined intellectual capital financial performance and companies' sustainable growth on manufacturing industry in Korean. Data collected from 390 manufacturing companies were analyzed using multiple regression models and the result revealed that intellectual capital has a positive impact on financial performance and companies' sustainable growth. In addition, companies' performance and sustainable growth are positively related to physical capital, human capital and relational capital. Nawaz (2018) assessed the intellectual capital performance profiles on financial performance of Islamic banking in United Kingdom. The data obtained was analyzing using regression analyses. The findings suggest a positive relationship between physical and financial capital employed efficiency, human capital efficiency and performance. Helin, Manurung and Husnataria (2018) examined relationship between value added capital employed, value added human capital, structural capital value added and financial performance of company in Indonesia. The method of the sample was purposive with total 34 sample analyze by using panel data regression, multicollinearity test, heteroscedasticity test and autocorrelation test. The result stated that value added capital employed has no effect on return on asset, value added human capital has an effect on return on asset and structural capital value added has an effect on return on asset.

Filipe, Zelia and Helena (2018) investigate effect of intellectual on small and medium sized hotel financial performance for the period between 2007 and 2015. Using a sample of 934 Portuguese small and medium sized hotels, the study adopted GMM system estimator, to analyze a dynamic panel data. The finding suggested that intellectual capital component provide positive impact on hotel financial performance. Filipe, Serrasqueiro and Alves (2018) investigated the relationship between intellectual capital and financial performance of small and medium enterprises hotel in Portugal. Using a sample of 934 Portuguese small and medium size hotels, the study adopted the GMM system (1998) estimator to analyze a dynamic panel data, the result suggested that intellectual capital component i.e., human capital, structural capital and relational capital provide a positive impact on hotel financial performance. Human capital and relational capital seemed to be key element for the success of hotels, being the basis of service quality in the hotels sectors. Furthermore, the results showed that human capital and structural capital are capitalized by the establishment and maintenance of long – term relationship with the key stakeholders. Erinos and Yurniwati (2018) examined influence of intellectual capital and financial performance of manufacturing companies in Indonesia. Data were analyzed using multiple regression and the findings revealed intellectual capital has positive effect to financial performance but the effect is not significant.

Abiodun (2019) examined the effect of structural capital efficiency on financial performance of listed oil and gas firm in Nigeria, for the period 2006 to 2018, nine firms were sampled. Data were obtained from the audited annual report of the firms and regression analyses were used for inference and test of hypothesis. The result of the regression analyses revealed that both intellectual capital efficiency and external capital efficiency have positive and significant effect on return on asset thus implying the prominence of these two variables in determining the financial performance of listed oil and gas firms in Nigeria. Saifullahi (2019) examined intellectual capital on the performance of consumer goods firms listed in Nigeria stock exchange. The data obtain were analyses using multiply regression analyses and the result revealed that value added intellectual coefficient has a significant positive effect on return on asset whereas market to book value was found to have negative impact on the return on asset. Nnubia, Ndu and Nwoleji (2019) examined effect of intellectual capital on performance of non-financial firms in Nigeria. A sample of 21 Nigerian non – financial firms listed on Nigeria stock exchange for the period of 10 years (from 2007 – 2016) was selected. The data collected were analyzed using ordinary least square method. The results show that for the Nigerian listed non – financial firms, the explanatory variables – capital employed efficiency, human capital efficiency and structural capital efficiency has positive significant effect on dependent variable – earning per share and market to book value (performance).

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Victor and Ebieri (2019) investigated effect of intellectual capital cost on financial performance of listed commercial banks in Nigeria during the period 2007 to 2016. The data were obtained from cross section of three banks from ten (10) year annual report, the data were analyses using ordinary least squares. The findings proved that individually, human capital efficiency has positive significant relationship with return on equity while structural capital efficiency and capital employed efficiency individually have positive but insignificant relationship with return on equity. The study therefore substantiated that intellectual capital cost significant affect return on equity and therefore concludes that intellectual capital cost has significant effect on financial performance of listed commercial banks in Nigeria.
Chitom and Cheluchi (2018) examined intellectual capital on performance of Nigeria banks listed in stock exchange. The data were analyses using Pearson coefficient correlation statistical tools to test the hypothesis. The result revealed that there is a relationship between values added intellectual coefficient indices human capital efficiency, structural capital efficiency, capital employed efficiency and employee productivity in Nigeria bank. Another finding is that there is a negative relationship between values added intellectual coefficient indices human capital efficiency, structural capital efficiency, capital employ efficiency and growth in revenue of banks in Nigeria. Onyekwelu, Osisioma and Ugwuanyi (2018) evaluate the impact of human resources on financial performance and market valuation of four (4) quoted banks in Nigerian. Data were analyzed using a percentage and chi – square statistical tests. The result shows that when investment in human capital are treated as asset and capitalized, there is a significant increase in bank net worth as against the current practice where investments in human resources are deal with as ordinary revenue expenses there by leading to gross undervaluation of banks' income statement and statement of financial position.

Methodology

This chapter covers the plan, method and techniques that were adopted in the study. It also discusses the research designs, the population of the study, sources and types of data, the technique of data analysis, and model specification.

Model Specification

The study evaluates the relationship between structural capital and financial performance of deposit money banks listed in Nigerian exchange group. The model of Al–Hawajreh (2013) was adopted and modified. The model was presented as.

$FP_{it} = \beta 0 + \beta_1 IA_{it} + U$……...……3.1

Where:

FP = Financial performance

IA= Infrastructural Asset

$\beta_1 - \beta_3 =$ parameter of the model to be estimated, which represent the slope of model and measure the amount of change in the dependent variable caused by each of the independent variables.

FP = Financial Performance proxy with (net profit margin)

SC = Structural Capital proxy with Infrastructural Asset (IA).

Research Design/Population

An ex–post factor research design was used in this study. Ex- post facto research is conducted after an event has occurred; data has already been collected and cannot be changed or controlled (Adefila, 2014). The study population is (23) twenty-three deposit money banks listed in Nigerian Exchange Groups floor as of December 31, 2023, eight

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out of the twenty-three are commercial banking license with international authorization, fifteen out of the twenty-three are commercial banking license with national authorization. The study population are the aforementioned above.

Sampling Technique and Sample Size

The study used a census sampling technique, sampling all of the deposited money banks. The sample sizes for the study comprises of the twenty-three (23) deposit money banks listed in Nigerian Exchange Group floor as of December 31, 2023.

Sources and Data Collection Method

The main data source for the study was the audited published annual financial statements of all deposit money banks listed in Nigerian exchange group floor as of 31 December 2023. The secondary source of data was used because data for all of the variables were found in the audited financial statement of deposit money banks.

Method of Data Analysis and Estimation Techniques

For systematic analysis of the data collected, both Descriptive method and inferential statistical tools of analysis were employed for this study. The inferential statistics used was multiple linear regressions. This technique was used for both dependent and independent variable.

Results

Table 1:
Descriptive Statistics of Variables (Dependent and Independents)

Variables	Mean	Std. Deviation	N
Financial Performance	.561	.705	310
Infrastructural Asset	447,597,459.503	1,611,168,660.663	310

The table above presents the descriptive statistics of the variables under consideration. It indicates the mean and standard deviation of each variable in our data set, so the financial performance has mean value of 0.561, which signifies the average financial performance of banks under study, while its standard deviation value is 0.705. This statistical indicator shows that data points are close to the mean because the standard deviation value is relatively small compare to the value of its mean. The table shows that average amount of 14 million is spent on research and development among the selected banks, if this is compared to its standard deviation of 81 million which is large relative to the mean value. It therefore implies that the amount of money spent on research and development among the selected banks is distant from the mean (meaning that the average amount indicated by the mean underestimates the actual (observed) amount spent on research and development by the observed banks. The same thing is applicable to amount of infrastructural asset (Mean = 447 million and S.D. = 1.6 billion) and organization image (mean = 480 million S.D. = 4.2 billion) presented in the table. Their standard deviation is large relative to their mean and this signifies that the observed amount of infrastructural asset, organization image and research and development are distant from their respective average amount indicated by the mean in the above table. In all, it can be said that mean is not an accurate representation of the data set. This also gives justification for the use of proposed method of statistical analysis (Multiple Linear Regression).

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Multi-Collinearity Test

Table 1:
Results of Collinearity Diagnostics (Variance Inflation Factor)

Variable	VIF	1/VIF
Infrastructural Asset	1.325	.755

The results in table provided evidence that all the three independent variables have no strong inter-correlations and inter-associations with one another based on the collinearity statistics of Variation Inflation Factor (VIF), which for all the independent variables are between 1 and 10, suggesting no problem of multicollinearity.

Table 3:
Breusch-Pagan/Cook-Weisberg IM-test

Breusch-Pagan/Cook-Weisberg heteroskedasticity
Ho: Constant variance
Variables: fitted values of Financial Performance
$chi^2(1)$ = 0.05
Prob>chi^2 = 0.8302

The Breusch-Pagan/Cook-Weisberg test for the data collected was carried out and the result is presented above. It shows a heteroskedasticity test for the assumption of constant error variance. It does this by examining whether squared standardized residuals are linearly related to predicted values. As seen above, no reason to reject the null hypothesis of constant variance ($p = 0.8302 > 0.05$). That is, we see no significant heteroscedasticity and therefore, there is constant variance.

Table 4:
Cameron & Trivedi's Decomposition of IM-test

Source	chi^2	Df	P
Skewness	1.610	3	0.658
Kurtosis	1.240	1	0.265
Total	3.220	13	0.997

Table 4 above presents a normality test, it made use of the skewness and kurtosis statistics to formally evaluate the null hypothesis that the sample at hand came from a normally-distributed population. From the results of the test presented above, no reason to reject the null hypothesis that our data is from normally-distributed population skewness ($p = 0.654 > 0.05$) and Kurtosis ($p = 0.265 > 0.05$).

Table 5:
Model Summary

Mean dependent var	0.561	SD dependent var	0.705
R-squared	0.003	Number of obs	310

F-test	0.328	Prob > F	0.805
Akaike crit. (AIC)	664.935	Bayesian crit. (BIC)	672.408

The Table 4 above describes the overall model, provides very important information about the model and it shows whether the model is successful in predicting financial performance. The above model table refers to predictor (Infrastructural Asset) are used in predicting Financial Performance. The column labeled R contains value of the multiple correlation coefficients between the predictors and the outcome which equals 0.57. i.e., when the variables are used as predictors, the correlation between the predictor and financial performance is (0.057). The next column gives us a value of R^2, which is a measure of how much of the variability in the outcome is accounted for by the predictors. For this model the R^2 value is 0.003, which means that Infrastructural Assets account for 0.3% of the variation in financial performance of deposit money banks listed in Nigerian exchange group for the financial years of 2014 to 2023. The R^2 value of 0.003 denotes that the predictor can account for 0.3% of the variation in financial performance. In other words, if we are trying to explain why financial performance of one bank is better than that of others, there might be many factors that can explain this variation, but our model, which includes three predictors, can explain just 0.3% of it. This means that 99.7% of the variation in financial performance cannot be explained by independent variables considered in this study. Therefore, there must be other variables that have an influence also.

Table 4:
Model Parameters (Coefficients)

Financial Performance	**Coef.**	**St. Err.**	**t-value**	**p-value**	**[95% Conf. Interval]**	
Infrastructural Asset	-1.95e-11	2.87e-11	-0.68	0.497	-7.61e-11	3.70e-11
Constant	.5618586	0.0418844	13.41	0.000	0.4794406	0.6442765

Hypothesis One: *Infrastructure asset has no significant effect on financial performance of deposit money banks listed in Nigerian exchange group*

Results in Table 4 revealed that the partial elasticity coefficient of infrastructural asset with respect to financial performance is -1.955-11, indicating that infrastructural asset has insignificant negative effect on the financial performance of the selected listed deposit money banks in Nigerian Exchange Group. This value indicates that as the amount of infrastructural asset increases by one unit, financial performance decrease by -0.1955-10units. Infrastructural asset is measured in millions of Naira; therefore, for every N1,000,000 increase in infrastructural asset, a reduction of 0.0000195 (-0.0000000000195484 x 1,000,000 = -1.95-5) in financial performance take place.

Discussion

The findings reveal that infrastructural asset does not have a significant impact on the financial performance of listed deposit money banks in Nigerian Exchange group. The findings is similar to that of Saifullahi (2019), Ahmad & Mushraf (2011), Salman et al. (2012), Ogbo et al. (2013), Ameneh et al. (2015), Anuoye (2016), Garlinia et al (2018), Sardo et al. (2018), Victor and Ebieri (2019), Adiputra et al (2020), Alqershi et al (2020), who all found insignificant, but differs from Chitom and Cheluchi (2018) as well as Dulanjani and Priyanath (2020), the study find out positively and significantly relationship between factors. In general, the findings demonstrate that structural capital has no significant impact on financial performance of deposit money bank listed in Nigerian exchange group. Which are the same with the findings of Garlinia et al (2018), Dulanjani and Priyanath (2020), Ameneh et al. (2015), Ahmad and Mushraf (2011), Saifullahi (2019), Anuoye (2016) Sardo et al. (2018), Ogbo et al. (2013), Victor and Ebieri (2019),

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Adiputra et al. (2020), Alqershi et al. (2020), but not to Lambe, Ame and Dzugwahi (2022) and Onuchi and Jones (2019).

Conclusion

The analysis presented in Table 4.5 provides insightful information regarding the relationship between infrastructural assets and the financial performance of deposit money banks listed in the Nigerian exchange group for the financial years 2014 to 2023. The model, which uses infrastructural assets as predictors for financial performance, yielded a multiple correlation coefficient (R) of 0.57. However, the R^2 value, which measures the proportion of the variability in the outcome accounted for by the predictors, was found to be 0.003. This indicates that infrastructural assets can only account for 0.3% of the variation in the financial performance of these banks. In simpler terms, while infrastructural assets play a role in determining the financial performance of banks, they explain only a minimal portion of the overall variability. Given the low R^2 value of 0.003, it is evident that 99.7% of the variation in financial performance remains unexplained by the infrastructural assets considered in this study. This suggests that there are other influential factors that are not captured in the current model, which significantly impact the financial performance of banks.

Recommendations

Inclusion of Additional Variables: Future research should consider incorporating other relevant variables such as organizational culture, management efficiency, customer satisfaction, and macroeconomic factors, which might have a significant influence on the financial performance of banks.

i. Deep Dive into Infrastructural Assets: While the current study has considered infrastructural assets as a predictor, a more detailed analysis focusing on the specific components of infrastructural assets, such as technological infrastructure, physical infrastructure, and organizational image, could provide more nuanced insights into their impact on financial performance.
ii. Enhanced Measurement Techniques: Given the intangible nature of infrastructural assets, more sophisticated and comprehensive measurement techniques should be employed to accurately capture their value and impact on financial performance.
iii. Strategic Focus on Intangible Assets: Banks should recognize the increasing importance of intangible assets, including infrastructural assets, in creating competitive advantages and driving financial performance. Therefore, there is a need to invest strategically in these assets to enhance their contribution to overall bank performance.
iv. Regular Performance Evaluation: Banks should regularly evaluate and monitor the performance of their infrastructural assets to ensure optimal utilization and alignment with the organization's strategic objectives.
v. Policy Implications: Regulatory bodies and policymakers should also consider the findings of this study in their policy formulation processes. There should be a focus on encouraging banks to invest in and effectively manage their infrastructural assets to ensure stability and sustainability in the banking sector.

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FARMERS-HERDERS CONFLICTS IN NORTH CENTRAL AND IMPACT ON EDUCATION, NATIONAL SECURITY AND SOCIO-ECONOMIC DEVELOPMENT OF NIGERIA

BY

Bolarin Najeeb Haroon, Yusuf Suleiman & Yusuf Olasunkanmi Ibrahim
Centre for Peace and Security Studies, Al-Hikmah University, Kwara State, Nigeria
Department of Educational Management and Counselling, Al-Hikmah University, Kwara State, Nigeria.
Department of Science Education, Faculty of Education, Al-Hikmah University, Ilorin, Kwara State, Nigeria.

Abstract

Since the restoration of civil rule in 1999, Nigeria has experienced a number of security issues, including Boko Haram insurgency, resource control agitation, and communal rioting. Numerous lives and properties have been lost as a result of these security issues. The Fulani herdsmen's attacks have become more dangerous in recent years due to their acquisition of sophisticated weaponry and communication technology. Most farmers have suffered because of Fulani herdsmen killings, robberies, rapes, and kidnappings, which has led to serious security challenges. Thus, the main goal of this paper is to analyze the threat posed by Fulani herdsmen in Nigeria and determine how it affects both socioeconomic development and national security. Conflicts between farmers and herders has posed substantial challenges to the educational system. Consequently, numerous villages and local governments have been compelled to shut down schools and colleges for extended periods. When clashes between farmers and herders transpire, essential infrastructure within schools, including classroom buildings, offices, books, and pertinent documents, often suffer extensive destruction or damage. In rural areas, schools are frequently subjected to arson, rendering it difficult for students to sustain their learning activities for prolonged periods as they relocate to safer areas with their families. The paper reveals that the Fulani herdsmen's attack destroys lives and property, undermines food security, and causes a significant increase in unemployment. The government should support affluent cattle owners in establishing cattle ranches across the nation, where the animals receive the proper care, as this paper suggests. For the security personnel and the host communities to be able to monitor the activities of Fulani herdsmen, registration is mandatory for those working in any local government.

Keywords: Conflict, Farmers, Herders, Education, Security, Development

Introduction

In recent decades, Nigeria has grappled with a persistent and complex challenge that has threatened its social cohesion, economic stability, and national security; the Farmers-Herders conflicts in the North Central region. These conflicts, characterized by clashes between sedentary farmers and nomadic herders over access to land and natural resources, have escalated to alarming proportions, permeating the very fabric of Nigerian society (Madu & Nwankwo, 2021). This paper aims to delve deeply into the multifaceted dimensions of the Farmers-Herders conflicts in North Central Nigeria and to elucidate its far-reaching impacts on education, national security, and socio-economic development. By examining the root causes, historical context, and contemporary manifestations of these conflicts, this paper seeks to offer insights into the complex dynamics at play and to propose viable solutions for mitigating the conflicts and their detrimental effects on Nigeria's trajectory of progress and development. To understand the origins and dynamics of the Farmers-Herders conflicts in North Central Nigeria, it is imperative to delve into the historical and socio-economic factors that have contributed to their emergence and perpetuation. The North Central region, often referred to as the Middle Belt, occupies a strategic position within Nigeria, serving as a transitional zone between the predominantly Muslim north and the largely Christian south. This geographical positioning has imbued the region with cultural, religious, and ethnic diversity, but it has also rendered it susceptible to tensions and conflicts stemming from competing interests and identities (Nnabuihe & Onwuzuruigbo, 2021).

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Adebajo (2022) highlighted that the conflicts between farmers and herders in North Central Nigeria have deep historical roots, dating back centuries to the pre-colonial era when various ethnic groups coexisted and competed for land and resources. With the advent of colonial rule and the imposition of arbitrary boundaries and land tenure systems, the tensions between farmers and herders were further exacerbated, as colonial policies favored sedentary agriculture and marginalized nomadic pastoralism. The Farmers-Herders conflicts in North Central Nigeria are not isolated incidents of localized violence; rather, they represent a systemic challenge that has profound implications for the stability, prosperity, and unity of Nigeria as a nation-state. Ezeogu, Ezugwu, & Obi (2018) underscored the significance of addressing these conflicts cannot be overstated, as they pose serious threats to multiple facets of Nigerian society, including education, national security, and socio-economic development. At its core, the resolution of the Farmers-Herders conflicts is essential for fostering social cohesion and inter-communal harmony in Nigeria. The protracted nature of these conflicts has engendered deep-seated mistrust, animosity, and ethno-religious divisions among various communities, undermining the social fabric of the nation and impeding efforts towards nation-building and reconciliation.

Against this backdrop, the purpose of this paper is threefold: first, to provide a comprehensive overview of the Farmers-Herders conflicts in North Central Nigeria, elucidating their root causes, historical antecedents, and contemporary manifestations; second, to examine the far-reaching impacts of these conflicts on education, national security, and socio-economic development, highlighting the human costs, economic losses, and security challenges they engender; and third, to propose actionable recommendations and policy interventions for addressing the conflicts and fostering sustainable peace, stability, and development in Nigeria. Erondu & Nwakanma, (2018) affirms that the conflicts have resulted in population displacement, reduced agricultural output, and, as a result, an increase in unemployment. Agriculture, which employs a big number of productive teenagers and adults, has become strained and turbulent. Farmers-herdsmen conflicts have contributed to the widespread migration of people from rural areas (local governments). The agriculture sector's significance to Nigeria's economic growth and development cannot be overstated. Olaoye (2020) states that insufficient agricultural product supplies will cause concern, discontent, a lack of food security, and negative repercussions on the national economy and security. Agricultural product availability, on the other hand, will result in vigorous health, stable mental and physical growth of residents, and increased national output In the subsequent sections of this paper, we will explore in depth the intricate dynamics of the Farmers-Herders conflicts, analyze their multifaceted impacts on education, national security, and socio-economic development, and delineate a roadmap for conflict resolution and peacebuilding in North Central Nigeria catalyze positive change towards a more inclusive, equitable, and resilient society for all Nigerians.

History of Herders-farmers Conflicts in Nigeria

The Farmers-Herders conflicts in North Central Nigeria epitomize the intricate interplay of historical grievances, socio-economic pressures, and environmental dynamics that have fueled protracted violence and instability in the region. Characterized by clashes between sedentary farmers, predominantly of agrarian backgrounds, and nomadic herders, primarily of pastoralist traditions, these conflicts have deep historical roots dating back centuries. At the heart of the Farmers-Herders conflicts lie competing claims over land, water, and grazing resources—a reflection of the changing dynamics of land use, population growth, and environmental degradation in North Central Nigeria. The historical patterns of land ownership, land tenure systems, and resource management practices have laid the groundwork for contention and conflict, as sedentary farming communities seek to protect their agricultural lands from encroachment by nomadic herders, who rely on transhumance and open grazing for their livelihoods. The

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historical context of the Farmers-Herders conflicts is intricately linked to the pre-colonial periods before the 1900s (Olaoye, 2020).

However, as a result of population pressures, climate change, and other causes, these conflicts have gotten significantly more serious in recent decades. Herders and farmers would agree on a system called burti during the British colonial era, in which special migration routes were established up for herders with mutual agreement from farmers, herders, and local officials. Thus, the burti system came to an end around the 1970s when farmers increasingly claimed ownership of areas along cattle movement routes, resulting in increasing confrontations (Peace, 2017). Herders used to routinely trade milk for cereal grains with farming groups. However, as packaged beverages became more popular in towns, milk was no longer extensively bartered. Modern treatments have also enabled herders to transfer their livestock further south into the "tsetse fly zone" in the south, where previously herders were unable to keep their cattle on a big scale due to tropical diseases in humid temperature zones. Tsetse management initiatives, beginning with those established by the British colonial authority, have lowered the threat of diseases such as trypanosomiasis (Mustapha, 2022). Herders now have easy access to medications for trypanosomiasis and dermatophilosis in order to keep their livestock alive. Furthermore, during the past several decades, herders have crossed trypanosome-intolerant zebu cattle with trypanosome-tolerant humpless breeds, boosting the cattle's tolerance of tropical diseases. All of these circumstances have facilitated the widespread movement of Fulani herders into Nigeria's southernmost territories, where they can readily sell their cattle for higher prices due to great demand for beef and other meat products in Nigeria's large southern towns and cities. However, in the south regions, they would confront settled societies that traditionally lack a background in peacefully negotiating and coexisting with nomadic herders. The rising accessibility to weapons and the religious division among followers of both Christianity and Islam have heightened the likelihood of violence. Blench (2017) states that the imposition of arbitrary boundaries and land tenure systems by colonial authorities further exacerbated tensions between farmers and herders, as competition over scarce resources intensified and conflicts over land ownership and access escalated.

Baca (2015) emphasized that since the establishment of the Fourth Nigerian Republic in 1999, farmer-herder conflict has killed over 19,000 people and displaced hundreds of thousands more. It coincided with an increase in farmer-herder conflicts across much of the western Sahel, owing to an increase in agriculturist population and cultivated land at the expense of pasturelands; deteriorating environmental conditions, desertification, and soil degradation; population growth; a breakdown in traditional conflict resolution mechanisms for land and water disputes; and the proliferation of small arms and crime in rural areas. Insecurity and violence have prompted numerous people to form self-defense units as well as ethnic and tribal militias, which have engaged in additional violence. The majority of farmer-herder confrontations have involved Muslim Fulani herdsmen and farmers, aggravating tensions. According to Oluwaleye (2020) in contemporary times, the Farmers-Herders conflicts have been exacerbated by a confluence of factors, including demographic pressures, climate change, and socio-economic inequalities. Rapid population growth and urbanization have led to increased competition for land and resources, exacerbating tensions between sedentary farmers and nomadic herders. Moreover, the adverse impacts of climate change, including desertification, deforestation, and depletion of water sources, have further intensified resource scarcity and heightened competition over dwindling natural resources. Mohammed & Baba (2018) affirm that the escalation of violence and bloodshed in the Farmers-Herders conflicts has been facilitated by the proliferation of small arms and light weapons, which have exacerbated inter-communal tensions and fueled cycles of revenge and retaliation. The breakdown of traditional conflict resolution mechanisms and the erosion of social cohesion have also contributed to the intractability of the conflicts, as communities resort to violence and vigilantism to assert their interests and defend their livelihoods.

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The geographical scope of the Farmers-Herders conflicts extends beyond the borders of North Central Nigeria, encompassing other regions such as the North West and North East, where similar dynamics of resource competition and ethno-religious tensions prevail. The transnational dimension of the conflicts, manifested in cross-border migration and transhumance, further complicates efforts to address the root causes and mitigate the impacts of the conflicts. Since the establishment of the Fourth Nigerian Republic in 1999, farmer-herder conflict has killed over 19,000 people and displaced hundreds of thousands more (Usman, 2019). It coincided with an increase in farmer-herder conflicts across much of the western Sahel, owing to an increase in agriculturist population and cultivated land at the expense of pasturelands; deteriorating environmental conditions, desertification, and soil degradation; population growth; a breakdown in traditional conflict resolution mechanisms for land and water disputes; and the proliferation of small arms and crime in rural areas (Baca, 2015). Insecurity and violence have prompted numerous people to form self-defense units as well as ethnic and tribal militias, which have engaged in additional violence. The majority of farmer-herder confrontations have involved Muslim Fulani herdsmen and farmers, aggravating tensions.

Farmers-Herders' Conflicts in North Central Nigeria

The North Central is one of Nigeria's six geopolitical zones, encompassing the majority of the country's Middle Belt. It consists of six states: Benue, Kogi, Kwara, Nasarawa, Niger, and Plateau, as well as Nigeria's Federal Capital Territory. The North Central region runs over the whole width of the country, from the border with Cameroon to the border with Benin. In terms of environment, the zone is characterized by the Guinean forest-savanna mosaic, with the western section being under the West Sudanian savanna ecoregion. The region has a population of over 20 million people, accounting for approximately 11% of the entire population of the country. The Federal Capital Territory Abuja, as well as Ilorin and Jos, are the most populated cities in the North Central, as well as the sixth, seventh, and eighth most populous cities in Nigeria (Wikipedia, 2022). Nigerian and international newspapers are frequently unable to report precise statistics of casualties. Despite the high number of attacks, Nigerian and foreign journalists rarely get access to first-hand accounts and frequently cite erroneous statistics (Obaje, 2017). As reported by Punch Newspaper on August 19, 2023, two lecturers at the University of Abuja expressed deep concern over the loss of lives and property in conflicts between farmers and herders in Benue and Plateau states. The academics highlighted a lack of governmental determination to prosecute the perpetrators, which they emphasized as a contributing factor to the sustained violence. Recently, at least two communities in Plateau State were subjected to retaliatory assaults by herdsmen, resulting in the tragic death of 21 individuals. The lecturers conveyed these concerns during a book review event entitled "The root cause of farmers-herders crisis in North-central Nigeria," hosted by the department in collaboration with the Rosa Luxemburg Foundation. Dr. Olowu Olagunju, one of the lecturers, stated that the conflict in Nigeria's North-Central region has tragically claimed the lives of over 60,000 individuals since 2001. He highlighted that the farmer-herder clashes have been documented in 22 out of Nigeria's 36 states, with the North-Central zone being the epicenter of these conflicts nationwide. These disputes have escalated into deadly violence, resulting in a death toll that exceeds 60,000 since 2001, a figure surpassing the casualties from the Boko Haram insurgency.

The assaults carried out by Fulani herdsmen in the North-central Nigerian state of Benue have resulted in the deaths of at least 1,269 individuals. Among the 23 local government areas in the state, these marauding herdsmen have infiltrated and taken control of 14 areas and are poised to encroach upon the remaining nine if prompt measures are not implemented to address this dire situation. In the North-east Senatorial District of Benue, the herdsmen have invaded Katsina-Ala, Kwande, Logo, and Ukum, with Vandeikya, Konshisha, and Ushongo remaining untouched. In the Benue North-east Senatorial District, the assailant herdsmen have targeted all the local government councils, except for Gboko. The areas that have been invaded and controlled by these violent herdsmen encompass Guma, Gwer-West, Gwer-East, Buruku, Tarka, and Makurdi local government councils (Premium Times News). Herdsmen

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attacked Nasarawa, razing over 50 houses and killing dozens of people. Approximately 40 farmers, among them women and children, have tragically lost their lives in Takalafiya village within the Gitata district of Panda Development Area in Karu Local Council due to suspected herdsmen. An eyewitness named Moses claimed that the assailants, believed to be of Fulani descent, launched an attack on the village. They reportedly fired guns indiscriminately and hurled explosives at houses while the residents were sleeping. Among the victims was Reverend Daniel Danbeki, a pastor from the Evangelical Church Winning All (ECWA), along with several members of his congregation, including women and children (The Guardian Newspaper).

On the 15th of May 2017, as reported by Punch Newspaper, a harrowing incident unfolded where herdsmen launched a vicious assault on a village in Niger State, resulting in the tragic loss of 21 lives. The attack took place on a Saturday night in Etogi community, Gbara ward of Mokwa Local Government Area. The conflict originated from an earlier confrontation between some Fulani youths and members of the community, resulting in the death of a Fulani herdsman. The herders, who had settled near the community, were granted land for farming under the condition that they would share a portion of the yield with the village head. However, tensions arose when the herders failed to fulfill this agreement, asserting their ownership of the land. Distraught by the loss of one of their own, the herders sought support from their kin and subsequently launched an attack on the community's mosque while worshippers were in prayer, resulting in the tragic deaths of everyone present, including the imam.

Reportedly by Sahara Report, Fear spreads as Fulani herdsmen abduct farmers in Kwara. The herders raided the farm, taking an unspecified number of workers with them while abandoning a pickup truck at the site. Kwara State has experienced repeated attacks by suspected herdsmen in recent times. In June, individuals believed to be Fulani herdsmen similarly encroached upon a farm situated behind Offa University in Aro, Offa, Kwara State. Nevertheless, as reported by Leadership News, a significant number of individuals are feared to have lost their lives in a clash between farmers and herders in Isanlu, the central town of Yagba East local government area in Kogi State. The violence erupted following the ambush and killing of a farmer on his way to his farm, with his decomposing body found on Sunday after local hunters and vigilantes scoured the nearby bushes. The severity of the crisis was amplified as it occurred on a market day, gathering both herders and farmers. Approximately 15 motorcycles and a Toyota Corolla car owned by the herders were set on fire, while others fled for safety. The incident brought economic activities to a halt in Isanlu, with most shops and marketplaces shut down.

Causes of Farmers-Herders Conflict in Nigeria

Many reasons have been cited in the literature as causes of farmer/herder confrontations; among them, though not exhaustively, are:

(a) **Climatic fluctuations' Effects:** Climatic variations, including irregular rainfall patterns, prolonged droughts, and desertification, have significantly altered traditional grazing routes and patterns in Nigeria. As arable land diminishes due to desert encroachment and changing weather patterns, herders are compelled to seek alternative grazing areas, often encroaching upon farmlands previously reserved for crop cultivation. The scarcity of water sources and diminishing pasturelands intensifies competition between farmers and herders for access to vital resources. As arable land shrinks and water sources become increasingly scarce, conflicts erupt over control and utilization of these limited resources. Herders, facing dwindling grazing lands, are forced to drive their cattle further afield, encroaching upon farmlands and triggering confrontations with farmers defending their livelihoods. Climatic fluctuations exacerbate existing socio-economic disparities, leaving both farmers and herders vulnerable to the adverse effects of environmental degradation. Farmers, reliant on consistent rainfall and stable growing seasons, face crop failures and reduced yields due to erratic weather patterns. Similarly, herders confront dwindling pasturelands and escalating fodder costs,

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exacerbating their economic hardship and heightening tensions with farmers competing for resources (Nwakanma & Boroh, 2019).

(b) **Population Growth:** The conflict between farmers and herders in Nigeria has persisted for decades, causing loss of lives, property, and economic setbacks. While various factors contribute to this conflict, one significant underlying cause is population growth. Nigeria is one of the most populous countries in Africa, with a population growth rate estimated at over 2% annually. The exponential increase in population puts immense pressure on land resources, exacerbating competition between farmers and herders for limited arable land and grazing areas. As the population grows, so does the demand for land for settlement, agriculture, and other economic activities. Consequently, available land for farming and grazing diminishes, leading to heightened competition between farmers and herders. This competition often escalates into violent conflicts, as both groups struggle to secure their livelihoods and sustain their families. Historically, Nigeria had designated grazing reserves to accommodate the needs of herders and their cattle. However, rapid urbanization, agricultural expansion, and population growth have encroached upon these reserves, reducing their size and functionality. As a result, herders face dwindling access to traditional grazing lands, forcing them to seek alternative grazing areas, often leading to clashes with farmers (Akinrinde, Osuwa & Olawoyin, 2021). Population growth exacerbates the effects of climate change, which further strains available resources. Erratic rainfall patterns, desertification, and diminishing water sources exacerbate competition between farmers and herders for fertile land and water resources. This intensifies tensions and escalates conflicts, as both groups struggle to adapt to changing environmental conditions. Population growth also intersects with political and socioeconomic factors, including inadequate land tenure systems, weak governance, and ethnic tensions, which exacerbate the farmers-herders conflict. In many cases, political manipulation and ethnic rivalries worsen the situation, leading to protracted violence and displacement of communities (Ofuoku & Isife, 2009).

(c) **Failure of Traditional Conflict Resolution Mechanism:** The conflict between farmers and herders in Nigeria predates colonialism, rooted in centuries-old competition for land and resources. Historically, traditional conflict resolution mechanisms, deeply ingrained within the cultural fabric of Nigerian societies, served as effective tools for mediating disputes and maintaining peace between agrarian and pastoralist communities. These mechanisms relied on customary laws, community elders, and religious leaders to arbitrate conflicts, emphasizing reconciliation and communal harmony. However, the effectiveness of traditional conflict resolution mechanisms has been severely undermined in contemporary Nigeria. One primary reason for this failure is the erosion of traditional authority structures and communal cohesion due to rapid urbanization, demographic shifts, and modernization (Ofuoku & Isife, 2009). As rural communities undergo socio-economic transformations, the authority of traditional leaders and institutions diminishes, weakening their ability to resolve disputes and enforce customary laws. Moreover, the escalating scale and intensity of the farmers-herders conflict have surpassed the capacity of traditional mechanisms to cope. The influx of modern weapons and the commercialization of livestock rearing have transformed the nature of disputes, rendering traditional mediators ill-equipped to address complex issues of land ownership, resource competition, and criminality (Olagbaju & Awosusi, 2019). Another significant impediment to traditional conflict resolution mechanisms is political interference and ethnic polarization. Politicians often exploit ethnic and religious fault lines to advance their agendas, exacerbating tensions and deepening mistrust between communities. The politicization of the farmers-herders conflict has further polarized society, hindering efforts to foster dialogue and reconciliation at the grassroots level. Moreover, the failure of successive governments to formulate and implement inclusive and sustainable policies exacerbates grievances and perpetuates cycles of violence. The absence of adequate legal frameworks and institutional support undermines the legitimacy of traditional mechanisms, leaving communities vulnerable to exploitation and manipulation by vested interests (Peace, 2017).

(d) **Technology and Economic Changes:** The complex and longstanding conflicts between farmers and herders in Nigeria have garnered significant attention both nationally and internationally. While the roots of these conflicts are multifaceted, the impact of technology and economic changes cannot be understated.

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Technological advancements, particularly in agriculture and communication, have transformed traditional farming and herding practices in Nigeria. The adoption of modern farming techniques, such as mechanized farming and irrigation systems, has led to increased productivity and the expansion of farmlands. However, these advancements have also encroached upon traditional grazing areas, diminishing the available land for herders and their livestock (Akinrinde, Osuwa & Olawoyin, 2021). Furthermore, advancements in communication technology have facilitated the rapid spread of information and the coordination of actions among various groups. This has enabled herders to mobilize more efficiently in response to perceived threats or conflicts over grazing lands. Similarly, farmers can organize and advocate for their rights more effectively, leading to heightened tensions between the two groups. Economic changes, including population growth, urbanization, and shifts in agricultural practices, have further exacerbated the conflicts between farmers and herders (Akanwa et al, 2023). Nigeria's population has been steadily increasing, leading to greater competition for land and resources. Urbanization has driven the conversion of agricultural land into residential and commercial areas, further reducing the available space for grazing. Moreover, changes in agricultural practices, such as the expansion of cash crops and commercial farming, have altered land use patterns and intensified competition for arable land. This has forced herders to seek alternative grazing routes and encroach upon farmlands, resulting in frequent clashes with farmers. The economic disparity between farmers and herders has also widened, exacerbating existing tensions. While farmers have benefited from government subsidies, access to credit, and support programs, herders have been marginalized and overlooked in development policies. This disparity has fueled resentment and animosity between the two groups, leading to violent confrontations and reprisals (Obasanmi & Enoma, 2022).

(e) **Long-Standing Disagreements:** The longstanding and escalating conflict between Fulani herders and farming communities in Nigeria has garnered widespread attention due to its devastating impacts on lives, livelihoods, and national stability. Recent attacks by Fulani herders often stem from long-standing grievances and retaliatory motives. For instance, the massacre of the Agatu people was reportedly retaliation for the death of a prominent Fulani figure due to alleged cow theft. Such incidents highlight the cycle of violence fueled by revenge and unresolved disputes over land and resources (Bello & Abdullahi, 2021). The core of the farmers-herders conflict revolves around competition for land. Rapid urbanization, population growth, and desertification have exacerbated land scarcity, pushing herders and farmers into closer proximity and intensifying resource conflicts. The encroachment of farmlands onto traditional grazing routes further exacerbates tensions, leading to clashes over land use and ownership (Yamtal, Ajik & Yamtal, 2023). Many herders face poverty, lack of access to education, healthcare, and basic infrastructure, exacerbating their vulnerability and sense of injustice. As traditional grazing lands shrink and economic opportunities dwindle, herders become increasingly desperate, resorting to violence as a means of survival and asserting their rights (Achem & Aderinto, 2023).

(f) **Damage or intentional grazing on crops:** One of the significant causes of conflict between farmers and herders is the damage or intentional grazing on crops. Herders, in search of grazing land for their cattle, often allow their animals to feed on farmlands, leading to destruction of crops. This can occur either unintentionally due to the lack of designated grazing areas or intentionally as a means of asserting herders' rights to land (Yamtal, Ajik & Yamtal, 2023). The consequences of damage or intentional grazing on crops are severe and multifaceted. Farmers suffer substantial financial losses due to destroyed crops, which undermines their livelihoods and food security. Moreover, these conflicts often result in loss of lives and further exacerbate ethnic and religious tensions in already volatile regions. The persistent conflicts between farmers and herders have detrimental effects on Nigeria's socio-economic development. Investments in agriculture are hindered as farmers fear cultivating their lands due to the risk of destruction by cattle. Additionally, the uncertainty and insecurity resulting from these conflicts deter investors and impede economic growth in affected areas (Yikwabs et al, 2020).

(g) **Water scarcity:** Water scarcity stands as a critical factor exacerbating the longstanding tensions between farmers and herders in Nigeria. Water is not merely a resource; it is a lifeline for agricultural productivity

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and sustenance. In Nigeria, where agriculture serves as a primary source of livelihood for a significant portion of the population, access to water is indispensable for both farmers and herders. The competition for water resources, particularly in arid and semi-arid regions, sets the stage for conflict dynamics between these two groups. Nigeria grapples with the challenges of water scarcity, compounded by factors such as climate change, population growth, and unsustainable water management practices. As water sources dwindle and become increasingly unreliable, the pressure mounts on farmers and herders alike to secure access to this precious resource for irrigation, livestock rearing, and domestic use. The scarcity of water directly impacts agricultural productivity, with farmers struggling to maintain their crops amidst erratic rainfall patterns and dwindling water supplies. In regions where irrigation is essential for farming, disputes over access to water sources escalate, leading to confrontations between farmers and herders vying for control over these vital resources. For herders, water scarcity poses a severe challenge to livestock management. As traditional grazing lands dry up and water sources diminish, herders are compelled to seek alternative routes and access points for their animals. This often brings them into direct conflict with settled farming communities, whose livelihoods depend on protecting their crops from grazing animals. Water scarcity exacerbates the underlying competition for land and resources between farmers and herders. Scarce water points become contested territories, sparking tensions and fueling violence as both groups vie for control over these critical lifelines. In the absence of effective water management strategies and conflict resolution mechanisms, the situation escalates into protracted disputes with devastating socio-economic consequences. The unchecked competition for water exacerbates environmental degradation, leading to the depletion of water sources, soil erosion, and loss of biodiversity. The overexploitation of water resources further exacerbates the vulnerability of communities already grappling with the impacts of climate change and environmental degradation, perpetuating a cycle of poverty and instability.

Impact of the Conflict on Education

Education has become a crucial factor in driving the growth of the national economy in the contemporary economic landscape. This is primarily due to its recognized role as a key contributor to the development of human capital. The persistent destruction of schools has emerged as a significant social issue in affected regions. In the case of Benue state, the occurrence of conflicts between farmers and herders has posed substantial challenges to the educational system. Consequently, numerous villages and local governments have been compelled to shut down schools and colleges for extended periods. When clashes between farmers and herders transpire, essential infrastructure within schools, including classroom buildings, offices, books, and pertinent documents, often suffer extensive destruction or damage. In rural areas, schools are frequently subjected to arson, rendering it difficult for students to sustain their learning activities for prolonged periods as they relocate to safer areas with their families (Okwori & Angenyi, 2019).

The educational system in Agatu Local Government Area (LGA) of Benue State, Nigeria, was already vulnerable before the farmers-herdsmen crisis, characterized by a substantial portion of children never experiencing formal schooling and a considerable number discontinuing their education before completing secondary school. The crisis has exacerbated the educational challenges in Agatu LGA, resulting in low school enrollment and a significant increase in the number of out-of-school children (Bilyaminu et al, 2017). The closure of schools carries extensive consequences, leading to the termination of education for numerous students and the loss of opportunities for higher education (Odinkalu, 2014). The impact of insurgency on girls' education in northeastern Nigeria. The study uncovered that insurgency has adversely influenced education in the region, as students experienced trauma witnessing attacks on their schools, resulting in a pervasive fear that deterred them from attending school (Dauda, 2014). According to Prof. Wilfred Uji, the Executive Secretary of the Benue State Teaching Service Board, note that the ongoing attacks by herdsmen on Benue communities have resulted in a disruption of the school calendar, compelling 300,000 children to leave school. Within this number, 200,000 are secondary school students, while 100,000 are primary school pupils,

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spanning across three local government areas. Uji expressed his concern about the detrimental impact of the crisis on the educational system, particularly within the primary and secondary school sectors. He mentioned that Government Secondary School, Gbajimba; Government Secondary School, Agasha; Government Science Secondary School, Logo; and Government Secondary School, Ukum, among others, have been either burnt or entirely shut down by herdsmen. Uji further stated that secondary school students and primary school pupils attending public schools in Apa, Agatu, Makurdi, Okpokwu, and Ogbadibo have also been compelled to abandon their educational institutions. The conditions in the IDP (Internally Displaced Persons) camps have become so challenging that even the mobile schools established within the camps struggle to manage the teaching and learning process due to overcrowding. Students who have been displaced and are now attempting to take the West African Examinations Council (WAEC) face difficulties, despite efforts to relocate them to safer centers.

However, Professor Uji further expressed the distress of witnessing students from IDP camps coming to take exams under such challenging circumstances. He remarked, while I was in my office, some of the teachers walked in and presented me with threat letters. When you receive such letters, it's crucial to take them seriously because the next day, the situation might escalate dramatically. The user's statement highlights a perceived connection between the attacks on educational facilities in Benue State by Fulani herdsmen and the violence in the North-East linked to Boko Haram. Uji expresses concern that there may be a deliberate effort to undermine the educational standards of Benue. He appeals to the federal and state governments to address the crisis, fearing that the region's educational standards might suffer in comparison to other parts of the country. He further emphasized, consider that an entire school year has been disrupted. When we contemplate recovering the lost time, it becomes evident that it will take more than five to 10 years to fully recover. The enduring consequences are substantial. Looking ahead, in 100 years, our region may lag behind educationally compared to other zones. The implications of the crisis are profound, affecting not only the future of the children but also the well-being of the Local Government, the state, and the country as a whole. The hardships brought about by the crisis have significantly impacted parents' ability to provide for their families, making it challenging to enroll children in school. The management of schools by teachers has also become problematic, as highlighted in a study by Okwori and Angenyi (2019) titled "Farmers-Pastoralists Conflicts and the Management of Primary Schools in Benue State." The research revealed that conflicts between farmers and pastoralists have had a highly detrimental effect on the utilization of infrastructural facilities and student enrollment in primary schools in Benue State. These conflicts not only hinder educational development but also impede economic growth by disrupting the productive segment of society. A particularly concerning aspect is that many pupils in Benue State have not been able to enroll in school after the calamity. Children have been compelled to relocate with their parents to safer places, where the crisis is not as prevalent. Additionally, those who remain in the affected communities often prioritize farming over attending school, further exacerbating the challenges facing education in the region.

Impact of the Conflict on National Security

The violent actions of Fulani herdsmen in Nigeria pose a major threat to national security, which has a negative impact on the nation's socioeconomic development. The threat posed by the Fulani herdsmen in Nigeria is increasingly concerning and could jeopardize national security. A persistent security issue facing numerous states across the nation, aside from Boko Haram, is the threat posed by Fulani herdsmen. Attacks by herdsmen on various communities in Nigeria have become more frequent (Nwangele, 2018). The number of reported attacks by Fulani herdsmen, who brutally murder locals in the invaded farming communities, including women and children, has increased in a number of states throughout the nation (Ikegbunam & Agudosy, 2019). Benue, Nassarawa, Plateau, Taraba, Kaduna, Adamawa, Zamfara, Oyo, Imo, Cross River, Abia, Ebonyi, and Rivers are among the states most severely impacted (Iheanacho, 2017). However, human security is weakened by the threat posed by Fulani herdsmen. Protecting people

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from socio-existential threats and vulnerabilities is known as human security (Okafor & Chukwuemeka, 2023). Chinwokwu (2017) highlighted that the unbridled criminal activities of Fulani herdsmen carry numerous implications for national security. Presently, these herdsmen have garnered the alarming designation as the fourth most dangerous terrorist groups globally. This classification not only adversely affects Nigeria's international image but also compounds existing challenges, including insurgency in the North East and militant activities in the Niger Delta. The unity of Nigeria is precariously hanging in the balance due to the unchecked criminality of Fulani herdsmen, exacerbated by perceived governmental bias in addressing the menace. This prevailing situation has fostered a widespread perception of apathy, with a prevailing sentiment that governance in the Nigerian state is feeble and unsuccessful. Such a negative image could further reinforce the notion that Nigeria is a risky country for conducting business. This implies that the targets we have set for sustainable development and economic growth in our nation by 2030 are wholly unrealistic. When development continues to support national security, it flourishes.

Conflicts between herders and farmers usually cause disruptions and pose a threat to the sustainability of crop production and pastoral farming. Conflicts like these exacerbate the cycle of extreme poverty and hunger, undermine social order and food security, and primarily impact the already marginalized groups—women and children in a nation as cohesive as Nigeria. Many communities have experienced a vicious cycle of poverty as a result of the conflicts, which has also had an impact on children's education and created barriers to their development and mass displacement (Cabot & Cabot, 2017). For example, in Zamfara state, insecurity has not only negatively impacted economic activity and people's means of subsistence, but farming—which is the primary source of income—has been abandoned, and communities have been abandoned out of fear. This has resulted in the rapid destruction of the social fabric of the communities and the destruction of fundamental human values, the consequences of which are too terrifying to consider (Imo, 2017). Nations globally are diligently striving to transition from the Millennium Development Goals (MDGs) to the Sustainable Development Goals (SDGs) by 2030. This shift involves substantial efforts in industrial and technological advancements, as well as ensuring widespread access to food. However, in Nigeria, the actions of Fulani herdsmen, coupled with governmental inaction, have heightened food insecurity, economic challenges, and starvation, contributing to overall underdevelopment. The significant displacement of individuals from their farms and residences by herdsmen has resulted in a rise in the population of internally displaced persons (IDPs). Individuals who should have been actively engaged in cultivating their farms find themselves, through no fault of their own, transformed into beggars and refugees, relying on assistance for their families' survival within their own country (Udosen, 2021). Meanwhile, their homes and farmlands remain abandoned due to the actions of criminal herdsmen. It's crucial to acknowledge that, regardless of any government assertions, the economic and human toll resulting from these criminal activities poses a significant obstacle to sustainable development and security. Moreover, the reckless destruction of farmlands, aquatic resources, and water bodies has profound implications for food security, leading to a negative impact on both the quantity and price of food. One might argue that the government's profiting from corruption in fund allocation to internally displaced persons (IDPs) and receiving grants from foreign donors may be a contributing factor to their inaction in addressing the Fulani herdsmen menace and the growing population in IDP camps. (Chinwokwu, 2017).

However, serious accusations have been made, suggesting that the suspected Fulani herdsmen responsible for various violent crimes in Nigeria may not be Nigerian citizens. This raises concerns not only about the porosity of our borders but also about the apparent inability of our security forces to effectively monitor and safeguard domestic security. The ease with which foreigners, armed with dangerous AK-47 rifles, can traverse the country's hinterlands without detection at numerous roadblocks highlights the inefficiencies, lack of experience, professionalism, and perhaps even

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patriotism within our security agencies. Such a situation poses a significant threat to our national security (Wambuma, 2021).

Impact of the Conflict on Socioeconomic Development of Nigeria

The threat posed by Fulani herdsmen is causing severe repercussions for socio-economic development in the targeted states and Nigeria as a whole. The areas affected by the conflict experience significant setbacks in economic and social prosperity due to the destruction of property and incidents of rape. In these states, the widespread crisis disrupts not only the physical infrastructure but also brings daily life to a standstill as people are afraid to engage in farming and other socio-economic activities, fearing for their lives. This escalating situation is rapidly undermining farming, economic endeavors, and social interactions, thereby jeopardizing sustainable development. Moreover, a substantial portion of the national budget is being allocated to compensate families who have lost loved ones in the Fulani herdsmen and farmers conflict. Additionally, considerable funds are being directed towards the acquisition of weapons and ammunition to equip the military in managing the crisis. These expenditures are taking a toll on Nigeria's economy, as highlighted by (Ajibefun, 2018). Similarly, Michael, Inyang, and Ukpong (2017) noted that the attacks by Fulani herdsmen have resulted in significant social dislocation and a persistent atmosphere of suspicion between the Fulani and other ethnic groups in the affected areas. The once legitimate nomadic activities of herdsmen have now become a social stigma, with people harboring discomfort around them. The social harmony and cohesion that used to exist between herdsmen and local residents have been severely strained, leading to a decline in social interactions. The researchers observed that in the past, Fulani herdsmen were welcomed to participate in community associations and engage with community members. However, this dynamic has shifted, and they are now often denied the privilege of joining such associations where they exist, contributing to a sense of social dislocation. In certain communities, resolutions have been made to prohibit the provision of land for herdsmen to graze their herds, significantly impacting social relationships.

According to the World Bank (2015), Nigeria boasting an estimated population of approximately 180 million, holds the status of being the largest country in Africa (Mohammed & Baba, 2018). A significant portion of its populace is involved in agricultural and livestock activities. The nation's diverse agroecological conditions facilitate the production of a wide range of agricultural goods. Moreover, agriculture stands as a crucial pillar in the economy, employing around 70% of the workforce and contributing roughly 60% to the national income (Ameh et al, 2017). Consequently, the extensive available land for agricultural purposes in Nigeria positions the sector as a key player in the country's economic development. Although 75% of the land is suitable for agriculture, only 40% is presently under cultivation (Ameh et al, 2017). Concerning the causes and consequences of the persistent conflicts between herdsmen and farmers in Nigeria, Mercy Corps (2013; 2016), a global humanitarian organization supported by the British Department for International Development (DFID), has highlighted significant impacts. The recurrent attacks have imposed substantial costs, leading to a staggering $14 billion loss over three years and severely affecting food security. Beyond impeding the country's economic development, these clashes have resulted in various economic repercussions, such as hindering trade practices, reducing crop yields, displacing farmers, causing loss of lives and properties, and damaging products in storage as well as public and private infrastructure. The situation is alarming, suggesting that without intervention, the attainment of food security and sustainable development remains elusive (Imo, 2017)

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Afolabi (2018) highlighted the multifaceted economic impact of the conflict. Firstly, the cattle industry is experiencing underperformance, contributing only 1.58 percent to Nigeria's GDP as of Q3 2017, in contrast to crop production, which contributed 22.19 percent. The potential for trade between farmers and herdsmen could offer a solution, with farmers providing quality feeds to improve the cattle's meat and milk yields if they knew their produce could be exchanged for acceptable payment. However, due to the prevalence of violence over commerce, farmers are instead incentivized to harm crops that they know the cattle will consume, resulting in losses for both farmers and herders. Obi and Chukwuemeka (2018) assert that according to the Nigerian Cattle Industry Report (2018), the current revenue generated by the Nigerian cattle market amounts to just US$6.8 billion annually, falling short of its potential US$20 billion. This discrepancy is primarily attributed to internal conflicts and the government's incomplete acknowledgment of the industry. Another aspect of the economic repercussions involves the detrimental impact of violence on communities that could have been potential markets for herders. Numerous communities in the affected regions have experienced depopulation, resulting in a refugee crisis that further burdens government resources. The Middle-Belt region has historically been one of Nigeria's most agriculturally productive areas, playing a crucial role in the nation's food production. The fertile soils of this region support the cultivation of important crops such as yam, cassava, rice, soybeans, and guinea corn. These crops are essential to Nigeria's aspirations for achieving self-sufficiency in food production. Hence, it is not an overstatement to assert that the ongoing pastoral conflict in key Middle-Belt states likely carries more significant economic implications for the country than the conflict in North Eastern Nigeria. The threat posed by Fulani herdsmen has severe implications for both the national security and socio-economic development of Nigeria (Afolabi, 2018).

Government's Strategies in Resolving Farmers-Herders Conflict in Nigeria

Over the years, the Federal Government has employed various approaches to address the issue. In April 2014, then-President Goodluck Jonathan's administration established an inter-ministerial technical committee on grazing reserves. This committee was assigned the responsibility of devising strategies to mitigate conflicts. Simultaneously, a political Committee on Grazing Reserves, chaired by the then-Governor of Benue state, Gabriel Suswam, was established. The committee's report advocated for the restoration and enhancement of grazing routes encroached upon by farmers. It also recommended that the Central Bank of Nigeria allocate a total of N100 billion ($317 million) to the 36 state governments for the construction of ranches (Peace, 2017). In 1965, the northern regional government of Nigeria took one of the earliest measures to address the pastoralism crisis associated with emerging conflicts between farmers and herders. The Northern Region Grazing Reserves Law of 1965 aimed to address the issue by establishing corridors for the movement of migrating livestock and designating 415 grazing reserves throughout the country. These reserves were intended to allocate large areas exclusively for herders to graze their livestock. Initially viewed as a legislative solution, challenges arose as population growth, urbanization, and migration encroached on these designated areas, limiting herders' access and use of the reserves. Furthermore, climate changes and inadequate maintenance often made it difficult for herders to find sufficient pasture and water within the reserves. Keeping livestock stationary increased their vulnerability to diseases and banditry, prompting herders to move their herds beyond the reserve boundaries. Both federal and state governments have neglected the maintenance of these reserves, failing to address the concerns of both farmers and herders. In the absence of a concrete response plan to enforce laws regarding cattle routes at all government levels, existing reserves are undergoing distortions (Salihu, 2019).

As a long-term solution, the government announced a new plan in January 2018 to establish 'cattle colonies' nationwide. According to Agriculture Minister Audu Innocent Ogbeh, each colony was envisioned to cover 5,000 hectares (approximately 25km by 20km) and serve as a cluster of ranches. These colonies would provide resources and facilities such as grass, water, veterinary services, mills for converting agro-waste to livestock feed, schools,

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hospitals, and markets. The entire setup was to be secured by agro-rangers. States were tasked with providing the land, and the federal government would bear the development and maintenance costs, possibly with support from international organizations like the UN Food and Agriculture Organization and the International Fund for Agricultural Development. Ranchers and herders were expected to pay a nominal fee. The government argued that the benefits would include protection from cattle rustlers, a reduction in farmer-herder disputes, healthier livestock, increased meat and dairy production, and additional revenue for state governments (International Crisis Group, 2018)

The federal government has taken several measures to address the escalating violence, including the deployment of additional police and army units. Two military operations, Exercise Cat Race (from 15 February to 31 March) and the ongoing Operation Whirl Stroke, have been initiated to curb violence across six states. In an intensified security response, the government has increased the deployment of both police and military units to the states facing unrest. In November 2017, the Inspector General of Police, Ibrahim Idris, dispatched five mobile police (anti-riot) units to Adamawa State to proactively prevent further clashes. Despite these deployments, the violence persists. President Buhari and other high-ranking officials have engaged in consultations with leaders of both herders and farmers, as well as relevant state governments, to explore ways of halting the attacks. As a potential long-term solution, the government has suggested the creation of "cattle colonies," designating specific land for herders nationwide. More recently, the government has introduced the National Livestock Transformation Plan (2018-2027). While these initiatives signal a heightened commitment on the part of the government, their actual implementation is pending, and the violence continues unabated. Kwaja and Ademola-Adelehen (2018) emphasized that the police have implemented certain measures to gather or confiscate illegal arms. On February 21, Inspector General Idris issued a directive for the public to surrender all unlawful firearms within a 21-day period from February 22 to March 15. During this timeframe, approximately 4,000 firearms were reported surrendered or recovered nationwide by the police. However, it's important to note that this total figure included only 453 firearms from the six states most severely affected by farmer-herder conflicts. Moreover, the initiative did not effectively disarm the groups responsible for the ongoing violence. The National Commission for Nomadic Education (NCNE) was established by the federal government in 1989 through Decree 41, which is now recognized as the Nomadic Education Act, Cap No. 20 Laws of the Federation. The primary objective of this program was to facilitate the economic and social integration of nomadic pastoralists into national life by offering relevant, functional, and mobile basic education along with livelihood skills. Additionally, it aimed to assist pastoralists in modernizing their cattle-rearing techniques to maximize economic potential, encompassing aspects such as dairy processing, marketing, animal vaccinations, and modern herding methods. However, the current state of the nomadic education program is marked by deteriorating infrastructure and deficits in human resources, largely attributed to insufficient funding from the federal government.

In 2016, the National Assembly made an attempt to address conflicts between farmers and herders through the National Grazing Reserve (Establishment) Bill 2016. However, this controversial bill was not passed. The failure to pass the bill was largely attributed to the Land Use Act of 1978, which vests all powers related to the regulation of ownership, alienation, acquisition, administration, and management of Nigerian land with the state governors. The National Assembly's efforts, including the 2016 bill and other attempts to legislate on grazing reserves, were perceived as a violation of the Land Use Act of 1978 and were seen as an endeavor to encroach upon the powers of the governors (Kwaja & Ademola-Adelehen, 2018). State-level responses differ. Some have set up local peace commissions or committees to facilitate dialogue between herders and farmers, aiming to address and resolve conflicts. Others, like Ekiti state in the southwest and the Federal Capital Territory (FCT) of Abuja in the center, have enacted legislation to control grazing activities. In Benue and Taraba states, governments have implemented laws prohibiting any form of open grazing. In Edo state, authorities have expressed intentions to establish enclosed grazing areas equipped with watering facilities. This would mandate herdsmen to feed their cattle in these designated spaces and cover the

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associated costs (Peace, 2017). Herders, viewing these regulations as limiting, frequently do not adhere to them. In the Federal Capital Territory, herders continue to let their cattle roam freely. In Taraba state, the cattle breeders' association has opposed the law prohibiting grazing, declaring an intention to legally challenge it (Peace, 2017).

Certain local responses have been more assertive. In Borno, Niger, and Plateau states, authorities have at times expelled herder groups from specific areas in response to local protests. In May 2016, Governor Okezie Ikpeazu of Abia state revived a local vigilante group, commonly known as the Bakassi Boys. He instructed community chiefs to nominate ten youths for a two-week intensive training with "reformed" Bakassi vigilantes before deploying them to rural communities. Two months later, the Cross River state government announced plans to establish a 3,000-member "Homeland Security Service." Local officials clarified that members would not carry firearms but would engage in activities such as providing intelligence on herders' movements and actions. While these measures might have decreased conflicts in certain areas, in other regions, they have exacerbated the situation. The expulsion of herder groups has heightened their resentment. If community-based vigilante groups target herders in the south, there is a risk that herders may retaliate against southerners residing in the north, thereby further intensifying the conflict (Kwaja & Ademola-Adelehen, 2018).

The Way forward

The following steps could be taken to lessen the impact of the herders-farmers conflict on the nation's security and socioeconomic development:

(a) **Fairness and Good governance:** To bring an end to recurring crises such as the farmers-herders clashes, it is crucial to embrace principles of equity and good governance. There needs to be a concerted effort to educate the political class about the significance of these principles. When there are perceptions of favoritism and nepotism within the government, it tends to provoke reactions from the citizens that can be detrimental to the overall peace of the country. As highlighted by Nnaji et al (2022) the persistent and deadly conflicts between farmers and Fulani herders are, in part, attributed to a lack of good governance. Addressing these governance issues is essential for fostering stability and harmony in the nation.

(b) **Border Security:** The importance of border security personnel cannot be overstated in addressing the current security challenges in Nigeria. The country's borders, whether in the North-East, North-West, South-West, or South-South, are porous. Therefore, implementing joint-security patrols involving the Armed Forces, the Police, and Paramilitary agents at international borders is crucial (John, 2022). To enhance surveillance, it is imperative to install visual sensors and motion detectors at strategic unmanned border routes. By taking these measures, Nigeria can effectively address issues such as illegal immigration by foreign herders and religious extremists, as well as the illicit importation of weapons. This comprehensive approach to border security would significantly contribute to overcoming these challenges.

(c) **Dialogue and Alternative Dispute Resolution (ADR) methods:** Engaging in dialogue and utilizing Alternative Dispute Resolution (ADR) methods is essential. Providing a platform for traditional and religious leaders to unify and influence their respective communities is crucial. These leaders can play a significant role in promoting tolerance, peaceful co-existence, and discouraging violence in conflict situations. Historical records show that traditional institutions served as effective systems of administration, maintaining law and order during the colonial period. Therefore, the government should actively demonstrate a willingness to involve traditional rulers in the pursuit of peace, harmony, and effective leadership in the country. By leveraging the influence of traditional and religious leaders, a more comprehensive and culturally rooted approach to conflict resolution can be achieved (Close, 2020).

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(d) **Education and Orientation:** Massive education and orientation programs are essential for traditional herders, emphasizing the transition from open pastoralism to ranching. This not only minimizes clashes between farmers and herders but also enhances productivity. States like Taraba, Benue, and Ekiti should be commended for enacting anti-open grazing laws. However, these state governments, along with others, including the federal government, should provide financial and material support to herders willing to adopt ranching. Any group of herders openly grazing, leading to violence with farmers, should be apprehended and prosecuted. Applying appropriate laws upon conviction would effectively deter such activities, contributing significantly to reducing herder-farmer conflicts in Nigeria. Additionally, it would limit the hiding places for Fulani extremists and curtail their ability to carry out terror on farming communities (Kerven, Robinson & Behnke, 2021).

(e) **The three tiers of Nigerian governments (Federal, States, and Local Governments):** The three tiers of Nigerian government must prioritize improving the living conditions of the Nigerian people, many of whom are currently grappling with poverty. It is imperative for governments, private entities, and international organizations to create employment opportunities for the large population of unemployed Nigerian youth, thereby enhancing their overall well-being. Essential amenities such as healthcare, educational facilities, electricity, water, and a well-developed road network should be provided to the Nigerian populace. However, the realization of these objectives hinges on the commitment of the political and economic leadership to combat corruption, injustice, nepotism, and bad governance; factors that insurgents often cite as justifications for their attacks. To achieve this, the government and its anti-corruption agencies should rise above sentimentalities and prosecute all corrupt officials, irrespective of their political, religious, regional, or ethnic affiliations. Upholding principles of good governance is crucial for uniting the country and preventing its disintegration.

Conclusion

A conducive environment, free from crisis and turmoil, is imperative for meaningful growth and development. This review delves into the immediate and underlying causes of the longstanding conflicts between Fulani herdsmen and the farmers in Nigeria, assessing its consequences and proposing potential solutions. Originating in the 1960s, this crisis has resulted in significant loss of lives and property, displacement of families, and the disruption of livelihoods. The primary cause of the conflict lies in the quest for animal fodder, leading to encroachments into crop farms during grazing practices. This has polarized the entire citizenry, raising concerns about the country's continued existence. To ensure meaningful development and growth, all stakeholders must collaborate to address and mitigate the crisis. The review advocates for good governance, the establishment of justice, equity, and adherence to the rule of law as crucial measures to halt the protracted conflicts. Additionally, central government efforts should focus on rectifying the polarized economy, which contributes to ordinary citizens accessing sophisticated weapons for internal conflicts. Those responsible for perpetuating this situation should be held accountable without bias, ensuring that the rule of law prevails.

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AN ASSESSMENT OF ADEQUACY OF THE AIMS, GOALS AND OBJECTIVES OF BASIC SCHOOL ARABIC CURRICULUM IN OYO STATE, NIGERIA

BY

Abdul-Hamid Habibullahi
Department of Arts and Social Sciences Education, Faculty of Education, Al-Hikmah University, Ilorin, Kwara State, Nigeria.
Email: abdulhamidhabibullahi@gmail.com

Abstract
This study assessed the adequacy of aims, goals and objectives of Upper Basic Arabic Language Curriculum in Oyo North, Oyo State, based on the views of Arabic Language teachers. In addition it investigated the influence of gender and qualification of the teachers on their assessment. A descriptive method, involving the administration of questionnaire for data collection was used. One hundred and thirty six qualified teachers of Arabic were purposively sampled from the 82 Upper Basic Schools, where Arabic Language was offered in the area. Data collected were analyzed using frequency counts, percentage indices and mean scores to answer research questions, while the hypotheses raised were tested at the 0.05 level of significance using the t-test. The study findings indicated that teachers assessed: the aims, goals and objectives of the Upper Basic Arabic Language Curriculum to be adequate. The findings also revealed that teachers' gender and qualification have a significant relative influence on their assessment. Consequently, it was recommended that: sufficient qualified Arabic teachers should be employed to teach Arabic Language at the Upper Basic level to achieve the adequate aims, goals and objectives of the curriculum; teachers with low qualifications should be encouraged to add additional qualifications; and female students should be encouraged to read Arabic to a professional level, to balance the gender problem in Arabic Education; the Oyo State Government should recognise Arabic Language as a formal teaching subject and give it its appropriate status in the implementation of the Universal Education.
Keywords: Assessment, Arabic, Curriculum, Adequacy

Introduction

Curriculum is the body of programme and practice of education covers all the assumptions and targets of every teaching subject. It is obvious that curriculum is the primary source of any formal education and it makes a distinction between formal and informal education. Formal education in Nigeria has passed through different policies or systems. It began with the colonial educational system, which offered the 8-6-2-3 system of education, i.e. eight years in the primary school, six years in the secondary school, two years of sixth form in Higher School Certificate (HSC) work and three years at the university or other type of higher education (Abdul-Hamid, 2015). In 1955, the Universal Primary Education was introduced in the Western Region and adopted by the Eastern Region in 1957. At that point in time, the duration of primary education was reduced to six-years and that of secondary was reduced to five years (6-5-2-3). The system was in operation until 1977, when the new National Policy on Education was introduced and adopted. The policy, which was edited in 1981, emphasized self-employment, ushered in the 6-3-3-4 education system, signified a 6-year primary education, a 3-year junior secondary education, a 3-year senior secondary education and a 4-year university or other forms of tertiary education (Abdul-Hamid, 2015).

On 30th September, 1999, the Universal Basic Education (UBE) programme was formally launched by President Olusegun Obasanjo. This brought about the adoption of the 9-3-4 system of education. In this system, the 6-years of primary education and 3-years of junior secondary education are merged to nine years in the Basic Levels, three years in the Senior Secondary School and four years in the university or other tertiary institutions. The programme aims at eradicating illiteracy, ignorance and poverty. This assertion is in consonance with the declaration of the World

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Conference on Education for All (WCEFA), which was introduced in 1990 (Abdul-Hamid, 2015). Arabic as a foreign language is among the school subjects included in the Universal Basic Education system. Thus, this marks a new trend in the development of Arabic Education in Nigerian educational system. In line with the new development, a new curriculum was designed to separate Arabic Language from Islamic Studies at the primary level and the existing junior secondary school curriculum was re-edited and merged with the primary school curriculum to form the Arabic Basic Education Curriculum (BEC) (Abdul-Hamid, 2015). Traditionally in curriculum development, scholars have defined steps to be followed.

It is observed that goal setting (aims, goals and objectives) and content selection are the major stages of the four basic stages in curriculum planning. While goal-setting answers why we teach and learn, content selection answers what we teach and learn. The major problems militating against our educational system come from faulty goal-setting and unrealistic content selection. Therefore, the role of aims, goals and objectives in curriculum development cannot be trivialised as it serves as the bedrock and the determinant of the purpose of knowledge to be transmitted. It provides a central dividing line between formal and informal education (Ajidagba, 2005). Abdul-Hamid (2015) asserts that the selection of aims, goals and objectives must satisfies certain criteria such as adequacy, appropriateness and consistency.

Purpose of the Study

This study is aimed at assessing the adequacy of the objectives of Arabic curriculum in Basic Schools in Oyo State. Specifically, the study was meant to assess:

1. The adequacy of the objectives of the Basic School Arabic language curriculum with the selected content for classroom instruction.
2. The gender difference in the assessment of the adequacy of the aims, goals and objectives of the Basic Schools Arabic language curriculum with the selected content for classroom instruction.
3. The qualification difference in the assessment of the adequacy of the aims, goals and objectives of the Basic School Arabic language curriculum with the selected content for classroom instruction.

Research Question

1. Are the objectives of Basic School Arabic curriculum adequate with the selected content for classroom instruction?

Research Hypotheses

H_{01}: There is no significant difference between male and female teachers in the assessment of the adequacy of the objectives of the Basic School Arabic language curriculum with the selected content for classroom instruction.

H_{02}: There is no significant difference between teachers with higher qualifications and teachers with lower qualifications in the assessment of the adequacy of the aims, goals and objectives of the Basic School Arabic language curriculum with the selected content. for classroom instruction.

Methodology

This study adopted descriptive method to describe and report teachers' assessment of the objectives of Upper Basic Arabic Curriculum based on their reactions to questionnaire items designed specifically for this purpose. 136 Arabic

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teachers were involved in the study. The population was drawn 86 Basic schools in the 13 local governments of Oyo North area of Oyo State using the purposive sampling technique. Questionnaire was used to obtain relevant information from the respondents. The questionnaire contained a brief introduction, followed by two sections (A and B). Section "A" of the instrument was structured to elicit teacher's bio-data, such as the teacher's school, gender, educational qualification and years of teaching experience, while section "B" contained 10 items to elicit information on the adequacy of the curriculum aims, goals and objectives. The respondents were given four options against each of the questionnaire items. The options were: Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with the values 4,3,2,1 respectively. Respondents were asked to tick any of the four options that represented their assessment of the curriculum. The face and content validity of the instrument was established by making it available to a team of experts consisting of two Language Education lecturers and one Measurement expert. The suggestions of the experts were reviewed. The reliability of the instrument was established by the use of the test re-test method. The questionnaire was administered twice, at an interval of two weeks on thirty (30) Arabic teachers from other schools not included in the sample. The results obtained were subjected to Pearson-Moment Coefficient Correlation and the value of .80 was obtained. The instrument was therefore assumed to be reliable. Frequency counts, percentage indices and mean scores were used to answer the research question, while the t-test statistic was employed to test the two hypotheses at the 0.05 level of significance.

Results

Demographic Data of the Respondents

Table 1:

Distribution of Respondents Based on School Type

S/NO	CATEGORY	NO OF SCHOOLS	PERCENTAGE%
1.	Private	131	96.3%
2.	Public	5	3.7
	Total	136	100%

Table 1 shows that 131 (96.3%) private and 5 (3.7%) public schools constituted the sample. It also shows that the number of students who offer Arabic Language was more in the private basic schools than in the public basic schools.

Table 2:

Distribution of Respondents Based on Teaching Qualification

QUALIFICATION	FREQUENCY	PERCENTAGE
Low Qualification (NCE)	123	90.4%
High Qualification (B. A. Ed.) Arabic	13	9.6%
Total	136	100%

Table 2 shows that 123 (90.4%) of the teachers were holders of the Nigeria Certificate in Education (NCE) while 13 (9.6%) were holders of the Bachelors' of Arts Degree in Arabic Education, indicating that teachers of Arabic with the NCE were more than teachers with B.A (Ed) degree in Arabic.

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Table 3:
Distribution of Respondents Based Gender

S/N	Category	No Of Teachers	Percentage%
1.	Male	124	91.1%
2.	Female	12	8.8%
	Total	136	100%

Table **3** shows as well that 124 (91.2%) of the teacher respondents were males while 12 (8.8%) of them were females. This reveals that there were more male teachers than female ones.

Research Question One

Are the aims, goals and objectives of the Upper Basic Arabic Language Curriculum adequate for teaching Arabic?

Table 4:
Teachers' Assessment of the Adequacy of the Aims, Goals and Objectives of the Upper Basic Arabic Language Curriculum

S/N	**Statements**	**Strongly Agree and Agree**		**Strongly Disagree and Disagree**		**Raw Scores**	**Mean Scores**
		Frequency	Percent	Frequency	Percent		
1.	The goals of the Upper Basic Arabic Curriculum adequately contribute to realizing the National Aims of Education.	71	52.2	65	47.8	357	2.63
2.	The goals of the Upper Basic Arabic Curriculum satisfy the students' needs.	87	64	49	36	385	2.83
3.	The goals of the Upper Basic Arabic Curriculum relate to the community where the curriculum is being implemented.	88	64.7	48	35.3	358	2.63
4.	The time allocated for the teaching of Arabic at the Upper Basic Education level is not adequate for the goals of the curriculum.	53	38.9	83	61.1	360	2.7
5.	The resources available for teaching Arabic at the Upper Basic Education level are not adequate for the goals of the curriculum.	93	68.4	43	31.6	265	1.9
6.	The objectives of the Upper Basic Arabic Curriculum adequately capture students' listening skills.	90	66.2	46	33.8	375	2.85

7.	The objectives of the Upper Basic Arabic Curriculum adequately address students' speaking skills.	57	33.9	79	66.1	392	2.70
8.	The objectives of the Upper Basic Arabic Curriculum adequately reflect students' reading skills.	70	51.4	66	48.6	348	2.56
9.	The objectives of the Upper Basic Arabic Curriculum do not adequately capture students' writing skills.	62	45.6	74	54.4	373	2.7
10.	The objectives of the Upper Basic Arabic Curriculum cannot meet the societal challenges of students.	43	31.6	93	68.4	397	2.9

Table 4 shows that out of the 136 Arabic Language teacher respondents involved in this study, 71 (52.2%) agreed to the first item that the goals of the Upper Basic Arabic Language Curriculum adequately contribute to realizing the National Aims of Education, while 65 (47.8%) of the respondents disagreed to the item. The raw score of the item was 357 with a mean score of 2.63. Furthermore, 87 (64 %) of the respondents agreed to the second questionnaire item, while 49 (36 %) disagreed. The item scored 385 and a mean score 2.83. Moreover, 88 (64.7%) of the respondents agreed to the third item and 48 (35.3%) respondents disagreed. This item attracted a score 358 and a mean score 2.63. For the fourth item, 53 (38.9) of the respondents agreed that the time allocated for the Upper Basic education level are not adequate with the goals of the curriculum, while 83 (61%) teachers disagreed. The total score of the item was 360 with a mean score 2.7. As regards the fifth item, 93 (68.4%) of the respondents agreed with it, while 43 (31.6%) disagreed. The item attracted a score 265 and a mean score 1.9. Moreover, 90 (66.2%) respondents agreed to the sixth item, and 46 (33.8%) disagreed. The item attracted a score 375 and a mean score 2.9. Fifty-seven (33.9%) of the respondents agreed to the seventh item, 79 (66.1) disagreed. The total score was 392 with a mean score 2.70. seventy (51.4%) of the respondents agreed to item eight, while 66 (48.6%) disagreed. The item attracted a score of 348 and a mean score 2.6. In addition, 62 (45.6%) of the respondents agreed to the ninth questionnaire item, and 74 (54.4%) disagreed. The item total score was 373 with a mean score 2.7. Moreover, 43 (31.6%) of the respondents agreed with the tenth item of the questionnaire, while 93 respondents (68.4%) disagreed. The item attracted a score 397 with mean score 2.9. It could be observed from table 4 that, except for the fifth questionnaire item with a mean of 1.9, the mean scores of all the other items were above the 2.5 mean of the scale. Consequently, it could be inferred from the table that generally, the teachers assessed the aims, goals and objectives of the Upper Basic Arabic Language Curriculum as adequate.

Hypotheses Testing

Research Hypothesis One: There is no significant difference between male and female Arabic Language teachers' assessment of the adequacy of the Aims, Goals and Objectives of the Upper Basic Arabic Language Curriculum.

Table 5:
T-test Analysis showing difference between the male and female Arabic Language teachers of their assessment of the adequacy of the Aims, Goals and Objectives of the Upper Basic Arabic Language Curriculum.

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Gender of Respondent	No	Mean	SD	df	t-cal Value	Sig
Male	124	28.17	3.75	134	6.48	.000
Female	12	21.08	1.62			

Table 5 indicates that the male Arabic teachers have a high mean score (Mean = 28.17, SD =3.75) compared to the less experienced who have a low mean score (Mean = 21.08, SD = 12.6), this implies a statistically significant difference, t (134) = 6.48, p< 0.05 in favour of the male Arabic teachers. The null- hypothesis is rejected, indicating that, there is a significant difference between male and female Arabic Language teachers in their assessment of the adequacy of the Aims, Goals and Objectives of the Upper Basic Arabic Language Curriculum.

Research Hypothesis Two: There is no significant difference between teachers of Arabic with high qualification and teachers of Arabic with low qualification in their assessment of the adequacy of the Aims, Goals and Objectives of the Upper Basic Arabic Language Curriculum.

Table 6:
T-test Analysis showing difference between the teachers of Arabic with high qualification and their counterparts with low qualification in their assessment of the adequacy of the Aims, Goals and Objectives of the Upper Basic Arabic Language Curriculum.

Teaching Qualification	No	Mean	SD	df	t-cal Value	Sig
Low Qualification (N.C.E)	123	20.08	.64	134	8.455	.000
High Qualification (B.A. Ed. Arabic)	13	28.33	3.50			

Table 6 shows that the B. A. (Ed) Arabic degree holders have a high mean score (Mean = 28.3, SD = 3.50) compared to the NCE holders who have low mean score (Mean = 20.08, SD = .64). This implies a statistically significant difference, t (134) = 8.46, P< 0.05 in favour of the B. A. (Ed) Arabic degree holders. The null-hypothesis is rejected. This implies that, there is a significant difference between teachers of Arabic with high qualification and teachers of Arabic with low qualification in their assessment of the adequacy of the Aims, Goals and Objectives of the Upper Basic Arabic Language Curriculum.

Discussion

The findings of this study, as seen in Table 3, showed that teachers' assessment of the adequacy of the objectives of Upper Basic Arabic Curriculum was generally positive. This is in line with Abdulhameed (2013) who also found that the Objectives of the Upper Basic Islamic Studies Curriculum are adequate. The low number of the respondents

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confirms the studies of Amoloye (2005) and Ibrahim (2006), who found inadequacy of teachers as a problem of teaching Yoruba and Hausa Languages. The researcher is of the opinion that qualified teachers and relevant instructional materials should be provided. This is also in line with Oladosu (2006) who emphasized the need to improve instructional materials and the need to employ professionally trained teachers of Arabic.

Conclusion and Recommendations

The results of this study indicate that the aims, goals and objectives of the Upper Basic Arabic Curriculum are adequate for teaching Arabic at this educational level; teachers' qualification has influence on the assessment of the adequacy of the aims, goals and objectives of the curriculum. Also, Teachers' gender and qualification significantly influence the assessment of the adequacy of the aims, goals and objectives of the curriculum. In view of the findings of this study, it is recommended that:

1. Sufficient qualified Arabic teachers should be employed to teach Arabic Language at the Upper Basic level to achieve the adequate aims, goals and objectives of the curriculum.
2. Female students should be encouraged to read Arabic to a professional level to balance gender problem in Arabic Education.
3. Teachers with low qualification should be encouraged to add additional qualifications so as to achieve the stated aims, goals and objectives.
4. Arabic should be recognised and be given appropriate status in the implementation of Universal Education in Oyo State.

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KNOWLEDGE, ATTITUDES AND PRACTICES TOWARDS MODERN CHILD SPACING AMONG WOMEN OF CHILDBEARING AGE IN SAMARU COMMUNITY

BY

[1]Hadiza M. S, [1]Salihu, A K, [2]Sani, M.S, [3]Abdullahi M, [4]Attahir, I, [1]Farooq, M.A, [1]Ahmad, Y, [5]Audu, J.D & [6]Auwalu, Y.

[1]Department of Nursing Science, Ahmadu Bello University, Zaria- Nigeria
[2]Nursing Science Programme,, Ahmadu Bello University Distance Learning Center, Zaria- Nigeria
[3]Department of Art and Social Science, Faculty of Education, Ahmadu Bello University, Zaria- Nigeria
[4]Department of Nursing Science, Kaduna State University, Nigeria.
[5]College of Nursing Sciences, Bida-Niger State.
[6]College of Nursing Sciences,Birnin Kudu, Jigawa State –Nigeria.
Email: hadizasma@yahoo.com

Abstract
Modern child spacing is a conscious effort by couples to space or limit number of children and helps them achieve desirable number of children. The study was carried out to assess the knowledge, attitudes and practices towards modern child spacing among women of childbearing age in Samaru community. A descriptive cross sectional study design was employed, and systematic sampling technique was used to select 89 women of child bearing age attending the Primary Health Care Center Samaru community. A structured questionnaire was used for data collection, and data was analyzed using frequency and percentage tables. More than two-third of the women (79.8%) had good knowledge of modern child spacing and a good number (78.6%) of the women had positive attitude. Although, (66.3%) of the women reported poor practice of modern child spacing. The major factor influencing their decision regarding modern child spacing was fear of side effect. About the results of this study it is recommended that the government and donor agencies should embark on massive and aggressive enlightenment campaign on the benefits of utilizing birth control both on the childbearing mothers, their immediate family and the entire community and by extension the state and country at large.
Keywords: Knowledge, Attitudes, Practices, Child spacing.

Introducing

Modern child spacing, also known as inter-pregnancy interval (IPI), refers to the amount of time between the birth of one child and the conception of the next child. Modern child spacing plays a crucial role in preventing unintended pregnancies, which can lead to negative social, economic, and health outcomes (OlaOlorun et al., 2021). The World Health Organisation (WHO) recommends that women wait at least two years after a live birth before attempting another pregnancy to reduce the risk of adverse outcomes (WHO, 2020). The WHO's recommendation is based on research that shows an increased risk of adverse maternal and neonatal outcomes, such as preterm birth and low birth weight, when the inter-pregnancy interval is less than 18 months. Despite the importance of modern child spacing, there is still a lack of knowledge and awareness among women of childbearing age in many African countries. Attitudes towards family planning and modern child spacing can also be influenced by cultural and religious beliefs, as well as societal norms and gender roles (Adanikin et al., 2021).

Nigeria is already experiencing a population explosion that is resulting in a mismatch between food production and the growing number of people. As of August 2021, Nigeria's population is estimated to be 212,320,991 by the United Nations, accounting for 2.64% of the global population. Nigeria is the 7th most populous country in the world, with a population density of 226 people per square kilometer (586 people per square mile) (United Nations, Department of Economic and Social Affairs, Population Division. (2021). Recent interest in modern child spacing methods in Nigeria

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has resulted in a gradual decline in fertility rates in the last decade, from 5.7 births per woman in the 2008 Nigeria demographic and health survey (NDHS) to 5.5 births per woman in the 2013 NDHS and 5.3 births per woman in the 2018 NDHS. In Kaduna state, the prevalence of modern child spacing among married women of reproductive age is 19%, while in Kano state, it is 4%. Factors such as education, wealth status, and age of women were found to be significantly associated with the use of modern contraceptives in Northern Nigeria.

Despite the availability of modern contraceptive methods and the potential benefits of modern child spacing, there is still a low prevalence of child spacing in Zaria where the study was carried out. This highlights the need for further research on the knowledge, attitudes, and practices of modern child spacing among women in Zaria, as well as targeted efforts to improve access to family planning services and promote safe and effective birth spacing practices (Iliyasu et al., 2020). Most couples have the desire to have a fulfilling sexual life, without the burden of unintended pregnancies or apprehensions regarding contraception methods and potential side effects.

Modern child spacing methods have been shown to be effective in preventing unintended pregnancies and reducing maternal and child mortality rates. According to Oginni et al. (2021), the utilization of modern child spacing methods among women of childbearing age in Nigeria is low, despite the effectiveness of such methods in preventing unintended pregnancies and reducing maternal and child mortality rates. This low utilization is influenced by various factors such as cultural beliefs, lack of knowledge, limited access to services, and inadequate support from partners and healthcare providers. Women within the age range of 15-49, regardless of their marital status, tend to have limited or inaccurate knowledge about modern child spacing methods and many of them have negative attitudes towards family planning. The fear of infertility and the potential for harmful side effects, as well as the risk of forgetting to take contraceptive pills, have been identified as reasons for the reluctance to use modern family planning methods (Okigbo et al., 2018). The effectiveness of past interventions aimed at increasing the utilization of modern child spacing methods in Nigeria has varied. While some inititive show positive outcomes, some factors have influenced its overall impact. Thus, it is essential to identify the factors contributing to the low utilization of these methods among women of childbearing age in Nigeria. Additionally, understanding women's perceptions of the benefits and drawbacks of modern child spacing methods is crucial in developing interventions that can improve access to and use of these methods (Ochako et al., 2018).

Research Objectives

1. To assess the knowledge of women of childbearing age towards modern child spacing methods in Samaru community.
2. To identify the perceived attitude of women of childbearing age towards different modern child spacing methods.
3. To establish the reported practices of women of childbearing towards modern child spacing in Samaru community.
4. To identify the factors that influence women’s decision-making regarding modern child spacing in Samaru community

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Methodology

The study was conducted in Primary Health Care Center Samaru in Sabon Gari local Government Area of Kaduna state, Northern Nigeria. It situated under the samaru district of sabon Gari local Government Area of Kaduna state which lies between the zaria-funtua road opposite the famous Ahmadu Bello University, Zaria. Samaru has an area of 300km with an estimated population of 45,897 from 2006 national census (National Population commission 2019). It has a total of 10,097 women of reproductive age group. Samaru is a heterogenous society of diverse ethnic, cultural, religious and social belief. The dominant ethnic group is Hausa while the dominant religion is Islam and Christianity. The primary Health care center consists of both ante-natal, post-natal units and immunization units. A cross-sectional descriptive study was employed. The study population were women of childbearing age (15-49) attending Primary Health Care, which is 157 going by the average monthly attendance. Any woman not married was excluded from the study. The sample size was calculated using Taro Yamani's formula. The formula was formulated by a statistician Taro Yamane in 1967 to determine the sample size from a given population.

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

Where n= sample size

While N= study population.

e= margin of error (0.07)

The population size used in the present study were (157) women. So the sample size was calculated as follow

$$n= \frac{N}{1+N(0.07)^2}$$

$$n=\frac{157}{1+157(0.0049)} = \frac{157}{1+0.7693} = \frac{157}{1.7693}$$

$$= 88.7$$

Sample size (n) =89

A systematic sampling was used based on the attendance of the Primary Health Care Centre Samaru and the eligibility criterion. Until the required number of respondents was obtained.

The instrument used for collecting data was a structured questionnaire. The questionnaire was self-explanatory and structured into five (5) sections, containing information on socio-demographic variables, on knowledge, attitude, practices and factors affecting the attitudes of women of childbearing age towards modern child spacing methods in Samaru community. Data was obtained manually and assembled, the responses on the completed questionnaire and observations was analysed by descriptive statistics of frequency and simple percentage, tables used for interpreting of data collected. Ethical approval was obtained from the coordinator Primary Health Care Centre Samaru. A letter of introduction from Department of Nursing Science ABU Zaria was attached. Similarly, informed consent was sought for from each respondent prior to participation. Participation was on voluntary basis. Confidentiality and anonymity assured.

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Results

Table 1:
Socio-Demographic Variable

Variable	Frequency	Percentage%
1. Age		
a. 15-25	21	18.6
b. 26-35	40	46.0
c. 36-45	24	29.2
d. 45 above	4	6.2
Total	89	100
2. Marital status		
a. Married	74	82.3
b. Divorced	12	13.3
c. Widowed	3	4.4
Total	89	100
3. Religion		
a. Muslim	56	60.2
b. Christian	33	39.8
Total	89	100
4. Educational status		
a. No formal education	18	12.4
b. Primary	34	26.5
c. Secondary	28	41.6
d. Tertiary	9	19.5
Total	89	100
5. Tribe		
a. Yoruba	11	11.5
b. Igbo	6	4.4
c. Hausa	54	51.3
d. Others	18	32.8
Total	89	100
6. No of children		
a. 1	19	13.3
b. 2	9	6.2
c. 3	14	24.8
d. 4 & above	47	55.7
Total	89	100
7. Occupation		
a. House wife	33	37.2
b. Trader	17	25.7
c. Civil servant	10	9.7
d. Farmer	4	3.5
e. Others	25	23.9
Total	89	100

On assessing the knowledge of the women on modern child spacing, majority (79.8%) of the women had heard of modern child spacing (62.0%) learnt of modern child spacing from health workers. Majority 48.3% are aware of less than 2years child spacing interval and 31.5% know of the recommended 2years child spacing interval. Regarding the

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benefits of child spacing 55% are that it reduces the risk of maternal and infant mortality and more than half of the women understand that closely spaced pregnancy increase risk of infant and maternal mortality (Table 2)

Table 2:
Distribution of women of childbearing age knowledge on modern child spacing

Question	Frequency	Percentage%
1. Have you heard of modern child spacing before now?		
a. Yes	71	79.8
b. No	18	21.2
Total	89	100
2. How did you learn about modern child spacing?		
a. Health care provider	44	62.0
b. family or friend	13	18.3
c. media source (eg. Radio, Tv, Social media)	9	12.7
d. others	5	7.0
Total	71	100
3. What are the different types of modern child spacing methods available		
a. Hormonal method		
b. IUDs	39	43.8
c. Barrier method	30	33.7
d. Natural family planning method	7	7.9
Total	13	14.6
	89	100
4. What is the recommended spacing between children according to health care providers?		
a. Less than 2 years	43	48.3
b. 2 years	28	31.5
c. 3 years	11	12.4
d. 4 years	6	7.8
Total	89	100
5. What are the benefits of child spacing?		
a. Reduced risk of maternal and infant mortality	49	55.0
b. Improved maternal and child health outcome	25	28.1
c. Improved economic opportunities for families	11	12.4
d. others	4	4.5
Total	89	100
6. What are the risks associated with closely spaced pregnancies?		
a. Increased risk of maternal and infant mortality	53	59.6
b. Increased risk of preterm birth and low birth weight	19	21.3
c. Increased risk of maternal anemia and other health complications	11	12.4
d. others	6	6.7
Total	89	100

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To assess the knowledge of women of childbearing age toward modern child spacing methods in primary health care center samaru, 6 questions with multiple options about modern child spacing were asked from which a marking scheme was drawn. One mark was allocated to the correct option and 0 mark to the remaining incorrect options. Using the scores obtained, a range of 0 to 2 marks was used to indicate that the women are not knowledgeable about modern child spacing while a score of 3 to 6 marks earned by the women which means they are knowledgeable about modern child spacing. The summary of the results is presented in table 3 below;

Table 3:
Summary of women of childbearing age knowledge of modern child spacing

Variables	Frequency	Percentage%
Poor knowledge (0-2)	18	21.2
Good Knowledge (3-6)	71	79.8
Total	89	100

The respondents' attitudes towards modern child spacing was found to be that majority of the women (78.6%) of the women with a mean score of 3.0 which is greater than 2.5 which serves as cut-off mark (indicating positive attitude) are of the belief that modern child spacing is important. More than half of the respondents (58.6%) with a mean score of 2.6 (positive attitude) are comfortable using modern methods of child spacing. But (61.8%) of the women with a mean score of 2.1(negative attitude) below 2.5 cut-off are not comfortable discussing modern child spacing with their partners .

Table 4:
Attitude of women of child bearing age towards modern child spacing

SN	Variables	SA (%)	A (%)	D (%)	SD (%)	Mean
1	Modern child spacing is important	27(30.3)	43(48.3)	12(13.5)	7(7.9)	3.0
2	I am comfortable with using modern methods of child spacing.	23(26.0)	29(32.6)	16(18.0)	21(23.4)	2.6
3	I am comfortable discussing modern child spacing methods with my partner	14(15.7)	20(22.5)	17(19.1)	38(42.7)	2.1
4	Modern child spacing is a family decision not a personal decision	31(34.9)	40(45.0)	13(14.5)	5(5.6)	3.1
5	Modern child spacing methods can improve the quality of life for women and their families	22(24.7)	47(52.8)	11(12.4)	9(10.1)	2.9
6	Modern child spacing allows women to pursue education and career goals?	39(43.8)	41(46.1)	7(7.9)	2(2.2)	3.3

7	More education and awareness can increase use of modern child spacing methods	26(29.2)	32(35.9)	19(21.4)	12(13.5)	2.8

Table 5 shows the reported practices of women towards modern child spacing. Majority of the women 59(66.3%) have never used modern child spacing methods, which shows poor practices. 23(76.7%) used modern child spacing methods while 7(23.3%) used traditional methods. Half of the women 8(50.0%) chose method with little or no side effect, 5(31.3%) used a method because it affordable and available.

Overall poor practices of modern child spacing was discovered among them.

Table 5:
Reported Practices of modern child spacing

Statements	frequency	Percentage
1. Used any family planning method		
a. Yes	30	33.7
b. No	59	66.3
Total	89	100
2. Method used		
a. Modern child spacing methods(hormonal method, IUDs, barrier methods)	23	76.7
b. Traditional methods (breast feeding, abstinence, calendar)	7	23.3
Total	30	100
3. Currently using any family planning method		
a. Yes	16	18.0
b. No	73	82.0
Total	89	100
4. Decision on use		
a. Advice from a healthcare provider	12	75.0
b Based on personal research and preferences	3	18.8
c. Recommendations from family and friends	1	6.2
Total	16	100
5. Reasons for using a modern child spacing methods		
a. To prevent pregnancy	4	25.0
b. To space out births	10	62.5
c. To improve overall health	2	12.5
Total	16	100
6. Main reason for choice of child spacing methods.		
a. Affordable and available	5	31.3
b. little or no side effect	8	50.0
c. suitable effective/ reliable	2	12.4
d. no reason	1	6.3
Total	16	100

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7. Satisfaction		
a. Very satisfied		
b. Satisfied	1	6.2
c. Neutral	7	43.8
d. Dissatisfied	4	25.0
e. Very dissatisfied	3	18.8
Total	1	6.2
	16	100

Table 6:
Factors that influence women's decision making regarding modern child spacing

Factors	Frequency	Percentage (%)
a. Lack of access to modern child spacing methods	9	6.8
b. Cost or financial barriers	23	17.3
c. Religious or cultural beliefs	26	19.5
d. Personal health concerns	7	5.3
e. Partner's opinion or beliefs	29	21.8
f. Fear of side effects	37	27.8
g. Other	2	1.5
Total	133	100

Table 6 shows that 37(27.8%) indicated fear of side effects such as bleeding, fatness and damage of other body organs as a major factor for not using modern child spacing methods. 29(21.8%) of the respondents attributed partner's opinion or belief as a major barrier against their attitudes towards modern child spacing methods. 26(19.5%) indicated religious and cultural beliefs as a reason for not using modern child spacing methods.

Discussion

The findings from this study indicated that two-third of the women (79.8%) have heard of modern child spacing which is similar to a study carried out by Adefalu et al., 2018 on awareness and opinions regarding contraception by women of reproductive age in North-West Nigeria where 82.4% had knowledge on modern contraceptives and health personnel were the main source of information on contraceptives for 66.4% of women in his study which is also in line with the 62.0% who learnt about modern child spacing from health care providers. This is because whenever prospective and nursing mothers visit health facilities for prenatal and postnatal services; health care providers always avail them with information on birth control for birth spacing. Hormonal methods has the highest prevalence, 43.8% of the women know of the hormonal methods of child spacing and the least subscribed to by the women who visit PHC centre was barrier method 7.9%. Majority 48.3% are not aware of the 2years child spacing interval as recommended by the (WHO, 2020). Regarding the benefits of child spacing 55% of the women who attend PHC centre understand that it reduces the risk of maternal and infant mortality, 28.1% are aware that it improves maternal and child health outcome which agrees with a report from (WHO, 2017) stating that the benefits of family planning have become increasingly recognized worldwide, including improved health, economic, and social outcomes for women and families, 12.4% understands that child spacing improves economic opportunities for families. More than half 59.6% of the women understand that closely spaced pregnancy increase risk of infant and maternal mortality

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Knowledge regarding the concept of modern child spacing reflects the effectiveness of the educational sessions offered by health care providers in the area in general and in the study group in particular. One of the greatest obstacles to modern child spacing in developing countries is knowledge. An individual can only accept to take contraceptives and space pregnancies only if she has an in depth knowledge of what modern child spacing is, different methods and its benefits. The study populations of women of child bearing age have generally fair knowledge regarding modern child spacing. The study shows that majority of the women (78.6%) of the women with a mean score of 3.0 (indicating positive attitude) are of the belief that modern child spacing is important which is similar to a study by Gajida et al (2019) Knowledge, attitude and practice of modern contraception among women of reproductive age in urban area of Kano, north-western Nigeria where majority of the respondents (63.4%) had a positive attitude toward modern contraception. More than half of the respondents (58.6%) with a mean score of 2.6 (positive attitude) are comfortable using modern methods of child spacing. Most (61.8%) of the women with a mean score of 2.1(negative attitude) are not comfortable discussing modern child spacing with their partners. This is in contrast with a study by Mbambu et al, (2023) Evaluation of the knowledge, attitude and practice among women attending family planning at Bwera general Hospital where 72% of the women have never discussed modern family planning with their husbands indicating negative attitude. This situation may hinder uptake of modern contraceptives by women in that population. Majority of the respondents (79.9%) with mean score (3.1%) agree modern child spacing is a family decision not a personal decision (positive attitude). A good number of the women (77.5%) with mean score 2.9 attending the PHC center agree that modern child spacing can improve the quality of life for them and their families (positive attitude). Majority (89.9%) with mean score 3.3 believe that modern child spacing allows women to pursue their educational and career goals (positive attitude). Most of the women (65.1) with mean score (2.8) agreed that more education and awareness can increase us of modern child spacing methods.

The findings from this study show the practices of women towards modern child spacing with reference to women attending the PHC centre. Majority of the women 59(66.3%) have never used modern child spacing methods, which is similar to a study of Obinna (2017), in which he found that only 15 percent of Nigerian women are utilizing any form of family planning which is at variance with the 2012 London Summit targets. Only 30(33.7%) have ever used modern child spacing methods which shows poor practices of the women in Samaru community. 23(76.7%) used modern child spacing methods while 7(23.3%) used traditional methods which is in contrast from a study in two south western Nigerian states where of the current users of any contraceptive methods, about half (44.3%) were using a traditional contraceptive method. 12(75.0%) were advised by health care providers. It is the highest because when women come for antenatal and postnatal clinics, the clinicians avail them with useful information's so as to help them provide adequate care for the delivered and unborn babies which contradicts the study by Obalase and Joseph (2017) on knowledge, Attitude and Acceptance of modern family planning method among women attending post-natal clinic in Ayeka Health Center in Okitipupa LGA Ondo state. Where a small percentage (27.5%) heard of information from government hospitals/ health care. 10(62.5%) used modern child spacing methods to space pregnancies, 4(25%) to prevent pregnancy and 2(12.5%) to improve overall health. Half of the women 8(50.0%) chose method with little or no side effect which supports a study by Ajayi et al, (2018) Use of traditional and modern contraceptives among childbearing women: findings from a mixed methods study in two southwestern Nigerian states where fear of side effects of modern contraception was the most reported reason for non-use of contraception and modern contraception in particular. Some women believe that modern contraceptives are harmful to the body and as such fails to use contraceptives or rely on less effective traditional family planning methods.

Regarding satisfaction, only 1(6.2%) was very satisfied with the method of child spacing she used, 7(43.8%) were satisfied with their choice of method, 4(25%) of the women were indifferent about choice of method (neutral), 3(18.8%) did not seem satisfied with the child spacing method they chose and 1(6.2%) of the women attending the PHC centre stated she was very dissatisfied and even concluded never to use any contraceptive again, hence will not

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practice modern child spacing even in the future. Despite knowledge on modern child spacing in Samaru is on the average with reference to the study area, but the actual level of utilization and practices is very low. This revealed that despite the level of awareness in the society, married women in Samaru still find it difficult to use birth spacing Findings of the study shows that 37(27.8%) indicated fear of side effects such as bleeding, fatness and damage of other body organs as a major factor for not using modern child spacing methods. Women face opposition to contraceptive use from their husbands and their families. In the northern Nigeria setting, this presents a significant barrier to modern contraceptive use and child spacing practice, because men are the decision makers in the family, and women often cannot obtain health services without their husband's explicit approval. This custom is deeply ingrained in local culture and evident in our findings that shows 29(21.8%) of the respondents attributed partner's opinion or belief as a major barrier influencing their decision regarding modern child spacing methods. 26(19.5%) indicated religious and cultural beliefs as a factor influencing their decision regarding modern child spacing methods. Previous studies have shown that many couples in Kaduna do not feel empowered to decide how many children they want to have, when to have them, and whether or not to use contraception, because only God can decide how many children a couple has and when (Sinai, Nyenwa, and Oguntunde 2018) Demand for Women's Health Services in Northern Nigeria. This implies that despite their knowledge on modern child spacing, fear of side effects, partner's opinion or beliefs and religious or cultural beliefs are the highest factors influencing women's decision making regarding of modern child spacing methods among women of child bearing age in Primary Health Care Center Samaru.

Implication to Nursing Practice

Modern child spacing activities and services are the instruments through which a people or nation use to achieve objectives of reducing poverty, maternal and infant mortality, check population explosion, improve income of its citizens all for a better life. Information is power, because it is the basis of making right decision whether as an individual or as a Government. Modern child spacing forms an important aspect of healthcare as its one of the component of Primary Health Care (Maternal Child Health including family planning). Therefore, nurses have a pivotal role in providing information to clients/couples on modern child spacing, its importance/ benefits. Nurses also encourage couples on adopting modern child spacing and guide them to make an inform decision on they the type of modern child spacing methods they wish to adopt.

Conclusion

Based on the findings from the analysis and interpretation, a conclusion was arrived that, although knowledge of modern child spacing is average among women in the study population, reported level of current practices of modern child spacing methods is low. This suggested that knowledge about child spacing methods has not yet fully translated into practice in the study area based on the data obtained from Primary Health Care centre Samaru community. Fear of infertility later in life and side effect are the major factors influencing their decision. Hence there is need for an aggressive target oriented information dissemination using all the available means especially the mass media, opinion leaders in the community, religious leader, husbands, mothers, relatives, doctors, nurses and all those involved in modern child spacing promotion practices. This should be aimed at disabusing the minds of the women and in so doing improve on the practice level. Ultimately, this will bring about the gains of modern child spacing and reduce the complication arising from closely spaced births both in the mother and baby.

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OPTIMIZATION OF DIGITAL ERGONOMICS OF MOBILE INTERNET IN TEACHING AND LEARNING IN POST-PRIMARY EDUCATION IN NIGERIA

BY
[1]Oyeyemi, Sunday Olufemi, [2]Aremu, Victoria Iyabo & [3]Akinola, Victor
[1]College of Professional and Specialized Education, Department of Educational Foundations, Lagos State University of Education, Nigeria.
[2&3]College of Information and Technology Education, Lagos State University of Education, Nigeria.
Email: *oyeyemiso2012@gmail.com*

Abstract

The paper explores the use of digital ergonomics of mobile internet in the teaching-learning situation in Nigerian post primary schools. Worrisomely, the emergence of internet and social media has evolved arrays of digital vices and abuses among students, prompting the neglect of the academic digital efficacy of mobile internet among secondary schools in Nigeria. On this premise, this paper examines the academic potentials embedded in digital ergonomics of mobile internet as opposed to digital misuses. The hypotheses focused on content accessibility, discovery learning and innovative learning as variables for the study. Adopting a descriptive survey research design, a questionnaire through stratified random was administered on two hundred respondents. Findings revealled that the students are generally aware of the educational efficacy of digital ergonomics. However, the trend is gross digital misuse of mobile internet devices negating the exploration of academic potential embedded in digital ergonomics of mobile internet. This paper established the urgent need for optimization of digital ergonomics of mobile internet in teaching and learning among secondary school students in Nigeria. Recommendation suggest that to ensure global competitiveness, practical and result-driven steps to ensure the successful adoption and implementation of digital ergonomics in teaching and learning in Nigerian post-primary education. These measures include ensuring that teachers and administrators are adequately trained on the concept of digital ergonomics and its applications. Pertinently, the need to continuously create an awareness on the importance of digital ergonomics among students, teachers and parents becomes eminent. This will assist to eradicate digital misuses thereby promoting optimization and academic efficacy of mobile internet.
Keywords: Optimization, digital ergonomics, mobile internet, teaching and learning, students

Introduction

An essential tool Information and Communication Technology (ICT) in the 21st century, is perceived to learning enhanced and supported through the use of digital technologies. The utilization of ICT entails facilities such as internet, computer, mobile internet devices and computerized knowledge content such as simulations backing teaching and learning practice (Hawkins, Barbour, & Graham, 2012). Information and communication technology in education has fundamental keys, ICT usually is an instrument for addressing challenges in teaching and learning, a change agent, and a central force in economic competitiveness (Culp, Honey & Mandinach 2003). Significantly, educational practice that optimizes ICT usage will enhance teachers‘ level of proficiency and development fostering students‘ academic performance and academic quality (Owen, Mustian and Liles, 2000). To achieve this lofty academic goal, governments at the various level in Nigeria has been striving to ameliorate the deficiencies in quality of curricular offered in secondary education. Which has been frequently characterized by poor teaching approach, negative teachers‘ attitude, students non-challant attitude to learning and school works, insufficient school amenities and unequal access to quality education.

Consequently, at the state level, an ICT curriculum workshop for 600 public secondary school teachers with the aim of assisting them on effective use of ICT facilities in instructional delivery by the Lagos State Government in 2009 was organized (Lagos Ministry of Information, 2011). Furthermore, through the assistance of World Bank launched

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the Lagos Eko Project was lauched‖ in 2009 in order to reinforce the knowledge based and content delivery of teacher. Facilities like laboratories and ICT facilities such as computer sets and e-tutor software were provided in 639 secondary schools with students' population of 620,120 as beneficiaries (Eko, 2010; 2011). In the same vein, Osun State Government introduces an ICT initiative tagged Tablet of Knowledge (Opon Imo). The Opon Imo‖ (PC tablets) has 56 e-books covering 17 subject offerings, 17 tutorial questions for the 17 subjects, 1000 past questions, six extra-curricular subjects and educational games. This ICT initiative provided mobile learning PC tablets for 150,000 senior secondary school students in the state with the aim of enhancing flexibility and efficient learning (Osun, 2014).

To gain ICT global relevance the Nigerian federal government, apart from being a signatory to a number of pacts and treaties like world declaration on education, Education for All (EFA) and Millennium Development Goal (MDG) was committed to the advancement of quality education through Information and Communication Technology (ICT). The National policy for ICT was articulated in 2001, with a vision to make Nigeria proficient in Africa and a key player in ICT for sustainable development and global effectiveness (Federal Ministry of Science and Technology, 2001). This mission proclamation acknowledged the incorporation of ICT into the mainstream education and training with a strategy to streamline educational system at all levels (Yusuf, 2005). As reckoned by Owhotu (2006), some wits through the partnerships with the government by development partners, non-governmental organisations (NGOs, Local and International) and private sectors launched the SchoolNet in September, 2001 and funded by Education Trust Fund. SchoolNet was engaged in the effective sustainable development and use of Information and Communication Technologies (ICT) to enhance teaching and learning in primary and secondary schools. Another effort was Education Trust Fund (ETF), enforcing Education tax of 2% of company's profit to be distributed by the Education Trust Fund for education purpose. Besides working with Schoolnet, ETF also works on the Education Resource Centre project, which aims to create science laboratories, ICT laboratories, libraries and multi-purpose halls in schools and institutions of higher learning. In addition was Computers-in-schools project of 2002 and One-laptop-per-child (OLPC) of 2006 these initiatives aimed at developing comprehensive ICT literacy through the introduction of computers in secondary schools, taking a clue from countries like Turkey and Morocco.

In June 2003, at the African Summit of the World Economic Forum held in Durban, South Africa, the New Partnership for African Development (NEPAD) launched the e-Schools Initiative, intended to equip all African high schools with Information and communication technology equipment including computers, radio and television sets, phones and fax machines, communication equipment, scanners, digital cameras, and copiers, among other things. It is also meant to connect African students to the Internet. The NEPAD capacity-building initiative will be executed over a ten-year period, with the high school component being completed in the first five years. Three phases are envisaged, with fifteen to twenty countries in each phase. The phases are to be staggered, and an estimated 600,100 schools are expected to benefit. However, with OLPC however and the above initiatives, Okafor and Edet (2008) identified some barriers to proper implementation of ICT in Nigeria schools. This includes limited ICT infrastructures, poor internet connectivity; inadequate learning sources (educational tools, course curriculum), lack of maintenance and technical support, inadequate funding of education on the part of corrupt Nigerian leaders and most importantly poor power supply, a problem peculiar to Nigeria. Ololube (2006) also attributes these barriers to the cause of low standard of education due to economic disadvantages and government policies.

Aduwaogu Ogiegbaen and Iyamu (2005) concludes that computer is not part of classroom technology in more than 90 percent of Nigerian public schools. This implies that the chalkboard and textbook continue to dominate classroom activities in Nigeria secondary school. NEPAD has scored the level of African continent students' experience with Information and communication technologies and their proficiency in using them very low. Fifty-five percent of

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students within the continent, including Nigeria, Algeria, Burkina Faso, Cameroon, Republic of Congo, Egypt, Gabon, Lesotho, Mali, Mauritius, Mozambique, Rwanda, Senegal, South Africa, and Uganda (who are participating in the first phase of the NEPAD e-Schools initiative), stated they had no experience at all in using computers. These pedagogical challenges call for an urgent approach most especially adoption of mobile internet device as a considerable alternative instructional tool.

Conceptual Anchorage of Digital Ergonomics

The need for information determined economy pitched by globalization and constant scientific advancement, prompted the 21st century skills necessitating the need for manpower creation. Achieving this lofty aim requires Information and media technology skills enhancing access to information efficiently, effectively and evaluating it critically and competently (P21 Framework Definitions, 2009). The ergonomics of mobile internet as observes by Komolafe-Opadeji (2011), students frequently access the Internet and preferred sourcing for electronic resources sometimes through mobile internet devices rather than the laptop computer, this observed preference can best explained the ergonomics of mobile internet in terms of the mobility, flexibility, ease of use and portability qualities. Conceptually, mobile internet device can be described as a handheld electronic device which is capable of storing and retrieving information generally needed by scholars regardless of space and time constraints affording learners the advantages of mobile technologies (O'Malley,Vavoula, Glew, Taylor & Sharples, 2005). Mobile internet devices if used appropriately is potentially endowed to improve the learning setting in extensive ways (Bradford, 2010). A deviation from academic endowment of digital ergonomic as asserted by Ball State's Hanley Institute for mobile media research on students' use of mobile devices revealled other usages such as accessing e-mail, sending text, download and listen to music and access social media sites(Park, 2005). Contemporarily, in Nigerian context Puberty characteristics of students spur them to crave for more independent and have more self-control at the expense of parental and teacher control. However the, analogue nature of most teachers and parents make them feel uncertain and unease about their teenage children's actions and experiences on the Internet, but lacks digital efficiency to curb this excesses (Lin, C. H., Lin, S. L., & Wu, 2009). Digital ergonomics suffers challenges from the overwhelming space at which technologies is trending, many teachers and parents have far trailing behind in curbing excesses due to inadequate knowledge of internet usage compared students (Livingstone, 2002).

The widen gap has featured some digital parenting crisis reflecting Internet slangs, Excessive usages of video games and Internet fraud drastically affecting student study habit culminating into e-cheating. The need to illustrate this crisis is pertinent so as to indicate its impact on parenting. The inability of teachers and parents to digitally curb internet excesses of teenagers culminating into digital vices as internet slangs, internet fraud, excessive use of video games and e-cheating are growing digital trend adversely affecting education. However, the of ergonomic mobile internet devices is geometrical as indicated by digital facts. Nigeria among West and Central Africa asserted by Olaleye (2016) was placed number one in Africa and eight in the world in terms of internet usage with about 63 million internet users in the country as at 2016. This can be attributed to inexpensive, functional, and convenient nature of mobile internet devices. This avails students prospects to access course materials and online information, learn in a collaborative environment, and obtain formative evaluation and feedback from teachers. As observed by Egunjobi (2011), mobile devices appears popular among Nigerian students, young adult learners, because it is affordable, flexible, and compatible and facilitate accessing relevant academic information. Adjourning, positivity, Morgan, (2012) asserts mobile internet devices as a key research components to teachers and students, due to its usage in completing individual and group assignments. It serve as supportive teaching tool for teacher quick search on a topic in classroom instruction. As observed by Bellarmine University study many teachers use mobile internet devices as teaching tools via text with students, sending reminders and students ask questions and receive instant feedback. Numerous English

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teachers adopt text messages to teach literature, mentoring students to write fictional text message conversations between literary characters (Morgan, 2012).

The pedagogical potentials and academic potency of mobile internet devices as asserted by Wang (2008) have been neglected thereby debarring academic learning optimization. Scrutinizing digital ergonomic among students and teachers, Koole (2006) further summarized that optimal usage in education will promote Content Accessibility (CA) prompting quick access to knowledge and information needed for effective teaching and learning. CA would further facilitates Discovery learning (DL), enabling students to comprehensively learn beyond classroom setting. DL likely provide Innovative Learning (IL) that promote active student activity and passive teacher activity which is a construct of innovative teaching and creative learning. This approach will facilitate a shift in paradigm from the traditional classroom teaching and learning to the digital ergonomic enhancing effective teaching and learning in 21st century required in Nigerian post-primary education.

With the strategies enumerated above, it is obvious that the cost of procuring mobile internet devices is significantly low compared to the running cost of procuring a new or second-hand computer and modem for internet browsing for all secondary school students in Nigeria. Currently, most students in Lagos now have access to mobile internet devices having the features like SMS, voice mail, recorders, still camera video games, audio music, radio play back, colour screen and web browser that are capable of accessing the internet and e-mail (Olayinka, 2008). The bane of this study is optimisation of ergonomic of mobile internet devices in classroom teaching and learning, necessary to acquit students with the academic and pedagogical potentials. Undeniably, among Nigerian students abounds disgusting, immoral and non-academic usage of mobile internet devices, such as playing video games, excessive chatting, internet fraud and watching of immoral pornographic sites via mobile internet, all done at the expense of their academics.

Research Questions

The following questions would be focused upon as the research questions for this study.

1. Is there any significant relationship between ergonomic of mobile internet devices and Content Accessibility (CA) in Nigeria post-primary education?
2. Is there any significant relationship between ergonomic of mobile internet devices and Discovery learning (DL) in Nigeria post-primary education?
3. Is there any significant relationship between ergonomic of mobile internet devices and Innovative Learning (IL) in Nigeria post-primary education?

Research hypotheses

H_{01}: There is no significant relationship between Discovery Learning (DL) and Ergonomic of Mobile Internet Devices

H_{02}: There is no significant relationship between Content Accessibility (CA) and Ergonomic of Mobile Internet Devices

H_{03}: There is no significant relationship between Innovative learning (IL) and Ergonomic of Mobile Internet Devices

Methodology

The research design is a descriptive survey. The Digital Ergonomics Questionnaire for learning\Teaching effectiveness (MAQLTE) is the only instrument used for this study. The 15 item questionnaire was drawn in line with the hypotheses

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and research questions. Respondents were requested to indicate their level of agreement with the questionnaire items by High, Moderate or Low. A test re-test method was used to determine the co-efficient of reliability of the instrument. The correlation co-efficient was computed and it gave reliability co-efficient of 0.87 which was considered high enough to be used. The questionnaire was personally administered by the researcher. The respondents were drawn from four (4) senior secondary schools within the neighbourhood of the researchers in Badagry and Ojo local government area of Lagos State. A sample of 200 students were purposefully based on their versatility of mobile internet device usage selected from:

i. Sito-Gbetrome Secondary School, Badagry, Lagos State;
ii. Royal Spry Secondary School, Badagry, Lagos State;
iii. Lagos State Model College, Ojo, Lagos State; and
iv. Adeniyi Goodwill School, Ijanikin, Lagos State.

The analyses of findings in the study was made with use of frequency counts, percentages and Person Product Moment Correlation Co-efficient (PPMC).

Results

Table 1:
Descriptive Statistics Showing Mean d Standard deviation of Variables

Descriptive Statistics

	Mean	Std. Deviation	N
Discovery learning	2.8500	.94622	200
Content Accessibility	2.8000	.93449	200
Innovative learning	2.9200	.95431	200
Ergonomic of mobile internet devices	3.0500	.97344	200

From table 1 above it shows that 200 students were captured in this study as “discovery learning”, “content accessibility” and “Innovative Learning” are regarded as independent variables while “Ergonomic of mobile internal devices” is regarded as the dependent variable in this study. The attribute of these variables by way of weight is discussed on mean and standard deviation. Content Accessibility recorded the lowest in terms of mean and standard deviation values as 2.80 and 0.934, closely followed by Discovery learning which recorded 2.85 and 0.946 and Innovative Learning approach having 2.92 and 0.954 respectively. Meanwhile, for the dependent variable, “Ergonomic of mobile internal devices” it recorded a relatively higher mean and standard deviation value as 3.05 and 0.973 respectively.

Table 2:
Pearson Product Moment Correlation Analysis showing relationship between Independent and Dependent Variable

Correlations

		Discovery Learning	Content Accessibility	Innovative Learning	Ergonomic of Mobile Internet Devices
Discovery Learning	Pearson Correlation	1	.589	.890	.632**
	Sig. (2-tailed)		.212	.203	.001
	N	200	200	200	200
Content Accessibility	Pearson Correlation	.589	1	.688	.781**
	Sig. (2-tailed)	.212		.216	.000
	N	200	200	200	200
Innovative Learning	Pearson Correlation	.890	.688	1	.705

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	Sig. (2-tailed)	.203	.216		.003
	N	200	200	200	200
Ergonomic of Mobile Internet Devices	Pearson Correlation	.632**	.781**	.705	1
	Sig. (2-tailed)	.001	.000	.003	
	N	200	200	200	200

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

From table 2 above, it shows the degree of relationship that exists between the Independent variables and Dependent variable. For discovery learning and Ergonomic of mobile Internet Devices, a correlate value of *0.632 was obtained meaning a positively strong relationship exists between them. At P-value of 0.05, Sig. value of 0.001 is obtained meaning "Not Significant". Statistically, it implies that there is a significant relationship between Discovery learning and Ergonomic of Mobile Internet Devices. In same table 2 above it shows that between Content Accessibility and Ergonomic of Mobile Internet Devices, a correlate value of *0.781 was obtained meaning a positively strong relationship exists between them. At P-value of 0.05, Sig. value of 0.000 is obtained meaning "Not Significant". Statistically, it implies that there is a significant relationship between Content Accessibility and Ergonomic of Mobile Internet Devices. In same table 2 above it shows the degree of relationship that exists between Innovative learning and Ergonomic of Mobile Internet Devices, a correlate value of *0.705 was obtained meaning a positively strong relationship exists between them. At P-value of 0.05, Sig. value of 0.003 is obtained meaning "Not Significant". Statistically, it implies that there is a significant relationship between Innovative learning and Ergonomic of Mobile Internet Devices.

Discussion

It could therefore be deduced that the significant relationship established between digital ergonomics of mobile internet device and variables like content accessibility, discovery learning and innovative learning can prompt effective teaching and learning. The import of the research was hinged on premise that optimization of by students and teachers can facilitate effective teaching and learning. First, content accessibility can be enhanced by digital ergonomic for topic taught in class by and for assignments by students. Second, prompt usage of mobile internet devices will enhance discovery learning by students and teachers. Finally, ideas acquire through content accessibility and discovery learning will promote innovative learning. This enable student to be active in classroom teaching and learning while teacher is passive due to prior learning by the students. Notably, the 21st century teacher is expected to be a mentor and facilitator of knowledge as opposed to the traditional classroom teaching that is teacher-centred. To further corroborate the findings of this study, Ola & Ojo (2006) asserts that digital ergonomic of mobile internet device is the modern form of information and communication technology (ICT) that education needs adopt to enhance qualitative content delivery services. The digital versatility is advancing so much ground in Nigeria as opposed to the traditional chalk and talk analogue method of teaching. These new trends in ICT have impacted on the use of materials and academic information. As a supportive instructional tool in classroom settings Buczynski (2008) opined that optimal and positive engagement mobile internet device such as web browsers search engines will impact on the accessibility and delivery in teaching and learning process. As further asserted Buczynski, proper attention and optimal usage of mobile internet device can serve as a supportive instructional tool in classroom settings due to academic and instructional potential of mobile internet device.

Consequently, the necessity to explore the academic potentials of mobile internet device to support classroom teaching and learning is essential to provision of qualitative post-primary education in Nigeria. Further validation of the result of this study hinged on Said (2015) which revealed that proportion of post-primary students frequently, utilised mobile internet device, for example, workstations, recording assignments, looking the web for study, getting to the college's LMS, understanding books and scholastic papers, and speaking with partners on informal communities. In essence, students should re-direct their drive from the unproductive and derogatory usage of mobile internet device to the

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educative and informative usage, which enhances academic potential as regards teaching and learning. However, in Nigeria post-primary schools, optimum utilization of digital ergonomic has been hindered by some issues has asserted by Robinson and Latchem (2003) despite teachers being are aware of the benefits inherent in integrating mobile internet device into teaching and learning activities, but they are hindered by non-versatility of internet usage. This was further emphasized by Salehi and Salehi (2012) affirming that teachers believed that insufficient technical supports in Nigerian schools and little access to internet and ICT prevent uncomfortable and confident of use ICT in the classroom.

Conclusion and Recommendations

Mobile internet devices are universal and easily portable, students and teachers are expected to maximise the benefits in acclimatizing them as instructional materials and learners must be exposed to practices and application in learning with Mobile internet devices. This paper explored the background to digital ergonomics of mobile internet devices in Nigeria. Attempt was made to xray the positive and negative usage of mobile internet usage in relation social and academic sphere. The study established that mobile internet devices cannot be excluded from effective and efficient pedagogy disassociated from the stereotyped and old-rugged traditional method of teaching. Digital ergonomics of mobile internet device undoubtedly serves as a virtual teaching and learning space for teachers in Nigerian post-primary education. The study justifies the need to tap academic potentials of mobile internet devices and its potency in the realization of qualitative education in post-primary education in Nigeria so as to cope with the current global drive for ICT. More importantly, since students are teachers are acquainted with the applications and functions of mobile internet devices. Obviously, mobile internet devices accompanied by ergonomics do efficiently facilitate learning both within and outside classroom, thereby, promoting student-centred and activity-based learning, which are embedded in content accessibility, discovery and innovative learning strategies. This study posit need for stakeholders and policy makers in education sector to propel a goal-driven steps to incorporate the ergonomics of mobile internet devices into Nigerian post-primary school. The recommendations offered hereafter are carefully developed from the tenacity of the discussion and findings and structured to align and fit into the existing senior secondary school curricula, so as to reflect the support which mobile devices provide for learning and pedagogical values. Recommended therefore posit that mobile internet device to be utilised to facilitate and provide opportunities for students to promote learning both within and outside the classroom environment. The need to pertinently promote a conducive, relaxed and convenient learning environment that is more academically productive. This should be geared to virtually facilitate differentiation, content accessibility, discovery and innovative learning, of which all learner are fully involved in learning.

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CAUSES AND EFFECTS OF CORRUPTION IN ACADEMIC INSTITUTIONS IN NIGERIA

BY

[1]Afiss, A. F., [2]Elizabeth, A.A., [3]Rasaki, A.R. & [3]Sunday, A.A.

[1]Department of Business Education, Al-Hikmah University, Ilorin, Kwara State, Nigeria.
[2]Department of Office Technology and Management Education, School of Business Education, Federal College Education, (Technical) Akoka, Lagos.
[3]Department of Business Administration, University of Lagos, Lagos.
[4]School of Technical Education (Business Education Programme), Yaba College of Technology.
Email address aafawale@alhikmah.edu.ng

Abstract

This study examined the causes and effects of corruption in academic institutions in Nigeria. As a descriptive research design of a survey type, it was made use of 630 lecturers across the tertiary institutions in Nigeria through proportionate stratified random sampling techniques'. Two research questions were raised and one hypothesis was tested in the study. Data were collected through the use of developed instrument styled, Causes and Effects of corruption in academic institutions in Nigeria (CEOCAIN). The instrument was validated and used for the study. The data collected were analyzed using percentage and t-test. The findings revealed that laziness on the part of students and the influenced students' attitude negatively and by extension led to poor academic performance. Some staff see it golden opportunities for them to enrich themselves; some even see it as a national cake. Lack of qualified personnel and motivation were the causes of corruption in academic to mention few. It was also revealed effects of corruption in academic such as poor standard of living, poor standard of education etc. Six recommendations were made, some of them recommendations were dichotomy between HND holder and university graduate needs to be addressed, there is need to review the curriculum from the primary to tertiary institutions, also, 6-3-3-4 educational system is suitable for this country and it deserve second taught.
Keywords: Corruption, Academic, Perception, Institution, Causes and Effects

Introduction

Corruption has been a major treat in Nigerian educational institutions from primary school to tertiary level both private and public sectors. It has been affecting Nigerian institutions for over two decades. Examples of academic corruption in Nigeria are embezzlement and misappropriation of budget allocated for education, bribery for admission into favourable schools, buying and selling of scores known as sorting, immoral attitude between academic staff and students, dishonesty that enhances grade on assignment or a course grade are becoming common in the teaching learning processes. New forms of dishonesty, plagiarism and other forms of dishonesty are challenges of the requirement of academic honesty and integrity in higher education institutions. Students' access to modern technologies, such as mobile phones, iPods, internets, scientific calculator has broadened the ways by which students can achieve the goal of dishonesty (Feday, 2017). Some parents and guardians often manipulate and tolerate corruption as they wince to provide educational opportunities for their children. These constitute various forms of fraud. They have influenced students' attitude negatively and by extension led to poor academic performance and poor Nigerian economy. Government, the society and educational institutions frown at it. Kasozi (2014) sees academic corruption as unmasking an underlying monster of dishonesty in the academy that could destroy the very fabric of society. Though part of our social fabric, academic corruption is more dangerous than many other forms of corruption, it should not be tolerated. From the perspective of social development, systemic education corruption (that which is beyond a few individuals "behaving badly") must be of concern because, more so than corruption in the police, customs service, or other areas, it contains both immoral and illegal elements, involves minors or young people, and damages the ability of education to serve a public good, most notably the selection of future leaders on a fair and

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impartial basis (Anderson & Heyneman 2005; Heyneman 2005; Noah & Eckstein, 2001). Much of education corruption might be classified under the term "professional misconduct" (Braxton & Bayer, 1999), but corruption may contain implications beyond other professional misbehavior. It may include corruption on the part of universities who bribe officials to become accredited, whose quality of public service may then be compromised and may produce graduates whose skills and professional levels could be a danger to the public (Heyneman, 2003, 2004) in (Heyneman, 2007). Some corrupt education officials and institutions see fraud as a norm and golden opportunities for them to enrich themselves; some even see it as a national cake. The increased demand for higher education increases the struggle to get admissions. In most of Africa, the demand has been increasing steadily to fill an education vacuum created by earlier neglect of access at all levels of education (Kasozi 2017).

One of the major causes of educational system in Nigeria can be attributed to academic corruption. The standard of education in 1960s cannot be compared with standard of education in 1970s, while standard of education in 1970s was different from 1980s. The present standard of education in 21 century has been drastically diminished as a result academic corruption in Nigeria institutions. The reading culture on part of students is no more there they look out for short cut during the examination periods which leads to academic fraud. Due to experience demonstrating that certain students are incapable of communicating in plain English, such as filling out a personal data form, academic corruption in postsecondary institutions has become necessary. The devaluation of Nigerian university degrees, underemployment, unemployment, and a lack of skills to adapt to the rapidly changing economic and technological landscape are just a few of the issues caused by graduates with inadequate training (Dimkpa, 2011). According to Okebukola (2005), Nigerian universities were not ranked in the top 20 in Africa due to low quality performance, adequate funding of educational sector, among others were the variable ratings that were reported to be below average in Nigeria. The public's outcry over declining educational standards in the mass media has made academic corruption a problem. For example, the declining standard of education in Nigeria is a result of teachers' demands for satisfaction, among other things.

Regretfully, the present study aimed to fill the vacuum left by the other studies' lack of investigation into the causes and consequences of academic corruption in tertiary institutions, specifically with regard to university education. Education aimed at a desired level of performance is fundamental to the quality of education as it pertains to teaching and learning. A sufficient amount of well-trained teaching staff, appropriate teaching methodologies, appropriate curriculum content, adequate and conducive physical facilities, classroom operations, and expected levels of interaction are just a few of these quality requirements.

Literature Review

Corruption is not a new occurrence in Nigeria; it has been existing before colonial era. Many scholars have defined corruption in many ways, the commonly definition is abusing of public fund or properties. Academic dishonesty is the worst form of corruption which is more severe than many other forms of corruption. Higher institutions might end up producing corrupt, less competent and unethical man-power (Feday, 2017). Corruption in Nigeria is a kind social virus which is hybrid of traits of fraudulent anti-social behaviour derived from British colonial rule and those derived from, and nurtured in the indigenous Nigerian context (Babayanju, 2014). Many Nigerians see it an opportunity to enrich them, some as a way of compensating the family members, friends, colleagues and relatives. Wikipedia (2016) sees corruption as a form of dishonest or unethical conduct by a person entrusted with a position of authority, often to acquire personal benefit.Corruption may include many activities including bribery and embezzlement, though it may also involve practices that are legal in many countries.Government, or 'political', corruption occurs when an office-holder or other governmental employee acts in an official capacity for personal gain. It is the unlawful ways of use of power to gain personal interest. Otoghile and UyiEdigi (2001) refer corruption as all forms of improper or selfish

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exercise of power and influence attached to a public as well as private office. Corruption is the giving of a bribe to an official so that the truth will not be told. It involves the embezzlement of public fund for personal use and any act which is considered to be criminal act according to the law of a particular society (Mike, 2017). It shows that many Nigerians love short cut to final destination. The causes of corruption in Nigeria Institutions are so many; one of them is poverty, Majority of the academic and non-academic staffs live with poverty, they lack basic needs and find things difficulty to provide basic things and this give room to lazy students from affluent home to buy their way out. Some lazy students without silver spoon look for alternative to sort themselves out. Some students help their friends to sit for examination or test, some to do assignment which money will be paid in returns as a result of poverty; some pressurized their peers because of the unethical pressure group they belong to.

Dearth of qualified staff: majority of corrupts staff are the people with low competence in their area of specializations, because they are neither trained nor qualified, they find it very difficult to follow the standards or the rules and regulations laid down in their profession or Institutions, the code of conduct have been neglected. As a result not to follow and obey the standards, codes of conduct usually results in academic corruption. The academic curriculum needs to be reviewed because the perception of Nigerian citizens is without attending tertiary institution one cannot make it in life, which gives rooms to some students to use all negative ways to be admitted and graduated at the tertiary institution. Also, the 6-3-3-4 education system needs to be reviewed as well and must be fully implemented; the technical and vocational schools have turned to white elephant institutions. One of the national educational goals, which derive from the philosophy of education, is the acquisition of appropriate skills and the development of mental, physical and social abilities and competencies as equipment for the individual to live in and contribute to the development of the society (National Policy on Education, 2004) which gives room to technical schools to acquire practical skill for those who cannot cope with their studies. More so, the dichotomy between HND holder and university graduate needs to be addressed, because majority of students want to go to university, they use various means to seek for admission. Based on vacancies on dailies or social medians, higher education is vital for accessing good jobs. Most sought for jobs demand university education qualifications with professional qualifications. With this, students lobby for admission (Mike, 2017).

Certificate mentality; this is another causes of academic dishonesty in Nigeria, Nigerians appreciate the colourful certificate, which they prefer it to what the holder can offer, colourful such as first class, distinction, grade one etc, the orientation of the students is to have the mention grades without having in depth knowledge. Those with the in depth knowledge with lower grades find it very difficult to seek for employment or further their educations and this led to academic corruption. Another reason for causes of academic corruption is poor quality assurance and lack of ethical standards; when the tertiary institution does not have quality assurance section or toothless quality assurance is existence, it will give room to academic corruption. Ethics is concerned with right and wrong and how conduct should be judged to be good or bad. It is about how we should live our lives and, in particular, how we should behave towards other people. Standards are acceptable or expected minimum level of performance. Ethical standards therefore are levels of conducts and behaviours that are socially and culturally accepted to be good or right. Nigerians no longer feel concerned about the consequences (good or bad) of their actions or inactions (Babayanju, 2014). Education is the bedrock of development of any nation, there are so many effects on academic corruption in Nigerian tertiary institutions; one of it is, it leads to poor standard of education. The quality of standard of education will be inferior to other countries. Also, ability to produce competent and qualify personnel will be difficult to produce and this will affect economy of the country. Corruption in education sector has culminated in falling quality of graduates, who are supposed to pilot the engine of economic development in the country (Babayanju, 2014). Poor standard of living, as a result of poor standard of education automatically, the standard of living will be below average. The future leaders

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who are supposed to pilot the engine of economic development in the country are half done, the output will be zero. Low productivity will occur, with this, it will lead to declining in purchasing power of currency (Feday, 2017).

Purpose of the Study

The main purpose of this study was to examine the causes and effects of academic corruption in Nigeria institutions. Specifically, the study determined to the causes of academic corruption and their effects on Nigeria institutions.

Research Questions

(i) What are causes of academics corruption in Nigeria institution?
(ii) What are effects of academic corruption in Nigeria institution?

Hypothesis

H_{01}: There is no significant relationship between causes and effects of corruption academic institutions in Nigeria

Methodology

The research design in of this work was a descriptive survey. Population was made up of this study was made up of 678 lecturers of tertiary institutions. The sample comprised of 200 respondents in all. Simple random sampling technique was used. Two self designed questionnaires were used in order to elicit information from the selected tertiary institutions for the research work which was tagged causes and effects of corruption in academic institutions in Nigeria (CEOCAIN). The validity of the instrument was critically looked at by three experts. Some these items of the questionnaire were removed and those considered irrelevant were discarded, based on the amendment, the final instrument was developed. The reliability of the instrument was assured through a test re-test method which yielded, frequency counts, percentage scores and t-test was used to analyze the hypothesis.

Results

Table 1: Demographic Information

Institution	Frequency (f)	Percentage (%)
College	25	22.73
Polytechnic	35	31.82
University	50	45.45
Total	**110**	**100**

Table 1 showed that 22.73% of academic staff of college of education staff returned their questionnaires, 31.82% from polytechnic while 45.45% from university.

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Table 2:
T-test analysis of significant relationship between causes and effects of corruption academic institutions in Nigeria.

Variable	N	Mean	SD	DF	t-cal	t-tab
Causes	110	28.6364	9.95654			
				109	-7.966	0.960
Effects	110	30.2182	11.20320			

The results presented in table 2 shows that causes of academic corruption have a mean score of 28.6364 and effects mean have 30.2182. The table further revealed that t-cal (-7.966) which is less than the t-table (0.960) at significant level of 0.05. Therefore, the null hypothesis hereby accepted. The causes of academic corruption institutions in Nigeria have effect not only on institution alone but also, the entire country.

Conclusion and Recommendations

This study was carried out to investigate the causes and effects of corruption academic in institutions in Nigeria. It was discovered that laziness on the part of students, lack of motivation of staff, poor quality assurance, strike etc lead to corruption in academic. Also, some parents and guardians often manipulate and tolerate corruption as they wince to provide educational opportunities for their children as a result of Nigerians mental toward certificate. Based on the findings of the study, the following were recommended:

1. There is need to review the curriculum from the primary to tertiary institutions, also, 6-3-3-4 educational system is suitable for this country and it deserve second taught.
2. Adequate funding is needed in Nigerian educational system
3. Both academic and non-academic staff need adequate motivation
4. More awareness on Technical educational sector and deserve more funding.
5. Adequate provision of school counselor for every primary and secondary school through the country.
6. The dichotomy between HND holder and university graduate needs to be addressed

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ESTABLISHMENT OF OLD PEOPLE'S HOMES AS A POTENTIAL SOLUTION TO ADDRESS CHALLENGES FACED BY THE ELDERLY IN NIGERIAN SOCIETY

BY

[1]Balogun, Olukunle Olagunju, [2]Ogundipe, Ololade Gbeminiyi & [3]Balogun, Tolulope Adeola

[1]Tai Solarin University of Education, Department of Adult and Development Education, College of Specialized and Professional Education.

[2]Department of Sociological Studies Education, Lagos State University of Education, Oto/Ijanikin, Lagos State, Nigeria.

[3]Tai Solarin College of Education, Omu – Ijebu, School of Arts and Social Sciences, Department of Social Studies.

Email: kunlegunju1961@gmail.com

Abstract

The study examined establishment of old people's homes as a potential solution to address challenges faced by the elderly in Ogun State, Nigeria. This study employed descriptive survey research design where questionnaire was used to acquire necessary data for the research work. Population comprises all old people in Ijebu Ode metropolise of Ogun State. Simple random sampling technique was used to select 50 old people from each of the three local governments to make a total of 150 old people in Ijebu Ode metropolise as sample for study. Three (3) research questions were raised and answered in this study. Reliability of the instrument was determined using Cronbach Alpha and data collected were analyzed using simple percentage, mean and standard deviation statistical tools. Findings revealed that, inadequate healthcare delivery system, financial constraints, social isolation and lack of family support are the primary challenges faced by the elderly. Also, lack of social interaction, community engagement, insecurity and peace of mind independence are the expected benefits of establishing old people's homes. Furthermore, the study revealed that, regulatory challenges such as licensing and compliance requirements, Socio-economic factors, such as poverty and unequal access to healthcare services, are the potential barriers associated with the establishment and operation of old people's homes. It was concluded and recommended that advocating for the establishment of old people's homes aligns with the need for innovative, flexible, and culturally sensitive solutions and government should therefore advocate for policy reforms that addresses the unique needs of the elderly in Nigeria.

Keywords*:* Potential, Solution, Challenges, Elderly, Establishment

Introduction

The global demographic landscape is undergoing a significant transformation, marked by a remarkable increase in the elderly population. This demographic shift brings forth a multitude of challenges for societies worldwide, particularly in providing adequate care and support for their aging citizens. As individuals age, they often encounter a myriad of challenges encompassing physical health limitations, mental health issues, social isolation, financial constraints, and a lack of accessible care options (United Nations, Department of Economic and Social Affairs, Population Division, 2019).In light of these challenges, the establishment of old people's homes emerges as a potential solution to address the multifaceted needs of the elderly population. Old people's homes, also known as nursing homes, retirement communities, or assisted living facilities, offer a range of services tailored to meet the diverse needs of older adults. These services often include medical care, assistance with daily activities, social and recreational programs, and a supportive living environment (Ayalon& Tesch-Römer, 2018).While old people's homes have been subject to scrutiny and debate, their role in providing specialized care and support for the elderly cannot be overlooked. Research indicates that well-designed and well-managed old people's homes can significantly enhance the quality of life for older adults, promoting their overall well-being and social integration (Kane& Kane, 2010).According to Okunola (2012),old people’s home started with institutions for the care of aged persons in Ibadan, they operated under the auspices of the missionary group. the inmates were mostly females and most of them, by and large senile had been

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collected, which indicated they are from the way, rescued from unruly crowds who yelled at them, giving the impression that, they were being rewarded for alleged sins of the past, the sins of being 'witches and wizards. From the report of Okunola (2012) that, old people's homes is best promoted at the local level with local communities participating in its management, but pilot projects could be promoted at State and national for the purpose of demonstrating standards.

One primary role of old people's homes is to offer comprehensive medical care and assistance with daily activities for residents who may have complex health needs or physical limitations. This includes access to skilled nursing care, medication management, physical therapy, and other medical services necessary for maintaining optimal health and managing chronic conditions (American Geriatrics Society, 2014).In addition to medical care, old people's homes often provide various support services aimed at enhancing the overall quality of life for residents. These may include assistance with personal care tasks such as bathing, dressing, and grooming, as well as support with household chores and meal preparation. By offering these services, old people's homes help older adults maintain their independence and dignity while ensuring their basic needs are met (National Institute on Aging, 2020).Furthermore, old people's homes serve as social hubs where residents can engage in a variety of social and recreational activities. These facilities often organize group outings, fitness classes, educational seminars, and cultural events to promote social interaction, stimulate cognitive function, and prevent feelings of isolation and loneliness among residents (Centers for Medicare & Medicaid Services, 2016).Moreover, old people's homes provide a safe and supportive living environment for older adults, offering security features, emergency response systems, and 24-hour staff assistance to ensure the well-being and safety of residents. This sense of security and peace of mind is particularly important for older adults who may be living alone or facing mobility challenges. Overall, old people's homes play a vital role in supporting the needs of the elderly population by offering a range of services designed to promote health, independence, social engagement, and safety (National Institute on Aging, 2020). By providing comprehensive care and a supportive living environment, these facilities contribute to enhancing the overall quality of life for older adults and facilitating successful aging in place.

The challenges faced by the elderly encompass a broad spectrum, ranging from physical health limitations to social and economic constraints. As individuals age, they are more susceptible to chronic illnesses, disabilities, and cognitive impairments, which can significantly impact their quality of life (Marengoni et al., 2011). Moreover, the prevalence of multi-morbidity among older adults further complicates their healthcare needs, necessitating comprehensive and coordinated care approaches. Social isolation and loneliness are prevalent issues among the elderly population, particularly for those living alone or experiencing loss of social connections due to retirement, mobility limitations, or bereavement (Holt-Lunstad et al., 2018). These factors not only contribute to mental health concerns such as depression and anxiety but also exacerbate physical health conditions and reduce overall well-being. More so, financial constraints pose another significant challenge for many older adults, especially those living on fixed incomes or relying solely on retirement savings. Rising healthcare costs, inadequate pension benefits, and limited access to affordable housing further compound financial insecurity among the elderly (Cacioppo& Cacioppo, 2014). As a result, many older adults struggle to meet their basic needs and access essential healthcare services. Furthermore, the lack of accessible and affordable care options presents a substantial barrier to aging in place for many older adults. While aging in place is a preferred option for most seniors, limited availability of home-based care services, as well as physical and environmental barriers, often necessitate institutional care such as nursing homes or assisted living facilities. Addressing these challenges requires a multifaceted approach that encompasses healthcare, social support, housing, and economic policies tailored to the unique needs of the elderly population.

However, the establishment and success of Old People's Homes in Nigeria necessitate a supportive policy framework that acknowledges the unique challenges faced by the elderly and fosters an environment conducive to their well-

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being. Government policies should aim to incentivize and facilitate the creation of Old People's Homes, recognizing them as integral components of a comprehensive elderly care system. In doing so, policymakers can explore tax incentives, grants, or subsidies for organizations and entities involved in the establishment and operation of these facilities (ILO, 2020).Additionally, policies should address licensing, accreditation, and standards to ensure that Old People's Homes meet the necessary criteria for providing high-quality care. These standards should encompass aspects such as staff training, safety measures, and the overall quality of life offered to residents (Adebusoye et al., 2019). Regular assessments and evaluations can further contribute to the continuous improvement of these facilities, aligning them with evolving best practices in elderly care.

A seamless integration of Old People's Homes with existing healthcare and social welfare programs is essential for a comprehensive and coordinated approach to elderly care. Government initiatives should focus on creating linkages between these facilities and primary healthcare services, ensuring that residents have access to medical professionals and specialized care when needed (Oladapo, 2018). Collaborative efforts between Old People's Homes and social welfare programs can address the financial aspects of elderly care. This may involve exploring funding mechanisms, subsidy programs, or partnerships with private entities to ensure the sustainability of these facilities while maintaining affordability for the elderly and their families. By aligning Old People's Homes with broader government strategies, policymakers can contribute to the creation of a cohesive and effective system for elderly care in Nigeria. Therefore, this study sought to look into how establishment of old people's homes can serve as a potential solution to address challenges faced by the elderly in Ogun State

Objectives of the Study

The main objective of this research is to examine the establishment of old people's homes as a potential solution to address challenges faced by the elderly in Ogun State, Nigeria. Specifically, the objectives of this research work are to:

i. Examine the primary challenges faced by the elderly population in Ogun State.
ii .Examine the advantages and benefits of establishing old people's homes as a solution to address the challenges faced by the elderly in Ogun State
iii. Examine the potential barriers associated with the establishment and operation of old people's homes in Ogun State.

Research Questions

The following research questions were raised to guide the study:

i. What are the primary challenges faced by the elderly population in Ogun State?
ii. What are the advantages and benefits of establishing old people's homes as a solution to address the challenges faced by the elderly in Ogun State?
iii. What are the potential barriers associated with the establishment and operation of old people's homes in Ogun State?

Methodology

The study adopted a descriptive survey research design. Population comprises of all old people Ijebu Ode metropolis of Ogun State .Simple random sampling technique was used to select 50 old people from each three local government to make a total of 150 old people as sample for study. A self-developed questionnaire was used as instrument for data collection. The questionnaire contained items on the main title of study. The instrument was given to experts for construct and content validation. Reliability of the instrument was determined using Cronbach Alpha. Data collected were analyzed using simple percentage, mean and standard deviation statistical tools.

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Results

Research Question 1: What are the primary challenges faced by the elderly population in Ogun State?

Table 1

S/N	ITEMS	AGREED		DISAGREED		Mean (ϰ)	S.D
		Freq (N)	Percent %	Freq (N)	Percent %		
1.	Access to healthcare	118	78.7	32	21.3	3.09	0.897
2.	Financial constraints	130	86.6	20	13.4	3.31	0.732
3.	Social isolation	125	83.3	25	16.7	3.18	0.786
4.	Lack of family support	127	84.7	23	15.3	3.13	0.748
5.	Inadequate housing	126	84.0	24	16.0	3.27	0.843
		Weighted Mean (ϰ) = 3.196 and SD = 0.801					

Table 1 above, shows that primary challenges faced by the elderly population in Ogun State, Nigeria as access to healthcare with (ϰ = 3.09, SD = 0.897), financial constraints (ϰ = 3.31, SD = 0.732), social isolation (ϰ = 3.18, SD = 0.786), lack of family support (ϰ = 3.13, SD = 0.748) and inadequate housing (ϰ = 3.27, SD = 0.843). This reveals that the mean and standard deviation of the items listed above is very high (ϰ = 3.196, SD = 0.801) showing the primary challenges faced by the elderly population in Ogun State, Nigeria.

Research Question 2: What are the advantages and benefits of establishing old people's homes as a solution to address the challenges faced by the elderly in Ogun State?

Table 2

S/N	ITEMS	AGREED		DISAGREED		Mean (ϰ)	S.D
		Freq (N)	Percent %	Freq (N)	Percent %		
1.	Old people's homes provide specialized medical care tailored to the needs of the elderly population.	104	69.3	46	30.7	3.09	0.882
2.	Old people's homes facilitate social interaction and community engagement among residents.	107	71.4	43	28.6	3.01	0.894
3.	Old people's homes provide a sense of security and peace of mind for residents and their families.	120	80.0	30	20.0	3.07	0.887
4.	Old people's homes promote independence and autonomy for older adults while providing necessary support.	114	76.0	36	24.0	3.12	0.955
5.	Old people's homes play a vital role in enhancing the quality of life for the elderly population in Ogun State.	107	71.3	43	28.7	3.14	0.956
		Weighted Mean (ϰ) = 3.086				**and SD = 0.915**	

Table 2 above, indicated that old people's homes provide specialized medical care tailored to the needs of the elderly population (ϰ = 3.09, SD = 0.882), old people's homes facilitate social interaction and community engagement among residents (ϰ = 3.01, SD = 0.894), old people's homes provide a sense of security and peace of mind for residents and

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their families (χ = 3.07, SD = 0.887), old people's homes promote independence and autonomy for older adults while providing necessary support (χ = 3.12, SD = 0.955) and old people's homes play a vital role in enhancing the quality of life for the elderly population in Ogun State (χ = 3.14, SD = 0.956). This reveals that the mean and standard deviation of the items listed above is very high (χ = 3.086, SD = 0.915) showing the advantages and benefits of establishing old people's homes as a solution to address the challenges faced by the elderly in Ogun State.

Research Question 3: What are the potential barriers associated with the establishment and operation of old people's homes in Ogun State?

Table 3:
Potentials Barriers

S/N	Items	AGREED		DISAGREED		Mean (χ)	S.D
		Freq (N)	Percent %	Freq (N)	Percent %		
1.	Regulatory Challenges, such as licensing and compliance requirements, may hinder the establishment of old people's homes in Ogun State	122	81.3	28	18.7	3.15	0.895
2.	Limited financial resources and funding constraints may pose barriers to establishing and maintaining old people's homes in Ogun State.	130	86.6	20	13.4	3.29	0.830
3.	Inadequate infrastructure, including lack of suitable facilities and resources, may impede the establishment and operation of old people's homes in Ogun State.	120	80.0	30	20.0	3.06	0.985
4.	Shortages of skilled healthcare professionals, such as nurses and caregivers, may affect the quality of care provided in old people's homes in Ogun State.	123	82.0	27	18.0	3.11	0.916
5.	Socioeconomic factors, such as poverty and unequal access to healthcare services, may affect the affordability and accessibility of old people's homes in Ogun State.	98	65.3	52	34.7	2.91	1.077
		Weighted Mean (χ) = 3.104 and SD = 0.9406					

Table 3 above, indicated that regulatory Challenges, such as licensing and compliance requirements, may hinder the establishment of old people's homes in Ogun State. (χ = 3.15, SD = 0.895), limited financial resources and funding constraints may pose barriers to establishing and maintaining old people's homes in Ogun State (χ = 3.29, SD = 0.830), inadequate infrastructure, including lack of suitable facilities and resources, may impede the establishment and operation of old people's homes in Ogun State (χ = 3.06, SD = 0.985), shortages of skilled healthcare professionals, such as nurses and caregivers, may affect the quality of care provided in old people's homes in Ogun State (χ = 3.11, SD = 0.916) and socioeconomic factors, such as poverty and unequal access to healthcare services, may affect the affordability and accessibility of old people's homes in Ogun State (χ = 2.91, SD = 1.077). This reveals that the mean and standard deviation of the items listed above is very high (χ = 3.104, SD = 0.9406) showing the potential barriers associated with the establishment and operation of old people's homes in Ogun State.

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Discussion

From table 1 above, research question 1 has a weighted mean of 3.196 which is above the benchmark of 2.50. This shows the primary challenges faced by the elderly population in Ogun State, Nigeria. Therefore, this finding agrees with the findings of Cacioppo and Cacioppo (2014) who stated that the primary challenges faced by the elderly population in society can vary depending on factors such as location, socioeconomic status, and access to healthcare. However, financial constraints pose another significant challenge for many older adults, especially those living on fixed incomes or relying solely on retirement savings. Rising healthcare costs, inadequate pension benefits, and limited access to affordable housing further compound financial insecurity among the elderly.

From table 2 above, research question 2 has a weighted mean of 3.086 which is above the benchmark of 2.50. This indicated the advantages and benefits of establishing old people's homes as a solution to address the challenges faced by the elderly in Ogun State. The above finding is in congruence with the findings of American Geriatrics Society(2014) who revealed that the primary benefits of old people's homes is to offer comprehensive medical care and assistance with daily activities for residents who may have complex health needs or physical limitations. This includes access to skilled nursing care, medication management, physical therapy, and other medical services necessary for maintaining optimal health and managing chronic conditions. In addition to medical care, old people's homes often provide various support services aimed at enhancing the overall quality of life for residents. From table 3 above, research question 3 has a weighted mean of 3.104 which is above the benchmark of 2.50. Thus, this revealed the potential barriers associated with the establishment and operation of old people's homes in Ogun State .Hence, this finding is in resonance with the findings of Ogundele and Ogundele (2019) who is of the opinion that potential barriers associated with the establishment and operation of old people's homes includes regulatory challenges, financial constraints, infrastructure and resources, workforce shortages, stigma and cultural beliefs, community opposition, accessibility and transportation, socioeconomic factors, legal and administrative hurdles, healthcare system challenges etc.

Conclusion

The establishment of Old People's Homes presents a promising solution to the pressing challenges faced by the elderly in Nigerian society. The aging population is growing, and traditional family structures are undergoing changes that affect the ability of families to provide adequate care. The potential roles of Old People's Homes in providing a supportive community, ensuring access to healthcare, and contributing to financial sustainability underscore their significance in the broader context of elderly care. Advocating for the establishment of Old People's Homes aligns with the need for innovative, flexible, and culturally sensitive solutions to address the evolving landscape of elderly care in Nigeria.

Recommendations

Based on the findings of the study, it is recommended that;

1. Government should advocate for policy reforms that address the unique needs of the elderly in Nigeria. They should lobby for the development and implementation of comprehensive elderly care policies at national and local levels.
2. There should be inter-sectoral collaboration among government agencies, non-profit organizations, healthcare providers, and private sectors to create a more unified approach to elderly care.
3. Government should launch community-based education programs to raise awareness about the challenges faced by the elderly.
4. Government should introduce incentives for businesses to adopt elderly-friendly practices, such as accessible facilities and flexible employment opportunities.

5. Government should develop and implement training programs for family caregivers and professional healthcare workers.
6. Government should invest in infrastructure that supports the mobility and accessibility of the elderly, including age-friendly public spaces and transportation. They should ensure that public buildings and facilities adhere to universal design principles.
7. Government should establish community support networks where neighbors and community members actively engage in providing assistance to the elderly.

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SKILLS DEMAND BY INDUSTRIES IN THE CONTEMPORARY SOCIETY

BY
Awonuga Olukayode
National Open University of Nigeria, Abuja,
Email: oawonuga@noun.edu.ng,

Abstract
This study focused on skills demand by industries in the contemporary society. A research question bordering on non-technical skills demand by industries in the contemporary society guided the study. A self-developed questionnaire entitled "Skills Demand Questionnaire" (SDQ) was used to collect data from 261 respondents. The SDQ was validated by three experts and a reliability coefficient of 0.79 was obtained using Cronbach Alpha Coefficient method. The data collected were analyzed using descriptive statistics to answer the research question raised and inferential statistics of t-test to test the null hypothesis formulated. The study revealed that all the identified non-technical skills are needed by industries in the contemporary society. The study further recommended that technical teachers should align themselves with skills in demand by industries and train students as appropriate.
Keywords: Skills; TVET; Craftsmen; Technical College

Introduction

Nigeria requires an efficient and a capable skilled workforce to manage her industries. The workforce comprises the engineers, technicians and the craftsmen from Nigerian universities, polytechnics and technical colleges. The importance of the skilled workforce cannot be overemphasized as it contributes immensely to the social and economic development of the country. The continuous growth and expansion of industries in Nigeria have led to exponential growth in positions that require certain technical skills. However, finding workers with the requisite skills remains a major challenge for employers in Nigeria. Employers have expressed concerns about the lack of adequately trained technical college graduates and feel that educational institutions under Technical and Vocational Education and Training (TVET) are not producing graduates with skills that match the needs of industry (Awonuga, 2019). Therefore, Oketch (2007), Jayaram and Engmann (2017), emphasized that employers have complained about the training and instruction acquired by the technical college graduates. The duo noted, that such instructions and training are grossly insufficient to meet the demand of today's construction industry. Subsequently, Jayaram and Engmann (2017), highlighted the fact that neither the secondary education nor the vocational training schools is equipping the school leavers with the key instructions and abilities needed for work. Hence, the need for TVET institutions to rise to their responsibilities.

Technical Vocational Education and Training (TVET) have been identified as an instrument that can help resolve the skill technicalities within the Nigerian construction industry. The Technical colleges as an offshoot of the TVET institutions in Nigeria are saddled with the responsibility of training skilled craftsmen for three-year in different disciplines. Students thereafter, graduate with a Federal Craft Training Certificate (FCTC) which qualifies its graduates for opportunities in various workplaces. Olakotan (2015) describes Technical Colleges as institutions where students are trained to acquire relevant knowledge and applied skills in different occupations for self-reliance, and employment in the world of work. In line with the aforementioned, Jayaram and Engmann (2017) reiterated, that skills could be learnt either in a formal or informal setting and the duo laid emphasis on TVET as an aspect of training institution that inculcates skills development, knowledge, and attitudes which cover the affective, psychomotor and cognitive domains. The essence of acquiring all-round skills according to Awe Griffith and Stephenson (2010) ; Olaitan et al., (2000) are that the students produced will be employable into the industry as a result of the training and

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skill acquired. Evidences abound in literatures that inadequacies in TVET are responsible for the skills gap at the craft level (Oni, 2007).

Furthermore, Olakotan and Lemo (2019) noted that mismatch exist between the skills acquired by craftsmen and the skills required for employment in the industry due to the fact that the school environment does reflect the conditions of the industry where the students subsequently find themselves upon graduation. This is what economist refers to as a variation between supply of and demand for human capital. Majority believed, that the problem of skills gap will continue to escalate as the jobs available in the construction industry become more technical; and the rate at which this is changing is quite alarming. Consequently, it is required that employees acquire adequate skills training that will make them employable in the workplace (Smith, 2003; De Grip & Van Loo 2002; Awe, 2010). A search for ways to ensure that graduates gain the appropriate skills to meet employers needs in the construction industry may not only improve workplace performance but can also lead to more responsive and sustainable technical education policies that can address individual and national needs. For instance, Ofori (2004) and Lewin (2006), among others highlighted that, improving quality and raising skills levels and standards for training may not only lead to higher wages and higher returns but may impact individuals, employers, and the entire nation. The employers in the industry are looking for the skilled workforce with the right skills (Crowson *et al*., 2000; Jayaram &Engmann, 2017) and qualities to contribute to the development and success of the industry. Skills identified by the industry to be of importance include, academic or cognitive skills, generic skills, technical or vocational skills and work-related attitudes or soft skills (Stasz, 2001). More so, there have been various accusations, about the qualities of graduates produced in most technical training institutions in Nigeria. It has been observed that most graduates of technical institutions in Nigeria are not skilled enough for employment in industry and commerce. In practice, demands for adequately trained technical graduates with appropriate skills to meet workplace challenges indicate that the availability of those graduates is extremely important to employers. Despite high demand for skilled artisans, the public have noted that graduates of technical colleges are greatly unemployed because of in-ability to acquire the required skills and training required for employment. Hence, this study attempts skills demand by industries in the contemporary society.

Literature Review

Industries in Nigeria found out that students of technical colleges are found deficient in some skills (Odusami, 2002; Awe, 2010). The major skill gaps previously found in industry in Africa, most especially Nigeria are cognitive especially numeracy and critical thinking, non-cognitive especially communication, leadership, and decision-making and technical skills among the craft workers (Jayaram & Engmann, 2017; Lututala, 2012; Odusami, 2002; Awe, 2007). Overwhelmingly, employers believe that the theoretical knowledge acquired in the classroom is the tip of the iceberg and that, it is insufficient by itself (Jayaram &Engmann, 2017; Lututala, 2012; Odusami, 2002; Awe, 2010). It seems employers look for a varying mix of non-cognitive or technical skills. Interestingly, employers felt that institutions should deliver the fundamental skills for employability to technical college students, so that employers can then conduct on the job training that is specific to their needs (Jayaram &Engmann, 2017). In a similar vein, Ndoye and Walther, (2012) conducted a research which highlighted similar skills gap found in craft workers in Africa. These skills which are needed include communication skills, literacy, numeracy and cognitive skills. Besides these skills, technical college graduates must possess three fundamental characteristics skills (Love *et al*., 2001; Ogwo and Oranu, 2006; Jayaram & Engmann, 2017).

Firstly, possession of practical experience is needed in other to intimate themselves with the working procedure and complexity of the industry. Secondly, they should recognize tools and equipment's used in construction industry, and then imbibe the spirit of collaboration in carrying out their jobs as expected of them in order to boost productivity and encourage good relationship among the co- workers. However, lack of collaboration in the industry has been observed

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to lead to wasted time and poor performance. It is mandatory for construction skills workers to possess various mixture of skills required for work in the industry. These include business, personal, technical and employability skills meant to assist in daily routine at the workplace (Oranu & Ogwo 2006; Stasz, 2001; Jayaram & Musau, 2017). Currently there is a call for new skills demand in industry, this was due to technological development and the introduction of information technology in industry, which is required in operating tools and equipment's by the labour pool for work (Mackenzie et al., 2000; Cordery, 1989). Ogundola and Olakotan (2018) averred that every meaningful citizenry must ensure adequate training and retraining tailored towards making them relevant in the contemporary society occasioned by technological advancement. Also, Olakotan and Hamzat (2020) noted that there is high rate of unemployment among craftsmen in Nigeria because it appears that they do not possess the current knowledge and skills that will enable them take up the available jobs in the contemporary society occasioned by technological advancement. Introduction of new technologies to the construction industry have redefined and called for new skills in other to improve performance and productivity (Wells &Walls, 2003; Agapiou et al., 1995). Introduction of new technology has greatly affected the performance of the craftsmen due to the out-of-date training they had previously acquired coupled with lack of various types of skills and showing lack of expertise as previously mentioned.

Purpose

This study determined skills demand by the industries in the contemporary society.
Specifically, the study identified:

1. Non-technical skills demand by industries in the contemporary society

Research Question

The following research question guided the study:

1. What are the non-technical skills demand by industries in the contemporary society?

Hypothesis

The null hypothesis was tested at 0.05 level of significance:

H_{O1}: There is no significant difference between the mean responses of technical teachers and electrical contractors on the non-technical skills demand by industries in the contemporary society

Methodology

This study adopted a descriptive survey research design. According to Gall, Gall and Borg (2007) a survey is a method of data collection using questionnaire or interviews to collect data from a sample that has been selected to represent a population to which the findings of the data analysis can be generalized. The study was carried out in Southwest Nigeria. The population for this study consisted of 261 respondents which are made up of 217 electrical contractors and 44 technical teachers (Electrical biased). The study made use of no sampling technique due to the manageable size of the population. Skills Demand Questionnaire (SDQ) was developed and used for the study. The SDQ contained 12 items guided by the raised research question. The scaling responses for the instrument was based on adapted Likert Scale ratings viz: Highly Required (HR) – 5, Required (R) – 4, Undecided – 3, Slightly Required (SR) – 2 and Not Required (NR)-1. The instrument was validated by three experts tested for reliability yielding a coefficient of 0.79 using Cronbach Alpha. The instrument was administered on the respondents by the researchers and 5 research assistants and the whole 267 copies distributed were duly recovered. The data collected were statistically analyzed using descriptive statistics of mean to answer the research question and inferential statistics of t-test to test the null hypothesis formulated at 0.05 level of significance. A mean of 3.50 and above was considered required while a mean rating of less than 3.50 was regarded as not required.

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Results

Research Question 1:

What are the non-technical skills demand by industries in the contemporary society?

Table 1:
Data for answering research question one are presented

S/N	Item Statement	$\bar{X}$	S.D	Remarks
1	Thinking ability	4.31	0.53	Required
2	Comprehension ability	3.81	0.44	Required
3	Reading skills	4.45	0.56	Required
4	Written communication skills	3.96	0.64	Required
5	Speaking and listening skills	3.68	0.76	Required
6	Leadership skills	3.69	0.52	Required
7	Negotiation skills	3.84	0.68	Required
8	Time management skills	4.36	0.92	Required
9	Problem solving ability	4.76	0.62	Required
10	Interpersonal skills	4.14	0.59	Required
11	Core skills for learning	3.96	0.91	Required
12	Job readiness skills	4.58	0.71	Required

The result presented in Table 1 revealed that all the 12 items (items1- 12) had a mean ranged from 3.68 to 4.76. This indicated that the respondents agreed on all the 12 items as non-technical skills demand by industries in the contemporary society because their means were above the cut-off point of 3.50. The standard deviation of the items also ranged from 0.44 to 0.92. This showed that the respondents were close to one another in their responses.

Hypothesis

The null hypothesis was tested at 0.05 level of significance:

H_{O1}: There is no significant difference between the mean responses of technical teachers and electrical contractors on the non-technical skills demand by industries in the contemporary society

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Table 2:
Responses of technical teachers and electrical contractors on the non-technical skills demand by industries

STATUS	N	Mean	Std. Deviation	Std. Error Mean	df	t	Sig
Technical Teachers	44	3.2286	1.03144	.17434	259	.512	.391
Electrical Contractors	217	3.1081	.96563	.15875			

$P < 0.05$

The data presented in Table 2 revealed that the p-value of .391 is greater than 0.05 at 259 degree of freedom. This indicated that there is no significant difference in the in the mean ratings of technical teachers and electrical contractors on the non-technical skills demand by industries. With this result, the null hypothesis ($H0_1$) of no significant difference was upheld.

Discussion

Technical institutions all over, have been recognized for imparting the necessary skills required needed for employment for all her recipients. The data presented in Table 1 provided answers to research question 1. The findings as presented in Table 1 revealed that 12 non-technical skills are needed by the industry from technical college graduates for smooth entry into the world of work. The findings of the study is corroborated by the submissions of Jayaram and Musau (2017) who noted that the contemporary skills in demand by industries to assist in daily routine at the workplace include business, personal, technical and employability skills. Also the findings of the study was supported by Ndoye and Walther, (2012) who highlighted communication skills, literacy, numeracy and cognitive skills as skills in top demand by industries in the contemporary society. Similarly, Stasz (2001) buttressed the findings of this study as he posited that skills identified by the industry to be of importance include, academic or cognitive skills, generic skills, technical or vocational skills and work-related attitudes or soft skills. A t-test of significance was used to test the formulated hypothesis. Table 2 revealed that there is no significant difference between the mean responses of technical teachers and electrical contractors on the non-technical skills demand by the industry. Therefore the null hypothesis is not rejected. Hence, the result is an indication that craftsmen are in dire need of the identified skills in the contemporary society.

Conclusion and Recommendations

There has been emphasis on technical and vocational education and training as an aspect of education that deals with the teaching of skills, knowledge and attitudes to cover the affective, psychomotor and cognitive domains, such that the students will be able to fit into the world of work. Failure to satisfy the demand of the industry in area of skills performance resulted into skills gap faced by the industries, this stands as an evidence that the school is lacking in providing the skills necessary for work. Hence, there is need for technical colleges to collaborate with industries so as to ensure that students acquire necessary skills needed for employment upon graduation. Based on the findings of this study, the following recommendations were made:

1. Technical teachers should align themselves with skills in demand by industries and train students as appropriate.
2. Relevant stakeholders in TVET settings should harness improvements occasioned by technological advancement and reflect same in the nation's technical colleges.

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PROBLEMS AND PROSPECTS OF UNIVERSITY EDUCATION MANAGEMENT IN THE 21ST CENTURY IN NIGERIA

BY

[1]Laura Akoloh [2]Ibinabo Stephen Koroye & [3]Ikurite Numoipre
Department of Educational Foundations, Isaac Jasper Boro College of Education, Sagbama, Bayelsa State, Nigeria.
Email: akolohlaura@gmail.com

Abstract

This study examined the problems and prospects of University education management in the 21st century in Nigeria. The demand for University education has continued to increase over the years and opinion of different stakeholder on how Universities should be managed has continued to shift in recent times. The study relied on secondary data from internet sources and journals for extensive review. It was indicated that there are challenges faced in the management of University education in recent times and such as the lack of technical competence for meeting modern educational demands. The prospects from managing these institutions were also highlighted. Major aspects of the topic x-rayed areas such as university system management in the 21st century, indicators for effective management of university education in the 21st century, challenges confronting university management in Nigeria in the 21st century and prospects were looked at in details. The review concluded that Universities can overcome the crisis associated with the exhausted resource of a classical university development system in the 21st century. They will succeed subject to their active role in social advancement.
Keywords: Management, Propspect, Prospect, University Education

Introduction

University administration is the ability of an individual or a group of individuals to influence and guide followers or other members of an organization to achieve predetermined university set goals. This involves making sound and sometimes difficult decisions, creating and articulating a clear vision, establishing achievable goals (Green, 2015), and providing followers with the knowledge and tools necessary to achieve those goals. Managers are found and required in most aspects of society, from university business to politics to region to community-based organizations (Adeyemi, 2009). According to Babalola (2007), to be an administrator in 2 the university means enough deal about curriculum and instruction, and providing guidance to staff when they have questions. It also means that we research best practices and look for the most innovative ways for staff to engage our students. It also means that university administrators should also be able to spend time getting to know students and working with staff. To be a university manager means that we have to maintain a focus on engaging staff and students to find the positives that surround us. To manage the university there is a lot of hard work to make sure they work with their struggling teachers at the same time they challenge their best teachers. True university managers do not need new mandates, policies or laws to make sure this happens. They do it instinctively and it is often at the forefront of their mind as they begin their day. University managers concentrate on preparing students for a variety of university career options at both community colleges and universities. In order to achieve these laudable goals, Ajayi and Haastrup (2011) opined that academic excellence must be guaranteed by the university managers. Academic excellence connotes effective teaching and learning, developmental researches, high impact community services, creativity and innovation, acquisition of self-independent economic skills by university graduates (Ukiwo, 2007). Oyebade (2016) puts it that it also indicates scientific and technological skills acquisition by both staff and students and high moral discipline.

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Theoretical Framework

This study is hinged on Freeman (1983) stakeholder theory. Stakeholder theory originated in the field of enterprise management in the 1960s, and most discussions on stakeholder definition are directed at tertiary education. Freeman (1983) defines it as "any group or individual that can be identified, that can influence the achievement of a company goal or that can be affected by the achievement of a company‘s goals. Such as public interest groups, government agencies, trade unions, competitors, trade unions, employees, customers, shareholders and so on. "In the 1970s, business management has moved from stakeholder influence to stakeholder participation. In the 1980s, with the publication of Freeman‘s landmark book Strategic Management - Stakeholder Approach, more and more western scholars have invested in this emerging field. Their research has penetrated from private institutions to the public sector, and has gradually gone beyond the scope of business management and spread to economic, political and social fields. Can stakeholder theory be used in the field of higher education? What are the similarities and differences between universities and enterprises? This is the topic that this paper tries to discuss. Differences and connections between university education and enterprises According to J Victor Baldridge of Stanford University, colleges and universities are unique professional organizations, which have six characteristics different from business organizations, government 4 organizations and their organizations: (1) the objectives of academic organizations are numerous and vague; (2) academic organizations serve customers; (3) institutions need intricate technology; (4) high degree of professional dominance academic work; (5) colleges and university professionals tend to be discrete and fragmented; (6) university organizations are becoming more and more vulnerable to the impact of environmental.

However, more and more scholars point out that universities and enterprises have common ground in some aspects. Wang Jianhua (2005) believes that in the context of reform, which is intertwined by new public management, neo-liberalism and economic globalization, higher education reform has gradually entered another "discourse system". It has gone farther and farther along the road of management reform and closer to enterprise management in management technology. Jeff Whitty pointed out that "without considering their respective functions, all organizations are fundamentally the same and have the need to pursue efficiency. The conclusion is that for public organizations such as schools, to be more effective, they must become more like enterprises, one of the important measures is to adopt a good business management model. Unlike the bureaucrats, professionals and politicians who used to control public education, new managers are regarded as innovative, dynamic, flexible, candid, consumer-centric and strategic. "The paper believes that university education, as a public sector, is obviously different from profit-making organizations such as enterprises. As a non-profit organization, university is also the gathering place of 5 owners of human capital. Material capital serves human capital. Knowledge innovation of human capital is the legitimacy basis of the existence of university. However, as a non-profit organization, colleges and universities themselves are "the links between stakeholders". The stakeholder analysis framework for higher education is not in the sense of "enterprise" for profit, but as a non-profit organization. Although "not for profit" means that no one owns the ownership and residual claim and control of the organization, only the property right of the legal person, whose property right subject is "virtual", it means that higher education institutions are a stakeholder organization.

Conceptual Clarification on University Education in Nigeria

The history of University education is dated back to 1948 when the first higher institution – University of Ibadan was established then followed by the second generation Universities from 1960 to 1962 and the third and fourth generation Universities from 1975 to 1980 and from 1980 to 1990 the fourth generation Universities. In April 1959, the Federal Government commissioned an Inquiry - the Ashby Commission to advise it on the higher education needs of the country for its first two decades. Before the submission of the report, the Eastern Region government established its own university at Nsukka (the University of Nigeria, Nsukka in 1960). The implementation of the Ashby Report led

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to the establishment of the University of Ife (now Obafemi Awolowo University, Ile-Ife) in 1962 by 6 the Western region, Ahmadu Bello University, Zaria in 1962 by the Northern Region and University of Lagos (1962) by the Federal Government. Over the years there has been a proliferation of universities including those established by State governments and privately owned. Similarly, in the course of time, it was observed that Nigerian Universities are fraught with lots of challenges that incapacitated their efficiency.

Mohammed and Gbenu (2007) affirmed that the quality of education offered by higher education institutions in recent times has deteriorated substantially. Babalola (2007) viewed the situation in our tertiary institutions as ―institutional failure‖ because of skill mismatch. He said skill mismatch is a major concern in Nigeria where tertiary education graduates acquire skills that are not demanded by the labor market. In spite of the great benefits of Universities' education to nation building the potentials of this level of education to fulfilling their responsibility are being consistently thwarted by the long-standing problems bedeviling the system. This paper, therefore, considers the concept, character, and importance of University education as well as challenges and possible solutions. Goals of University Education According to the National Policy on Education (NPE, 2004), the goals of tertiary education that is necessary for system performance include to: i. contribute to national development through high-level relevant manpower training;7 ii. develop and inculcate proper values for the survival of the individual and society; iii. develop the intellectual capability of individuals to understand and appreciate the local and external environment; iv. acquire both physical and intellectual skills for self-reliance; v. promote and encourage scholarship and community service; vi. forge and cement national unity and vii. promote national and international understanding and interaction To reiterate it is realized from the above-stated goals that the key components of the university are to offer teaching, research, and community service. Effective teaching is very important in university education as it constitutes about 40% of the university education system.

Biola (2015) submitted that all resources required for research - an important program of the University are made available to ensure Nigerian universities excel in carrying out this vital role. Communities are equally expected to be beneficiaries of the services offered by the universities. However, given these goals expected from these institutions, to what extent have they fared? According to Abdul (2013) who did a study on the evaluation of the Universities education goals in Nigeria, the goals of Universities' education is moderately been achieved. Even though the University system in Nigeria has not had a very smooth sail from inception, it has witnessed many successes. National Teachers_ Institute as (Jake, 2012) argued that the gains that Nigeria has derived from the university education become glaring when 8 one considers the five national goals through which Nigeria's philosophy of education draws its strength, namely, to create a democratic and free society, a just and egalitarian society, a united, strong and self-reliant nation, a great and dynamic economy and a land full of bright opportunities for all citizens.

University System Management in the 21st Century

University management implies being able to handle (carefully and not wastefully) what goes on in the processing of educating people in the university system. A rather encompassing definition by Altbach (2005) puts ―university management‖ as meaning the way universities are formally organized and operated. Likewise, Ojedele and Fadokun (2009), equally see university management as the management of men and resources with the most highly developing minds and intellects. They stressed further that, university management entails the management of academic and human resources in order to produce persons that are found worthy both in character and learning, persons whose services are needed in the business or private enterprise and public services. University management in the words of Ibukun (1996), can be viewed from two perspectives the supra or national level, and at the internal or individual institutions levels. At the national level, the national university commission (NUC) is the statutory government organ responsible for the coordination of university management in the country Its main objectives in the words of NUC

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(2004), is ―to ensure the orderly development of 9 university education in Nigeria, to maintain its high standard by laying down or setting minimum Academic Standards (MAS) for all programmes taught in Nigerian universities and the accreditation of such programmes; and to further ensure adequate funding of all Nigerian universities. On the other hand, the internal management of each university in Nigeria is represented by a simple organogram. The visitor and chancellor are titular political office holders whose administrative roles are mainly reserved for ceremonial functions in general. Federal and state universities have the president and the incumbent governors, as visitors respectively. At the apex of the management structure within each university is the council. This body in his words is headed by a chairman of council (Pro-Chancellor). Other members include the Vice-Chancellor who is the chief executive of the university; he is saddled with the daytoday management of the university, with other members of the public as constituted by government, representatives of the university Senate and congregation, and the registrar as secretary and chief scribe who handles all matters which are administrative.

Indicators for Effective Management of University Education in the 21st Century

The quality of an education, university education inclusive can be ensured, judging by the following indices. For the universities in Nigeria to therefore achieves its goals of creating a continuous capacity to produce and re-produce knowledge for national development as stated in Federal 10 Republic of Nigeria (FRN, 2013), the under listed indices amongst others must therefore be strictly adhered to: i. Availability of quality human capital or resources in terms of qualifications, training and experience. ii. Adequate provisions of teaching materials iii. Modification of the content of curriculum to be market friendly iv. Ensuring quality and adequate provisions of instructional facilities such as lecture rooms, libraries, laboratories, resource centre, studio and workshops etc. (Chukwuma & Nwaham, 2007). iv. Availability of specialized lecturers v. The use of modern teaching and management techniques coupled with effective monitoring and evaluation of both staff and students. When all the above indices or indicators are given necessary attention and consideration, the goals of university education may not be far from being achieved.

Challenges Confronting University Management in Nigeria in the 21st Century

In the past few years, there have been myriads of problems confronting the management of university education in the 21st century in Nigeria. Prominent among these problems is the issue of inadequate funding. Akindutire and Ajayi (2007) have laid credence to this that; inadequate funding is the bane of the Nigerian university education, and this is invariably hindering optimal performance of many university managers. 11 Some of the universities in the country are characterised by poor infrastructure, overcrowded classrooms, persistent industrial crisis and students 'unrest as a result of inadequate funding. This may jeopardise the effective management of university education in the 21st century. However, some of grave challenges bedeviling university management system in the 21st century is discussed as thus:

1. Poor Leadership Competence of University Managers: Most administrative problems experienced in our universities today are due to the fact that many of our universities managers are new in the field and therefore do not have wider knowledge of the technicalities involved in effective university management. While the old ones among them appeared or seemed out of date because of inadequate development (Akudo 2014 submitted). However, many of the university managers seem to have failed to use their leadership competencies for the achievement of their institutional educational goals and objectives.

2. Inadequate Equipment and Physical Facilities: In this age of accelerating technological development and globalization, modern equipment and facilities for effective teaching and learning are not only essential but must be provided in adequate and useable condition. Roberth Okah (2013), observes that all Nigerian universities particularly

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the first and second generation cadre are faced with the problem of coping with old facilities including Obsolete equipment. This 12 invariably affect effective management of university in the 21st century. Lecturers rooms are grossly inadequate and most building are in a state of dilapidation and despair, libraries with obsolete books and journals appear to be a common sight in our universities in Nigeria, and laboratories with obsolete equipment equally seem to be the order in the nation's universities. To make situation worse for university managers, a large proportion of money allocated to university which would have been utilized to improve facilities are being expanded on recurrent expenditure such as salaries and allowances, leaving nothing for infrastructure and other developments (Robert-Okah, 2013).

3. Excess enrolment: This is another major challenge confronting effective university management in the 21st century. Excess enrolment as affirmed by scholars usually results in overcrowded classrooms, ineffective instructional delivery, examination malpractices, inadequate recreational and learning facilities etc.

4. Dearth of Academic Personnel in the Universities: There is an acute shortage of academic staff in most of the nation 's universities. This was further buttressed by Ngozi (2013), that many university programmes rely mainly on adjunct and part-time Lecturers to facilitate them. The implication of this is that lecturers are over laboured with excess responsibilities and this invariably may affect productivity in terms of quality teaching, effective conduction of examinations, marking and grading of students scripts and releasing of examination scores, supervision of students projects and thesis. All 13 these vital functions appear to be unduly delayed due to a shortfall in academic staff requirements in Nigerian universities. The brain drain syndrome in the Nigerian university system has also compounded the problems of acute shortage of academic staff in the Nations Universities. Most of the good brains appear and indeed scattered to other parts of the globe such as Europe, Asia, America etc. and those still in service in Nigeria, if given the opportunity will equally migrate.

5. Incessant Strike actions in the University System: perhaps one of the banes of effective university management in the 21st century in recent times is the incessant strike actions being embarked on by various Unions bodies in Nigerian university system. Nwabueze (1995), further lays credence to this that among the dire consequence of strike actions in the university system is generation of unwholesome mood which is unconducive to meaningful teaching and learning among teachers and students alike.

6. Insecurity: The spate of general insecurity in the nation has further put the works or university managers in jeopardy; especially in the northern universities where we have the ―Boko Haram‖ insurgency (terrorism), which is totally against western education. There is also the insecurity problem of militancy in the South-western parts of the country, kidnapping and armed robbery in the west, and the seemingly lack of will on the part of the leadership, the followership and the law enforcement agencies to tackle these insecurity problems in the nation 14 are all current issues university managers must grapple with in this 21st century.

Prospects in University Management in the 21st Century

Based on the issues raised in this paper, the author has put forward the following prospect as panaceas for effective university management. i. Government should provide adequate funds for the management of university education: This is to say that; government should allocate more funds to the universities so that they can be more effective in their operations. Likewise, the universities on their own parts should look inward by strengthening their internally generated revenue base without compromising academic standard. ii. Provision of more physical facilities by government in universities should be given uppermost attention: This is very germane to preparing students for life in the ever competitive global village; facilitating effective teaching and learning, and invariably a better performance

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on the parts of both the teachers and the learners. According to Akindutire and Ajayi (2007), universities administrators should take the advantage of the Education Tax fund (ETF) in providing some of the physical facilities in their universities on regular basis; and prudent spending of such funds must also be ensured. iii. Improving the condition of service of university staff: The conditions of service of university staff (both academic and nonacademic) should be improved upon in order to curb the incidence of 15 brain-drain that seems prevalent in our universities. This could be achieved through the motivation of university staff by enhanced salary package and better conditions of service. The teaching staff should also be encouraged to carry out meaningful and productive researches that are geared towards national development. iv. Student enrolment: The issue of students 'enrolment which have exploded in recent times, over stretching the available facilities and infrastructures on our campuses should be thoroughly looked into. v. Insecurity: On the issue of insecurity all hands must be on deck to tackle this menace, most especially, the government should rise to this challenge by matching words with action; by ensuring the security of lives and property of citizenry which is one of its primary duties. Conscious efforts at achieving comprehensive and sustainable peace and security in the country should be made by government; and this could be achieved by putting in place the necessary foundations for short and long term peace and security in the country and this will invariably rub on our universities. The cost of insecurity is quite high both for individual Nigerians, as well as the nation as a whole. The elimination of this threat and enemy of man (insecurity) must be a top priority of the government and everybody.

Conclusion

Universities can overcome the crisis associated with the exhausted resource of a classical university development system in the 21st century. 16 They will succeed subject to their active role in social advancement. First of all, it implies that the universities 'active efforts in cooperating with the society and other international organization to implement educational policies that aid effective university management system in the 21st century is sacrosanct. This can be facilitating by applying a more flexible approach to students 'admission; ensuring diverse curricula and expanding educational variability; pursuing active policy in attracting the young to study at a university which will invariably boost human capital development.

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