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TOWARDS COMMUNITY REHABILITATION: REFLECTIONS FROM THE BWARAK COMMUNITY THEATRE EXPERIENCE

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ABSTRACT
Most tertiary institutions in Nigeria are known influence the communities in which they are established. In recent times, scholars have observed the growing trend of negative influences in such communities and that of the Federal University of Education Pankshin is not an exception. The sudden rise in social perils in the Bwarak community has been attributed to the presence of the Federal University Pankshin formerly known as the Federal College of Education Pankshin, where thousands of students come from across the nation to attain education. Against this backdrop, the authors of this article employed community theatre pedagogy to trammel increasing social menace in Bwarak Community in the light of its proven effectiveness in stimulating community members' active engagement, dialogue and critical thinking towards social change. This will be done through interviews, observation and focus group discussions. The impact of the study was evaluated by a combination of action-based, qualitative and quantitative research. Materials required for the implementation of this project. The social menaces uncovered from the interaction between members of the community and the university include: unemployment, robbery, teenage pregnancy, substance abuse and truancy. The researchers further catalyzed solutions by facilitating discussions between the university and the community representatives. It is hoped that positive changes would be encountered in the near future as the consensus of decisions spelt a harmonious working relationship and corporate social responsibility from both parties in an effort to rehabilitate Bwarak community.

Key words: community theatre, social perils, Bwarak, FUE Pankshin, interaction.

INTRODUCTION

The study aims to test and explore the effectiveness of using community theatre pedagogy as an approach to address and mitigate social menace in Bwarak community. The social menaces in focus include: robbery, teenage pregnancy, drug abuse, fraudulent acts and vandalization.

Social menace all over the world seems to be accelerating in societies despite the efforts of various institutions and organizations. This research recognizes that despite the efforts of different researches from different disciplines-from religious (Chibuzor, 2022), psychological (Adaeze, 2020) and sociological perspectives to stem the tide of social

perils, the scourge seems to be getting worse. The study therefore considers the significance of community engagement and participatory approaches in tackling social challenges; from recorded successes from past projects executed such as "Peacebuilding through theatre: The Agwan Rogo Experience" (Tsaku & Embu, 2012) and Project "Zaman TD (Dantala and Group 2021), among other initiatives. The sudden rise in social perils in the Bwarak community might be attributed to its being home to the Federal College of Education, where its numerous students come from across to nation to attain education. It is against this backdrop that this research proposes the use of community theatre pedagogy to trammel increasing social menace in Bwarak Community in the light of its proven effectiveness in stimulating community members' active engagement, dialogue and critical thinking towards social change. This strategy aims to provide insights to the vulnerable, foster empathy, challenge harmful concepts and practices and promote positive social change. In addition to the aforementioned perils, the study also pinpoints other specific social risks that the Bwarak community is prone to. With community stakeholders, this was done through surveys and focus group discussions. The impact of the study will be evaluated by a combination of action-based, qualitative and quantitative research. Materials needed for the implementation of this project include both human and material resources. Effective measures was taken to ensure that the data collection process was without bias. The results provided information on the underlying causes and consequences of these societal problems.

Area Of Study

Shidams in Poret (2022) states that Pankshin Local Government is one of the oldest Local Government areas in Plateau State. It has passed through various stages of political changes via military regimes or democratically elected civilian administrations. The administrative evolution of Pankshin Local Government began in 1919, when it served as the divisional headquarters for the British colonial administration. It controlled an area that comprised the present Kanam, Mangu, Kanke and Bokkos local government areas. However, in 1976, the federal government set up local government areas and Pankshin became one of the full-fledged pioneer local government areas in the country with its headquarters in Pankshin town. The local government area is home to the Ngas, Mupun, Miship, Pai, Tal, Fier, Tambes and Kadung ethic nationalities. Bwarak village is a settlement in Pankshin.

Population

The population for this study shall be drawn from the Bwarak community and school community of Federal College of Education Pankshin. Interviews were conducted with all community stakeholders, a community meeting which will be recorded shall also hold, as well as a focus group discussions with the various stake holders. Observations and analysis of recorded speech was also carried out

To achieve the desired depth of information required, the researchers worked with a smaller sample called focal persons, but maintain a lengthy physical presence to ensure that the required depth of understanding for a case study is achieved. However, the following features were considered: age, sex, level of education and occupation. The central focus in selecting focal persons is to ensure that every group is well represented in the project.

Objectives of the Study

The study aims to test and explore the effectiveness of using community theatre pedagogy as an approach to address and mitigate social menace in Bwarak community. Additionally, the research sought to: assess the current extent and impact of social perils faced by Bwarak community in areas such as drug abuse, teenage pregnancy and syndicate robbery; explore the potential of community theatre pedagogy as an innovative approach to addressing these social perils in Bwarak community; and investigates the potential for social transformation and positive change in community theatre through the implementation of community theatre.

METHODOLOGY

The nature of this study puts it into the domain of action based and qualitative research. Burns (2015) defines action based research as an approach that is grounded in practical action (the action component) while at the same time focused on generating, informing and building theory (the research component). This is an approach to research that involves processes of collaboration, dialogue and action among participants in the surrounding social system. Ugwu and Eze (2023) posits that qualitative research is concerned with feelings, ideas, or experiences, additionally, shanks (2002) in Poret defines qualitative research as a form of systematic empirical inquiry into meaning. However, by systematic it means that the study follows a methodical structure and follows a procedure or plan. By empirical, it implies that the research is based on verifiable observation and experience rather than theory or pure logic.

The research design employed in this study is the case study research design Coombs (2002) defines case study as

a methodological research approach used to generate an in-depth understanding of a contemporary issue or phenomenon in a bounded system. He adds that it requires an in-depth investigation conducted into an individual, group, or event to gain an understanding of a real-life phenomenon. Measures was taken to ensure that the data collection process was without bias and data gotten was treated with utmost confidentiality. The following instruments were used for data collection for the project:

Participant Observation: while the researchers immerse themselves in this project, they observe the behaviors, interactions and practices of the participants.

Focus Group Discussion: the project also involves organizing the various target groups in the community; the men, women youths, students and the vigilantes in Bwarak community.

Audio/video recording: it is very important to record community theatre performances and related discussions or reflections to capture the essence and impact of the performances. The recordings were transcribed and analyzed for themes and patterns related to the trammeling of social perils in Bwarak community.

Field Notes: detailed field notes was taken to capture important observations, quotes and reflections that may not be captured through other data collection methods

Gathering Data and Analysis

Data gathered from observations, interviews and focus group discussions with research team and community members can be summarized into the following listed below:

1. Unemployment: the community is said to have given up about 95% of their farm lands for the establishment of the college, but when it comes to employment only two slots are given to the whole community. When it comes to ad hock employment by ventures which is a meagre salary, the college and its management rather give it out to their relations outside the community. This eventually leads to employing thieves who end up collaborate with students to vandalize the school property.
2. Substance abuse: the presence of the college has in a great way increased the rate of substance abuse within the community.
3. Robbery/rape/vandalization: community members can no longer have domestic animals in the community because they are always stolen, the college property have been constantly vandalized by thieves who steal electric cables, sewage manholes and even breaking into offices. Female students and young girls have become victims of rape and assault.
4. Truancy/ cultism: young children in secondary schools have mastered the art of absconding from school to meet their senior friends who may or may not be students of the institution. They introduce them to alcohol, substances and cultism.
5. Lack of clean water supply in the community: the community does not have access to clean drinking water.
6. Violations of culture and tradition: the community always has a festival annually where by masquerades parade the community, but because of the institution, most of the students don't know how to conduct themselves during such occasions hence the outbreak of violence experienced some time in 2022
7. Indecent dressing: young girls within the community look up to students of the institution as role models. This translate to the increase in indecent dressing, teenage pregnancy and lack of respect for elders.
8. Allocation of Farm lands: during raining season, farms are usually allocated to people at a price, however, as donors of these farm lands the community members complained and expressed their displeasure on the sales of these farms before having access to their own farms. They also expressed the pains they go through to access their farm lands located behind the institution because of the newly built fence that has covered their shortest route to and from the farm.

Scenario Building and Performance

The research team went back and analyzed the data gotten from the community and college to be able to produce a play that would serve as a recap and engage the final interactive session with the community. During rehearsals, the team ensured that the subject matter was in line with data generated from the community, with detailed attention to its security challenges and locale. The team also ensured it was a one act performance, because of time. Casting was done according to the skills, most of the casts used were students of the institution and the language used was a combination of Hausa, Ngas and Pidgin English to ensure effective communication. The play was an open ended play to allow

every one participate and contribute. Issues that the play looked at include unemployment, access to farm lands, pollution of land, theft, indecent dressing, substance abuse, rape and prostitution.

Plot Structure

Two men (an elder and a young man) walk in lamenting about the community. The first is a titled man of Bwarak and the other a youth. As they discuss, a passerby (member of the vigilante) will join in the discussion stating his own problem. The fourth (a woman), then an official from the Development association of Bwarak Joins the discussion as they move to Tompet to have an elaborate discussion, they are also joined by a student and a staff of the institution. As they arrive Tompet, the discussion is then thrown to the larger house (that is where everyone is gathered for a thorough discussion on possible solutions to the problem).

Discussion and Evaluation

At the end of the performance, people were willing to contribute on possible measures to mitigate this ills bothering the society. Below is listed the summation of possible solutions suggested by the participants:

1. Corporate social responsibility: it was agreed that the community and college should come together and work in order to flush out thieves. Ironically, the community felt the school was harboring and hiding this criminals while the college too felt the community was the one hiding the criminals. The representatives of the college promised to convey the message to the management of the institution to ensure a corporate social responsibility. This could be achieved through having meetings at intervals, inviting community members to learn some skills at the centre for entrepreneurial studies of the college and working with the vigilantes of the community especially when students are on break.

2. The community will put measures in place to check indecent dressing and substance abuse within the acommunity. As a member of the community it was suggested that "if you see something wrong, you say something"

3. The University will also continue to ensure that it notifies the students on behaviours and conduct during cultural and traditional ceremonies to avoid clashes.

CONCLUSION

Community theatre has a lot of potential for community rehabilitation if the procedures are carefully observed. It clearly demonstrates how problems can be brought to the fore and thrashed into solutions by the same parties involved. Additionally, dramatization of the issues discussed provides a vivid reflection of the problem, driving home its intensity and calling or urgent solutions. In conclusion, the study was able to achieve rapport between the school community and Bwarak community. Community members had a sense of empowerment as they were actively engaged in addressing social perils and work towards finding solutions. On the whole, valuable insights were gained on how community theatre approach can be effectively used as an educational tool to address social issues not only in Bwarak community but also in other similar communities facing similar challenges.

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IMPACT OF HOME ECONOMICS-BASED ENTREPRENEURSHIP EDUCATION ON STUDENTS' BUSINESS SKILLS DEVELOPMENT IN SECONDARY SCHOOLS IN JOS NORTH METROPOLIS

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ABSTRACT

This study examines the impact of Home Economics-based entrepreneurship education on students' business skills development in secondary schools in Jos North Metropolis. The study was necessitated by the inadequate entrepreneurial competencies among students, which hinder their self-reliance and economic productivity. The study was guided by three objectives and three research questions. The Experiential Learning Theory (ELT), propounded by David A. Kolb (1984, revised in 2014) was used as theoretical framework. Using a descriptive survey research design, a sample of 200 students was selected from 10 secondary schools through random sampling. Data were collected using a structured questionnaire and analyzed using mean scores and chi-square tests. Findings revealed that Home Economics-based entrepreneurship education significantly enhances students' financial management, creativity, problem-solving abilities and business preparedness. However, challenges such as inadequate funding, limited practical facilities, insufficient instructional time and a shortage of qualified teachers hinder its effective implementation. The study concludes that integrating hands-on entrepreneurship training into Home Economics curricula can significantly equip students with the skills needed for small-scale business ventures. It recommends increased government support, enhanced practical learning facilities and stronger collaboration between schools and the business community to maximise the potential of entrepreneurship education in secondary schools.

Keywords: Home Economic-Based, Entrepreneurship, Business Skills, Development, Secondary School, Students

INTRODUCTION

Entrepreneurship is the process of identifying, developing and bringing a business idea to life with the aim of generating profit and providing solutions to societal needs. It involves innovation, risk-taking and effective management of resources to ensure sustainability and growth. Entrepreneurs play a vital role in economic development by creating employment opportunities, enhancing productivity and fostering competition in the marketplace. According to Adebayo (2021), entrepreneurship serves as a catalyst for economic transformation, as it encourages self-reliance and reduces the burden on government employment schemes. The evolution of entrepreneurship has shown that it is not confined to a specific field; rather, it spans across various sectors, such as agriculture, manufacturing and services. Therefore, equipping individuals with entrepreneurial skills is essential for fostering economic independence and national growth.

Entrepreneurship education refers to a structured program designed to equip individuals with the knowledge, skills and mindset necessary for initiating and managing business ventures. It encompasses various learning strategies, such as theoretical instruction, practical training and mentorship, to develop problem-solving abilities and innovative thinking. As highlighted by Eze (2020), entrepreneurship education aims to prepare students to become self-employed and contribute positively to society by reducing unemployment rates. This type of education is not limited to business studies alone; it cuts across multiple disciplines, providing learners with diverse opportunities to explore and exploit business potentials. Integrating entrepreneurship education into secondary school curricula is crucial in fostering early exposure to business principles

and enhancing students' readiness for economic engagement beyond formal education.

Home Economics-Based Entrepreneurship Education is a specialised area that integrates entrepreneurial principles into Home Economics, providing students with skills in food production, clothing and textile management, hospitality and other related fields. This approach enables learners to translate their Home Economics knowledge into viable business ventures. According to Okafor (2022), Home Economics-Based Entrepreneurship Education enhances students' financial literacy, creativity and management skills, which are essential for running successful businesses. By incorporating practical activities such as catering services, interior decoration and fashion design, students are exposed to real-world business experiences that prepare them for self-employment. This form of education is essential in equipping students with lifelong skills that promote self-sufficiency and economic empowerment.

The importance of Home Economics-Based Entrepreneurship Education cannot be overemphasised, as it plays a significant role in bridging the gap between theoretical knowledge and practical application. It fosters the development of technical and vocational skills, which are crucial for economic sustainability. According to Ibrahim (2021), integrating entrepreneurship education into Home Economics enhances students' capacity to create and manage businesses successfully. Furthermore, it encourages creativity, problem-solving abilities and financial independence, thereby reducing reliance on white-collar jobs. This educational approach also contributes to national development by promoting small and medium-sized enterprises (SMEs), which are key drivers of economic growth. As such, empowering students through Home Economics-Based Entrepreneurship Education can lead to increased innovation and improved economic stability.

Home Economics-Based Entrepreneurship Education significantly impacts students' business skills development in secondary schools, as it provides hands-on training and real-world business exposure. This approach helps students acquire essential business skills such as financial management, marketing strategies and customer relations. According to Ojo (2023), students who undergo this form of training demonstrate higher levels of business acumen and adaptability in the entrepreneurial landscape. By integrating entrepreneurship into Home Economics, students gain practical experience that prepares them for self-reliance and career success. Moreover, it enhances their ability to identify market opportunities and effectively manage resources, thereby fostering a culture of entrepreneurship among young learners. Consequently, Home Economics-Based Entrepreneurship Education is a vital tool for preparing secondary school students for economic participation and sustainable business ventures.

Statement of the Problem

Students' business skills development in secondary schools in Jos North Metropolis remains inadequate, as many students struggle with entrepreneurial competencies necessary for self-reliance and economic productivity. Specifically, their ability to identify business opportunities, manage finances and apply innovative strategies is limited. This situation is partly due to the traditional theoretical approach to teaching Home Economics, which does not sufficiently integrate practical entrepreneurship training. Several challenges hinder the effective development of students' business skills. These include inadequate instructional materials, lack of qualified entrepreneurship-oriented Home Economics teachers, insufficient exposure to real-life business environments and limited government support for entrepreneurship education. In response to these challenges, efforts have been made to improve entrepreneurship education within Home Economics curricula. Government policies have emphasised the need for practical learning and some schools have introduced business incubation projects. Workshops and skill acquisition programs have also been organised to enhance students' practical knowledge. However, these efforts remain inconsistent, poorly funded and largely theoretical, limiting their effectiveness. If these challenges persist, students will continue to graduate without essential business skills, leading to increased unemployment, economic dependency and a lack of innovation among young entrepreneurs. The potential for Home Economics to serve as a catalyst for self-employment and wealth creation will remain untapped, further exacerbating youth unemployment and economic stagnation in Jos North Metropolis.

The existing gap between the current state and the ideal lies in the insufficient implementation of practical entrepreneurship strategies within Home Economics education. While the subject has the potential to foster business skills, its delivery remains largely theoretical, preventing students from acquiring the hands-on experience needed for business success. Addressing this gap requires a structured integration of entrepreneurship-focused pedagogy, improved funding and stronger collaboration between schools and the business community.

Aim and objectives

The aim of this study is to examine the Impact of Home Economics-Based Entrepreneurship Education on Students' Business Skills Development in Secondary Schools in Jos North Metropolis. The specific objectives of the study are to:

1. examine the extent to which Home Economics-based entrepreneurship education enhances students' business skills development in secondary schools in Jos North Metropolis.

2. identify the challenges hindering the effective integration of entrepreneurship education into Home Economics in secondary schools in Jos North Metropolis.
3. assess the impact of practical entrepreneurship training in Home Economics on students' ability to start and manage small-scale businesses.

Research questions

The following research questions guided the study:

1. To what extent does Home Economics-based entrepreneurship education enhance students' business skills development in secondary schools in Jos North Metropolis?
2. What are the challenges hindering the effective integration of entrepreneurship education into Home Economics in secondary schools in Jos North Metropolis?
3. How does practical entrepreneurship training in Home Economics impact students' ability to start and manage small-scale businesses?

Theoretical Framework

The Experiential Learning Theory (ELT), propounded by David A. Kolb (1984, revised in 2014), serves as the theoretical framework for this study. ELT posits that learning occurs through experience and is a continuous process where knowledge is created by transforming experience into understanding. The theory is based on four key principles: Concrete Experience (learning by doing), Reflective Observation (analyzing experiences), Abstract Conceptualization (forming theories from experiences), and Active Experimentation (applying knowledge in real-life situations). In applying this theory to the present study, Home Economics-based entrepreneurship education provides students with hands-on learning experiences where they engage in practical business activities such as budgeting, product development, financial management, and marketing strategies. Through this experiential approach, students develop critical business skills, enhance creativity, improve decision-making abilities, and gain confidence in managing small-scale enterprises. By integrating practical entrepreneurship training into Home Economics, students are better prepared for economic independence, job creation, and self-reliance, making ELT a relevant framework for understanding how experiential learning enhances business skills development.

LITERATURE REVIEW

Concept of Home Economics in Secondary Schools

Home Economics is an academic discipline that equips students with essential life skills, focusing on areas such as nutrition, family living, clothing and textiles and home management. In Nigerian secondary schools, the subject aims to prepare students for effective family life and societal contribution. It emphasises practical knowledge, enabling students to manage personal and family resources efficiently. The curriculum is designed to foster self-reliance and improve the quality of life for individuals and families (Adeyemi & Olatunji, 2020).

Despite its importance, Home Economics often faces challenges in Nigerian secondary schools. A study conducted in Enugu State revealed that a significant number of parents (74%) exhibited negative attitudes towards Home Economics education, perceiving it as less prestigious compared to other subjects. This perception contributes to the under-enrollment of students in Home Economics classes and affects the allocation of resources for its effective teaching. Additionally, many students are discouraged from pursuing Home Economics due to societal biases that prioritise science and technology-related subjects over vocational disciplines (Eze, 2020).

The negative perception of Home Economics is further compounded by systemic issues within the educational framework. Research indicates that the subject is often marginalised, with insufficient instructional materials and inadequate teacher training. The lack of well-equipped laboratories, outdated textbooks and insufficient funding further hinder the effectiveness of Home Economics education. These challenges limit students' opportunities to acquire practical skills essential for personal and professional development (Okafor, 2022).

To address these challenges, there have been calls for a reformation of the Home Economics curriculum in Nigeria. Emphasizing the integration of entrepreneurial skills and practical applications can enhance the subject's relevance and appeal. By aligning the curriculum with contemporary societal needs, Home Economics can play a pivotal role in equipping students with skills necessary for self-reliance and economic contribution. Experts suggest that incorporating modern instructional strategies and providing continuous professional development for teachers will help improve the perception and effectiveness of Home Economics in Nigerian secondary schools (Adebayo, 2021).

Home Economics-Based Entrepreneurship Education

Integrating entrepreneurship education into the Home Economics curriculum is a strategic approach to equip students with business acumen alongside traditional home management skills. This integration aims to foster an entrepreneurial mindset, enabling students to identify and capitalise on business opportunities within the domains of food and nutrition, textiles and family services. Such an approach not only enhances students' practical skills but also prepares them for self-employment and economic independence (Ifeoma & Uche, 2019).

A study conducted by Ogunleye and Salami (2020) found a significant impact on graduates' application of entrepreneurial skills. The research highlighted that graduates who underwent this integrated curriculum were better equipped to establish and manage their own

businesses, particularly in areas related to their field of study. This demonstrates the effectiveness of incorporating entrepreneurship into Home Economics at an early educational stage.

The integration of entrepreneurship into Home Economics education addresses the broader issue of youth unemployment in Nigeria. By providing students with the skills to create and sustain their own enterprises, this educational approach contributes to economic development and poverty alleviation. It empowers students to become job creators rather than job seekers, thereby playing a crucial role in national development. Research findings indicate that students who receive entrepreneurship training in Home Economics are more likely to start small businesses immediately after graduation (Emmanuel & Chukwu, 2021).

However, the successful implementation of Home Economics-based entrepreneurship education requires a supportive policy framework, adequate funding and continuous professional development for educators. Challenges such as outdated curricula, lack of instructional materials and insufficient practical exposure need to be addressed to maximise the potential benefits of this integrated educational approach. Policymakers must prioritise funding and curriculum reforms to enhance the quality and impact of Home Economics-based entrepreneurship education in secondary schools (Adamu & Yakubu, 2023).

Impact of Home Economics-Based Entrepreneurship Education on Students' Business Skills Development in Secondary Schools

The incorporation of entrepreneurship education into Home Economics curricula has a profound impact on students' business skills development in Nigerian secondary schools. This educational strategy equips students with practical skills and entrepreneurial competencies, enabling them to identify and exploit business opportunities within their communities. As a result, students develop critical thinking, problem-solving abilities and a proactive mindset essential for successful entrepreneurship (Olawale & Akinyemi, 2020).

Empirical studies have demonstrated the effectiveness of this integrated approach. Research conducted in North-East Nigeria revealed that graduates of the NCE Home Economics program, which includes entrepreneurship components, showed a significant application of entrepreneurial skills in their professional endeavours. These graduates were more likely to establish small-scale enterprises in areas such as catering, fashion design and interior decoration, directly applying the skills acquired during their education. This highlights the real-world benefits of integrating entrepreneurship education within the Home Economics curriculum (Omotayo & Udochi, 2021).

Furthermore, the integration of entrepreneurship education within Home Economics has been linked to increased innovation and creativity among students. By engaging in practical projects and business simulations, students learn to develop business plans, manage resources and navigate market dynamics. This experiential learning fosters a deeper understanding of business operations and enhances students' confidence in their entrepreneurial capabilities. A study in Lagos State found that students who participated in entrepreneurship-oriented Home Economics programs exhibited higher levels of creativity and problem-solving skills compared to their peers (Ibrahim, 2021).

The positive outcomes of this educational approach extend beyond individual skill development. By producing graduates equipped with entrepreneurial skills, secondary schools contribute to the broader economic development of their communities. These young entrepreneurs create employment opportunities, stimulate local economies and serve as role models, inspiring others to pursue entrepreneurial ventures. This ripple effect underscores the societal value of integrating entrepreneurship education into Home Economics curricula (Nwachukwu & Ogu, 2023).

However, challenges persist in the widespread adoption of this educational model. Issues such as inadequate funding, limited access to modern teaching resources and insufficient training for educators hinder the effective delivery of entrepreneurship education within Home Economics. Addressing these challenges requires collaborative efforts from educational authorities, policymakers and community stakeholders to ensure that students receive comprehensive and practical entrepreneurial training (Eze, 2020).

In conclusion, Home Economics-based entrepreneurship education plays a vital role in developing students' business skills in Nigerian secondary schools. By equipping students with both practical and entrepreneurial competencies, this integrated approach prepares them for successful careers and contributes to the economic advancement of their communities. To maximise its impact, concerted efforts must be made to overcome existing challenges and enhance the quality of entrepreneurship education within the Home Economics curriculum (Adediran & Okonkwo, 2024).

METHODOLOGY

This study used the descriptive survey research design. The population of the study consisted of 2,132 secondary school students offering Home Economics as a subject in Jos North Local Government Area. The sample of the study were 200 students selected from 10 secondary schools in the selected locality. The random sampling technique was used the select the sample schools and respondents. The instrument for data collection was a structured questionnaire titled "Impact of Home Economics-Based Entrepreneurship Education on Students' Business

Skills Development in Secondary Schools (IHEBEESBSDSS)". The questionnaire was a four-point Likert scale comprising of 15 items. The instrument was validated by experts through face validity. A reliability co-efficient of 0.89 was found through a pilot study. The instrument for data analysis was mean score and the chi-square was used to test hypotheses at 0.05 level of significance.

RESULTS
Analysing of Research Questions
Research Question One: To what extent does Home Economics-based entrepreneurship education enhance students' business skills development in secondary schools in Jos North Metropolis?

Table 1: Mean Score Showing the extent Home Economics-based entrepreneurship education enhances students' business skills development in secondary schools in Jos North Metropolis

S/N	Items	SA	A	D	SD	Total	$\bar{x}$
1	Home Economics enhances students' financial management skills.	102	36	46	16	622	3.11
2	Home Economics entrepreneurship education improves students' creativity and innovation.	48	108	20	24	580	2.90
3	Skills acquired from Home Economics help students in record keeping and inventory management.	42	100	34	24	560	2.80
4	Home Economics-based entrepreneurship education promotes problem-solving skills in business management.	36	124	32	8	588	2.94
5	The course prepares students to be self-reliant through business skill acquisition.	62	26	72	40	510	2.55

Table 1 above reveals that all the items are rated above the acceptance level of 2.50. This indicates that respondents agree that Home Economics-based entrepreneurship education significantly enhances students' business skills development. Specifically, it aids in financial management, boosts creativity and innovation, improves record-keeping and inventory management, promotes problem-solving in business and prepares students for self-reliance through business skill acquisition.

Research Question Two: What are the challenges hindering the effective integration of entrepreneurship education into Home Economics in secondary schools in Jos North Metropolis?

Table 2: Mean Score Showing the Challenges Hindering Entrepreneurship Education in Home Economics

S/N	Items	SA	A	D	SD	Total	$\bar{x}$
6	Lack of adequate funding hinders effective entrepreneurship education in Home Economics.	104	20	40	36	592	2.96
7	Inadequate practical facilities limit skill acquisition in Home Economics entrepreneurship education.	176	8	4	12	748	3.74
8	Limited time allocated for practical entrepreneurship activities affects students' business readiness.	88	40	68	24	632	3.16
9	Theoretical emphasis in Home Economics reduces students' practical exposure.	124	20	44	12	656	3.28
10	Shortage of qualified teachers affects the effective integration of entrepreneurship education in Home Economics.	110	36	42	12	644	3.22

Table 2 above shows that all the identified challenges have mean scores above the acceptance level of 2.50. This suggests that respondents acknowledge significant barriers to the effective integration of entrepreneurship education in Home Economics. These challenges include inadequate funding, limited practical facilities, insufficient time for hands-on entrepreneurship activities, excessive theoretical focus and a shortage of qualified teachers.

Research Question Three: How does practical entrepreneurship training in Home Economics impact students' ability to start and manage small-scale businesses?

Table 3: Mean Score Showing How Practical Entrepreneurship Training in Home Economics Impacts Students' Ability to Start and Manage Small-Scale Businesses

S/N	Items	SA	A	D	SD	Total	$\bar{x}$
11	Practical entrepreneurship training equips students with the necessary skills to start small-scale businesses.	66	104	8	22	610	3.05
12	Exposure to real-life business simulations in Home Economics boosts students' confidence in business management.	92	36	28	44	576	2.88
13	Entrepreneurship training in Home Economics enables students to identify and explore business opportunities.	158	42	0	0	798	3.99
14	Students trained in Home Economics entrepreneurship education develop a strong entrepreneurial mindset.	124	36	32	8	798	3.38
15	Hands-on entrepreneurship training in Home Economics prepares students to handle business challenges effectively.	140	8	32	20	660	3.30

Table 3 above reveals that all the items have mean scores above 2.50, indicating strong agreement among respondents that practical entrepreneurship training in Home Economics positively impacts students' ability to start and manage small-scale businesses. The training equips students with essential business skills, boosts their confidence, helps them identify and explore business opportunities, fosters an entrepreneurial mindset and prepares them to tackle business challenges effectively.

Hypotheses

Testing of Hypothesis

H_{01}: There is no significant relationship between Home Economics-based entrepreneurship education and students' business skills development in secondary schools in Jos North Metropolis.

Table 4: Chi-square test result of significant difference between Home Economics-based entrepreneurship education and students' business skills development.

Cells	f_o	f_e	Df	x^2cal	x^2crit	Decision
5	11	47.60	12	61.78	16.92	H_{01} Rejected

From the above table 4, the calculated value x^2 61.78 is greater than the table value x^2 crit 16.92 i.e. 61.78 > 16.92. Therefore, the researcher rejected the null hypothesis and accepted the alternative hypothesis which states that there is a statistically significant relationship between Home Economics-based entrepreneurship education and students' business skills development in secondary schools in Jos North Metropolis.

Hypothesis two

H_{02}: There is no significant relationship between the challenges hindering the effective integration of entrepreneurship education and the implementation of Home Economics in secondary schools in Jos North Metropolis.

Table 5: Chi-square test result of significant relationship between the challenges hindering the effective integration of entrepreneurship education and the implementation of Home Economics in secondary schools in Jos North Metropolis.

Cells	f_o	f_e	Df	x^2cal	x^2crit	Decision
5	11	32.60	12	40.67	16.92	H_{02} Rejected

From the above table 5, the calculated value x^2 40.67 is greater than the table value x^2 crit 16.92 i.e. 40.67 > 16.92. Therefore, the researcher rejected the null hypothesis and accepted the alternative hypothesis indicating there is a significant relationship between the challenges hindering the effective integration of entrepreneurship education and the implementation of

Home Economics in secondary schools in Jos North Metropolis.

Hypothesis three

H$_{03}$: There is no significant relationship between practical entrepreneurship training in Home Economics and students' ability to start and manage small-scale businesses.

Table 6: Chi-square test result of the significant relationship between practical entrepreneurship training in home economics and students' ability to start and manage small-scale businesses.

Cells	fo	fe	Df	x^2cal	x^2crit	Decision
5	6	16.40	12	361.33	16.92	H$_{03}$ Rejected

From the above table 6, the calculated value x^2 361.33 is greater than the table value x^2 crit 16.92 i.e. 361.33 > 16.92. Therefore, the researcher rejected the null hypothesis and accepted the alternative hypothesis indicating there is a significant relationship between practical entrepreneurship training in Home Economics and students' ability to start and manage small-scale businesses.

Discussion of Findings

The findings of this study reveal that Home Economics-based entrepreneurship education significantly enhances students' business skills development in secondary schools within Jos North Metropolis. Respondents strongly agreed that Home Economics fosters financial management skills, creativity, record-keeping, problem-solving and self-reliance through business skill acquisition. This aligns with the findings of Okoro and Etuk (2017), who emphasised that integrating entrepreneurship education into Home Economics equips students with essential business skills, enhancing their ability to manage financial resources, innovate and sustain entrepreneurial ventures. Their study highlights the role of Home Economics in bridging the gap between theoretical knowledge and practical business applications, reinforcing the current study's conclusion.

However, the study also identified significant challenges hindering the effective integration of entrepreneurship education into Home Economics. These include inadequate funding, limited practical facilities, insufficient time for hands-on activities, excessive theoretical focus and a shortage of qualified teachers. These findings are consistent with the study by Eze (2020), which reported that entrepreneurship education in Nigerian secondary schools faces substantial barriers, particularly due to inadequate resources and a lack of well-trained educators. Their study emphasised that overcoming these challenges requires policy intervention and increased investment in educational infrastructure to facilitate more practical-based learning experiences.

Furthermore, the study demonstrates that practical entrepreneurship training in Home Economics significantly impacts students' ability to start and manage small-scale businesses. The respondents agreed that hands-on training boosts confidence, fosters an entrepreneurial mindset, helps students identify business opportunities and prepares them to handle challenges in business management. This finding is supported by Oviawe (2020), who found that students who undergo practical entrepreneurship training develop stronger business acumen, resilience and innovation skills. Oviawe emphasised that practical exposure enhances students' readiness for real-world business ventures, making entrepreneurship education a crucial component of Home Economics.

Conclusion

In conclusion, the study has shown that Home Economics-based entrepreneurship education plays a crucial role in enhancing students' business skills development by fostering financial management, creativity, problem-solving and self-reliance. However, its effective implementation is hindered by challenges such as inadequate funding, limited practical facilities, insufficient time for hands-on activities, excessive theoretical focus and a shortage of qualified teachers. Despite these challenges, the study confirms that practical entrepreneurship training in Home Economics significantly equips students with the necessary skills to start and manage small-scale businesses. Therefore, addressing these barriers through improved funding, enhanced teacher training and a greater emphasis on practical learning will further strengthen the impact of Home Economics on entrepreneurial development among secondary school students,

Recommendations

1. Given that inadequate practical facilities and insufficient funding hinder effective entrepreneurship education in Home Economics, the government and school administrators should allocate more resources to equip schools with modern practical facilities. This includes establishing well-equipped Home Economics laboratories and providing financial support to facilitate hands-on business simulations, ensuring students gain real-world entrepreneurial experience.

2. Since a shortage of qualified teachers negatively impacts the integration of entrepreneurship education into Home Economics, educational stakeholders should prioritise the recruitment and continuous professional development of Home Economics teachers. Regular training workshops and certification programs should be introduced to

enhance teachers' competence in delivering practical entrepreneurship education effectively.

3. To strengthen students' ability to start and manage small-scale businesses, the curriculum should place greater emphasis on practical entrepreneurship training, such as mentorship programs, business incubators and internships with local entrepreneurs. Schools should collaborate with business experts to provide students with exposure to real-life entrepreneurial experiences, fostering confidence and skill development

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LITERATURE AND CULTURAL NATIONALISM IN SELECTED NOVELS OF NGUGI WA THIONG'O

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ABSTRACT
Literature embodies a wide range of human experiences, dealing with man in his immediate environment. Africa encompasses a diverse range of traditional beliefs and cultural traditions that are occasionally shared by numerous societies. These ideas and rituals are developed from the people's revered culture and they provide a connection between people's historical heritage and the current day. This paper adopts Library-based research or content analysis using Ngugi wa Thiongo's novels *Weep Not, Child, The River Between, Petals of Blood* and *Wizard of the Crow* as primary sources of data and other critical literary materials about Ngugi's literary ouvres as secondary sources of data. Employing Marxism, Ngugi's Globalectics theory and the politics of knowing and mythology as interpretative ideologies, the paper examine Ngugi wa Thiongo's approach in trying to wrestle Africa's cultural heritage from the Neo-colonial whims of the West in collusion with African elites in the era of globalizatioin. This paper therefore analyses Ngugi's cultural nationalism project and the effectiveness of his advocacy for resistance and rejection of bad leadership in Africa by the teaming masses of Africa.

Keywords: Literature, Myth, History, Cultural Nationalism, Marxism, Globalectics.

Introduction

Literature is a discipline that deals with man in his social environment. Literature is not necessarily history but it can be history as it has the ability to pre-empt an unacceptable future. In this case, literature relates to history by being a product of history upon which it depends for its various constituents. To this end, the literary artist is thus a historian as well as a nationalist. Literature can take from the historical process of the past and the present to construct the future. The artist could start from a dissatisfied present, peeps into the past to see how it was like and makes a selection from both to predict the future. For the creative writer, re-visiting history is always oriented towards future betterment of society.

African literature is therefore influenced by the authors' personal experiences and historical facts. This is because of Africa's unique historical experience of colonialism in which people were humiliated and exploited. For this reason, the African artists takes keen interest in the political developments of his time as he watch his society disintegrate under the yoke of colonialism. R.L. Okonkwo attest to this that "With the advent of colonialism... the traditional society was disrupted by Christianity, Western education and other forces, European influences seemed to have swept the African culture before it. Missionaries saw little of value in the African way of life…" (researchgate.net). Terhemba, Shija in *Modern Literary Theory and The African Fiction,* asserts that "most of African fiction was written for the purpose of waging war against imperialism, colonialism corruption, dehumanization and ignorance... (16)

Viewed from the above, one could be right to conclude that most pioneer African Literature and even now has been a literature of reclamation and record setting. This is where Ngugi, Achebe and a host of others are prominent names in African Literature in their bid to wrestle African Culture out of the clutches of colonial and neo-colonial whims of the West.

Ngugi wa Thiongo is one African novelist who has always placed himself as the advocate of the down-trodden masses of Africa because of his overt socialist literary ideology. He tries at all times to re-enact and extol the heroic struggle of Kenyan and African masses since the era of colonialism. He is equally concerned with the themes of corruption, colonialism, neo-colonialism, religion, culture, protest and hope among others. He does this effectively by relying on the history of Kenya and Africa in general.

History has the ability to change society either positively or negatively. For the creative writer, re-visiting history is with a view to checking individual or community excesses. It may also be for the purpose of re-inventing and re-scripting those affirmative values of society so that the new generation does not go into error. The process of an imaginative re-visiting of the past helps in making a sober and rational assessment of the present to creatively blaze a new and glorious trail for the emergence of future society. These are issues the reader finds on the pages of Ngugi's numerous novels. His desire is to arouse national consciousness of African masses.

Theoretical Framework

The literary theories applied in this work are Marxism, Globalectics Theory and the politics of knowing by Ngugi wa Thiongo and mythology as interpretative ideologies. Marxism as a literary, political and social theory seeks to explain the course of human history and the structure of past, present and future societies. For this reason, there is a vital link between literature and history. When this theory is brought to bear on the literary works of Ngugi, it helps in understanding the artistic process of re-inventing social realities from historical antecedents.

Globalectics deals with the continued need to decolonize theory from its traditional "Western" heritage and open it up for globalectical discourse. This theory allows readers globally to see the connection between works from different times, periods and places as original, meaningful and relevant to those places. Globalectics demonstrates the need to understand the similarities and differences in stories we tell each other. It is a cross-pollination of literary dialectics and an attempt to rescue world literature from the dichotomy of its imperial past and transform such literature into a mode of sharing. This theory embraces wholeness, interconnectedness, equality of potentiality of parts, tensions and motions. It is a way of thinking and relating to the world, particularly in the era of globalization. Globalectics is meant to accord dignity to the poor as they fight poverty.

Mythology in its modern sense refers to a system of hereditary stories of ancient origin once believed to be true by a particular group of people. Myths serve to explain why things happen as they do, and why the world is as it is. They provide a rationale for social customs and rules by which people conduct themselves. Myths also relates to rituals. These myths are printed in the people's minds and hearts, oral history or customs, shrines and in their religious functions which have become integral to the people's way of life, and which may not be encoded in the written form. Prominent names in this area of mythological study includes Claud-Levi-Strauss, Hans Blumenberg, William Blake and others. Today, myth has become a prominent term in literary analysis. It is on the basis of the relevance and context of Ngugi's works that Marxism, Globalectics and mythological criticisms are adopted as critical tools for analyzing his novels. This is necessary since both viewpoints relate to history, culture and society.

The Place of Myth and History in Ngugi wa Thiong'o's Novels

Africa has a wide variety of traditional beliefs and social practices which are sometimes shared by many societies. Such beliefs and social practices are derived from the people's cherished cultural heritage that connects the past with the present. Africa has a vast reserve of folklores, myths and legends, upon which the African writer depends as source of raw materials for his creative works. Art therefore, is generally affected by society and its politics. Indeed, Sanka, Eyison and Darteh have argued that:

> Elements of the oral tradition, apart from giving an African touch to Ngugi's writings, also contribute in sharpening the style of the novelist, in developing the themes of the writer, as well as demonstrating his commitment towards a particular course (6).

Ngugi's novels are full of myths, legends, folktales, songs, rituals and other traditional art forms which are beneficial to modern society. For example, myths are stories of ancient origin which were once believed to be true by a particular group of people. They are created to explain the mysteries of life, death, the beginning of the world, natural phenomena and powers. Even though they are imaginary and mostly with anonymous authorship, they are strongly believed to account for the origin of man and the universe. Myths also give rise to the different religions in various parts of the world.

Africa has a great reservoir of tales that employ animal characters in substitution for human characters. The animals represent specific human actions and generalized patterns of human behaviour. The ultimate goal is to subvert the corrupt and divisive moral conventions and the established social order that originally enforced those values. Iortyer Manasseh and Jacob Gaadi in "Literature and History for Cultural Revival…" have argued that Africa has a past that is not recorded in most history books and a culture that was fragmented during colonialism. According to them, African writers have continued to remind the African masses of the road they travelled to independence; thus reiterating the necessity for African cultural and economic independence and unity of all oppressed masses in third world countries (106). This is a call for Africans to return to their cherished aesthetic and cultural values that once held society together in the pre-colonial days.

Before the advent of colonialism, Africa had different social values with established systems which were embedded in the cultures of the people. These values were passed on from generation to generation through oral narratives. Some of these values are still being practised in some rural communities today because they are closely tied to the culture and beliefs of the people. The traditional welfare systems adequately took care of the needs of the people in diverse ways like respect for elders, virtue, communal living system, extended family system, traditional medicine, religion and traditional education. These were meant to meet the people's needs so they could live functional lives. These traditional mechanisms of community education were carried out through the observance of such cultural norms which facilitated the entrenchment of the acceptable behaviour of all. These mechanisms were also conveyed through myths and legends of the people in order to inculcate moral values in the younger generation. Thus, these acceptable social systems were based on kinship or village council of elders which served as units of community organization that promoted mutual, peaceful co-existence. According to scholars like Folaranmi and Tope, the Christian and Islamic religions in Africa only but built on this existing system they found in Africa. They argue further that:

> The norms and practices were by the second half of the nineteenth century crystallized to formal services on the one hand by Christian missionaries with their Judaic heritage of being "their brothers' keepers" and being "kind to one another" and on the other hand by the Muslim practice of Zhakat religious alms which enjoin the rich to give to the less fortunate (327).

The above statement indicates that African traditional beliefs and welfare culture pre-date the advent of Christianity. It also reveals that communal living and social welfare were inherent in traditional African society and formed an integral part of the socio-economic and religious well-being of the people. Therefore Christianity and Islam which came to build on this system, only turned society and individuals into religious hypocrites as portrayed by Ngugi and other writers in Africa.

Tanure Ojaide has opined that culture has a history and geography feeding it in a continuum of self-renewal. According to him, the process involves abandoning some aspects that are not relevant, and appropriating some new things even from outside. This means a culture has a past and a present but the present realty is also bound to change with time (*Emerging Perspectives* 11). It means that culture, literature and history co-relate. Therefore, it is necessary for Ngugi to revisit his people's history in order to re-create society along pre-colonial lines in order to learn lessons from the past and to combat the present problems facing Africa today. He does this in both his fictional and non-fictional writings. Angela Miri agrees with this position that "Ngugi has consistently canvased in his non-fictional writings for the right of the people to be exposed to the truth (in its stark reality) about their national situations and realities, and how these affect their individual conditions" (30).

That is why Ngugi keeps going back to the history and experiences of his people in his quest to liberate the Kenyan and African masses who continue to suffer under the yoke of their insensitive leaders. This concern and message of liberation keeps evolving in almost all of Ngugi's literary works. His desire is to liberate Kenyans and African culture from the neo-colonial tentacles of the west in the era of globalization.

Ngugi weaves this message around the Gikuyu myth, especially the creation story that one finds in *Weep Not, Child* and the history of his people. This is a clear Marxist tenet of a historical revisiting of the past to shape the future. He sees colonialism not just as stealing the people's history but also as annihilating the people's culture and identity by killing their pride in their names, language and anything African. Perhaps, this may partly account for the reason why he dropped the name "James" in the first place to show his resistance to colonialism in its varying forms. This also explains why Ngugi tries at all times to recreate the history and social realities of the Kenyans' heroic struggle against both internal and external forces that stand between Africa and her quest for true national liberation. Ngugi's concern like that of most of his African counterparts is not just the collapse of independence, which is considered as a personal loss but also the immediate historical forces that are shaping these events. One must therefore take into account Ngugi's ideological dimension of his literary project when reading his works. He uses his literary works to reflect on, expose and decry the socio-political and economic realities in Kenya and Africa in general, from the colonization to post-colonial era. His main concern in this project is to liberate the people of Kenya socially, politically, religiously, economically and teach Africans in general. For this reason, he draws his lessons from historical, cultural, religious, social and political issues obtainable in Kenya in order to drive home his message.

Ngugi's Cultural Nationalism and Decolonization Project

> Culture that stays in total isolation from others can shrivel, dry up or wither away. Cultures under total domination from others can be crippled, deformed, or else die. Cultures that change to reflect the ever-changing dynamics of internal relations and which maintain a balanced give and take with external relations are the ones that are healthy (*Moving the Centre,* 16).

The above quotation lends credence to the fact that Ngugi is very much aware of what happens when cultures come in contact with one another. There is always a possibility of give and take. He is much aware that no culture or society is an island if such a society must grow. The problem Ngugi

attempts to solve is a situation where one culture (Western Culture) feels superior to the other (African culture) and tries to annihilate an already existing culture, calling it barbaric or uncivilized. Indeed, Ngugi has argued that to take away a people's culture is to take away their identity. That is why the author resolves to extol and promote his people's culture in order to make them take pride in who they are through his cultural nationalism project.

Ngugi exhibits this cultural nationalism any time he reflects on the Kenyan and African pre-colonial set up as he extols the communal spirit of Africans, bringing out their strengths and weaknesses as a group. He values and glorifies the affirmative virtues of the pre-colonial African set-up whereby the evenings were characterized by fire side storytelling, by adults to the young ones who later told those stories to their peers in school. That was a time when everybody was his brother's keeper and things were shared equally. Even when conflicts arose, they were settled amicably. Ngugi states this succinctly in *Petals of Blood* that, "In those days there were no vultures in the sky waiting for the dead carcasses of dead workers, and no insect-flies feeding on fat and blood of unsuspecting toilers (120). But gradually, the people became subjugated by both local and alien tyrants.

The antagonism which later arose and upset this hitherto peaceful co-existence has its roots in the history of the tribe in the wake of European invasion and western Christian teaching which found its way into the community. A good example of this is found in Ngugi's *The River Between* where Kameno and Makuyu are in constant conflict with each other. Kameno is considered the home of traditional cultural values for its association with the original parents of the tribe, Gikuyu and Mumbi; while Makuyu ridge is the seat of clansmen who have adopted Christianity with their leader, Joshua. It is in the given scenario that Ngugi questions the validity of the imposition of the European cultural norms on the African peasantry. Infact, Ngugi emphasizes the disintegration of indigenous societies as a result of the encroachment of the Whiteman on the local culture with his civilization mission that fails to mediate with local values.

Those who are mostly criticized in Ngugi's cultural project are the elites who are exposed to cultural alienation and fascinated with western ways to the detriment of their own traditional African customs. They shy away from their customs, social ceremonies, language, names, and so on. In *Petals of Blood,* Rev. Kamau changes his name to Rev. Jerrod Brown, in *Wizard of the Crow* Emperor Tajirika changes his name to Titus Flavius Vespasianus Whitehead. What an irony and neo-colonial madness. They no longer see anything beautiful in their own African traditional ways. It is therefore no wonder that Ngugi later abandons his Christian name – James and also writes for his target audience in his mother tongue before translating the works into English. In this way he gives expression to his own

concept of cultural nationalism. One other important feature in Ngugi's writings and ideology is his fight against both internal and external forces that seek to destroy African cultural norms that bind society together. Infact, in *Wizard of the Crow*, Ngugi illustrates this senseless neo-colonial hunger of the elites in western values in the activities of the Ruler of Aburiria with his ministers. To this, Ngugi calls for a collective fight by the workers and peasants of Africa as exemplified by "movement for the voice of the people". He agitate for a call to accountability of African leaders by the people through their heroic struggle.

Indeed, Ngugi consciously recreates the historic struggle of his people against such foreign intrusion in order to educate and sensitize his readers on the negative effects of colonial encroachment under the guise of Christianity and the power of the gun. Ngugi wants those traditional African ideals to be liberated from the clutches of foreign domination through neo-colonialism. This has become a recurring decimal in Ngugi's literary and cultural aesthetics. He supports this kind of struggle, which he expresses in an interview with Charles Cantalupo in *The World of Ngugi* in these words:

> 'Struggle' is part of nature and part of our history and cultures. As a central concept in my aesthetic or cultural vision, "struggle" has been developing. I think, starting from my essays on writers and politics. One can see this theme become more and more dominant in my cultural theory and aesthetic theory. "Struggle" is central to nature, to human art and to my history. (222).

The above excerpt shows Ngugi's intellectual response to his world. One of the most important aspects of this task is raising the awareness of his people towards revolutionary change. His novels chart a new consciousness that serves as a counterweight against existing neo-colonial, social, political, religious, cultural and economic realities in Kenya and Africa in general.

Sharifa Akter has opined that in *Petals of Blood,* Ngugi portrays the threats that hybridity poses to cultural purity and integrity through the transformation of a traditional village (Ilmorog) to, "The capitalist social system with its associated class struggles fundamentally influences the social, cultural, philosophical, economic and political ideals of society" (180). This confirms Ngugi's assertion that imperialism can never develop a country or a people. He sees Africa's present problem as a result of the Blackman's contact with Europe which has not only robbed Africans of their resources but also their identity. He argues that language is culture and Africans cannot continue to promote African cultural values through a borrowed or imposed western language to the detriment of their traditional languages. His argument is that if African writers continue to write in the language of their oppressors (colonizers), they are giving up their cultural independence and abandoning

the language of their people which is the only conservator of their culture.

Ngugi's desire is for these languages and cultures to be preserved and passed on to the next generation. Indeed, Russell Al Farabi applauds Ngugi's cultural nationalism when he asserts that "Ngugi's philosophy of culture and decolonization is not only a powerful symbolic form of cultural empowerment, but is also an articulate socio-political counter-discourse to hegemonic notion of culture" (69). The author's continued concern is for the upliftment of the down-trodden masses of Kenya and Africa in general. One basic achievement of Ngugi, like many other writers, is that he does not only point out problems but he also proffers solutions to such problems. His constant argument is that the African political elites have not evolved any meaningful ideology that can alleviate their people's sufferings long after independence except the 'texts' proscribed by westerners to suit their whims. His goal as a cultural nationalist is to build a nation state in Africa in accordance with the wishes and expectations of the down-trodden masses of Africa.

Conclusion

Ngugi's reliance on the myth and history of his people to chart a verile future course for the people through resistance is worth applauding. Indeed, the historical experiences of Kenyans from the colonization through the mau-mau rebellion to independence and the subsequent bad governance of the postcolonial era are all central in Ngugi's novel. For example, *Petals of Blood* critiques the post-colonial Kenyan State and the betrayal of the revolutionary ideals of the mau-mau movement. Ngugi is keenly aware of how myths and legends of Kenya are important sources of inspiration for action in the history of resistance and social transformation of the nation.

In all these efforts, Ngugi's main preoccupation is for Africa to return to all those cherished aesthetic cultural values that united the people in pre-colonial days. He does this effectively by weaving his stories around the myths and history of Kenyans and indeed, Africa. His vision is that Africa must go back to her origin and learn lessons from the way in which the people produced and managed their wealth before colonialism. This is one of the tenets of Marxism. Ngugi believes that a study of the past can reveal systems which were fair and equitable and its principles and wisdom can be used to combat the present socio-political problems bedeviling Africa today.

There is a lot to learn from culture in literature for Africa to assert her cultural identity in the face of modernization and globalization. That is why Literature and African Literature in particular attempts to project the African culture as it were for readers (Africans) to learn lessons from the past. This is urgent as globalization is fast eroding aesthetic cultural practices that once held the entire continent in check. Ngugi, like many other writers in Africa

have continued to preserve the records in their literary works for the upcoming generations of Africa to learn lessons from.

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EFFECTS OF PRE-READING ACTIVITIES ON THE ACHIEVEMENT OF NIGERIA CERTIFICATE IN EDUCATION (NCE) STUDENTS OF FRENCH IN READING COMPREHENSION IN FEDERAL COLLEGE OF EDUCATION, PANKSHIN, PLATEAU STATE

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ABSTRACT

The study investigated the effects of pre-reading activities on the achievement of Nigeria Certificate in Education (NCE) students of French in reading comprehension at the Federal College of Education, Pankshin, Plateau State. Employing a quasi-experimental design, specifically a non-equivalent pre-test and post-test control group approach, the study sampled 108 NCE II students from the French Department, who were divided into experimental (52) and control (56) groups. The Reading Comprehension Achievement Test (RCAT) was used to measure students' comprehension skills, with data analyzed using mean scores and ANCOVA. Findings revealed that students exposed to pre-reading activities demonstrated significant improvements in identifying main ideas, supporting ideas, summarization and retelling, compared to their counterparts in the control group. The experimental group consistently outperformed the control group, with notable mean gains across all assessed comprehension skills. These findings aligned with existing literature, underscoring the effectiveness of pre-reading strategies in enhancing students' cognitive engagement and comprehension. The study concluded that structured pre-reading activities played a crucial role in improving reading comprehension and recommended their integration into reading instruction to enhance academic performance.

Keywords: Pre-Reading, Activities, Reading Comprehension, Achievement, NCE

INTRODUCTION

Reading comprehension is a cognitive process that involves decoding text, understanding its meaning and interpreting its underlying messages. According to Ilogho (2015), reading comprehension goes beyond the mere ability to read words on a page; it involves the integration of prior knowledge with new information to construct a coherent understanding of the text. This process requires not only the ability to decode written language but also the capacity to engage with the text critically, making inferences and synthesizing information to form a comprehensive interpretation. Reading comprehension is therefore seen as an active and dynamic interaction between the reader and the text, where the reader actively constructs meaning based on the context, purpose of reading and the reader's own experiences and knowledge base. Similarly, Edet (2020) emphasizes that reading comprehension is an essential literacy skill that encompasses the ability to grasp the explicit content of a text and to infer the implicit meanings embedded within it. He posits that comprehension is achieved when a reader can extract, process and relate the information presented in the text to their existing cognitive framework. This understanding aligns with the idea that reading comprehension is not a passive reception of information but an active, interpretative process. Reading comprehension skills refer to the cognitive abilities that allow individuals to effectively understand, interpret and derive meaning from written texts. According to Ibrahim (2018), reading comprehension is not merely the ability to decode words but involves a complex interaction between

the reader's prior knowledge, the text and the context in which reading occurs. This multifaceted process requires the reader to engage in various levels of thinking, from literal understanding of the text to higher-order thinking skills such as analysis, synthesis and evaluation.

Pre-reading activities are instructional strategies employed before engaging students in reading a text, aimed at enhancing their comprehension by preparing them cognitively and emotionally for the reading task ahead. These activities serve as a bridge between the reader's prior knowledge and the new content they are about to encounter, thereby facilitating deeper understanding and retention of information. Pre-reading activities encompass a range of practices, such as activating prior knowledge, where students recall what they already know about a topic, thus creating a mental framework to which new information can be connected. Another common pre-reading strategy is previewing, which involves examining titles, headings, subheadings, pictures and summaries to gain a general sense of the text's content and structure. This method helps to set a purpose for reading, making the process more goal-oriented and focused. Vocabulary preparation is also a vital aspect of pre-reading activities, where unfamiliar or challenging words are introduced and explained beforehand, reducing potential barriers to comprehension. In essence, pre-reading activities are designed to prime the reader's mind, enabling them to approach the text with an informed and prepared mindset, ultimately leading to a more effective and meaningful reading experience.

It is in the light of the above discussion that the researcher has seen the grave need to investigate the effect of pre-reading activities on reading comprehension achievement of NCE students of French in reading comprehension In Federal College of Education, Pankshin, Plateau State.

Statement of the Problem

Reading comprehension is a critical skill for academic success and overall intellectual development, particularly among NCE students. In Federal College of Education, Pankshin, the status of reading comprehension among students presents a concerning picture. Many students exhibit significant difficulties in understanding and interpreting texts, which adversely impacts their performance in other academic areas. Despite the central role of reading comprehension in education, a considerable number of students struggle to grasp the main ideas, infer meanings and apply the knowledge gained from reading to practical contexts.

Several challenges contribute to this problem. One of the primary issues is the lack of effective pre-reading

activities that prepare students to engage with texts meaningfully. Pre-reading activities, which include strategies such as predicting content, activating prior knowledge and setting reading purposes, are often overlooked or inadequately implemented in the classroom. As a result, students approach reading tasks with little to no contextual preparation, leading to superficial engagement with the material and poor comprehension outcomes. If these challenges are left unaddressed, the consequences could be far-reaching. Poor reading comprehension skills at the NCE level can lead to a cascade of academic failures, reduced self-esteem and diminished prospects for future educational and career opportunities. Students may become disengaged from the learning process, leading to higher dropout rates and contributing to a cycle of educational underachievement in the region.

However, there exists a significant gap between the current status of reading comprehension in FCE Pankshin and this ideal. The absence of structured and consistent pre-reading activities in the curriculum leaves students ill-prepared to tackle reading comprehension tasks effectively. This gap highlights the need for targeted interventions that integrate pre-reading activities into the teaching process, ensuring that students are better equipped to understand and engage with the texts they encounter. Addressing this gap is crucial for improving reading comprehension skills and, by extension, the overall academic success of NCE students in Federal College of Education, Pankshin, Plateau State.

Aim and Objectives of the Study

The main aim of this study was to investigate the effects of pre-reading activities on the achievement of Nigeria Certificate in Education (NCE) students of French in reading comprehension In Federal College of Education, Pankshin, Plateau State in order to:

1. determine the pre-test and post-test achievement of students in identifying main ideas in the experimental and control groups.
2. determine the pre-test and post-test achievement of students in identifying supporting ideas in the experimental and control groups.
3. determine the pre-test and post-test achievement of students in summarisation in the experimental and control groups.
4. determine the pre-test and post-test achievement of students in retelling in the experimental and control groups.

Research Questions

The following research questions were raised to guide the study:

1. What are the pre-test and post-test achievements of students in identifying main ideas in the experimental and control groups?
2. What are the pre-test and post-test achievements of students in identifying supporting ideas in the experimental and control groups?
3. What are the pre-test and post-test achievements of students in summarisations in the experimental and control groups?
4. What are the pre-test and post-test achievements of students in retelling in the experimental and control groups?

Hypotheses

The following hypotheses are formulated to guide the study and they will be tested at 0.05 level of significance in this study:

1. There is no significant difference between the pre-test and post-test achievements of students in identification of main ideas in the experimental and control groups.
2. There is no significant difference between the pre-test and post-test achievements of students in identification of supporting ideas in the experimental and control groups.
3. There is no significant difference between the pre-test and post-test achievements of students in summarisation in the experimental and control groups.
4. There is no significant difference between the pre-test and post-test achievements of students in retelling in the experimental and control groups.

LITERATURE REVIEW

Reading Comprehension

The concept of reading comprehension is a never-ended concept to be discussed. Christopher (2017) states that reading is the art of creating meaning with text. The two keywords here are creating and meaning. If there is no meaning being created, there is no reading taking place. To do this practice, the way how readers can understand and create the meaning of what they read will depend on how they can perceive as well as to make sense words, sentences, or even a connected text in their mind or thought. This process will require the readers to use background knowledge, vocabulary, grammatical knowledge, experience of the readers to help them in comprehending the written text.

Background knowledge really helps reader in reading comprehension. As what had been stated by Basila and Jajua (2019), reading comprehension is about relating background knowledge to new knowledge contained in the written texts. he comprehension of written text is significantly influenced by the individual's prior knowledge, which plays a crucial role in the reading process. Adequate familiarity with a subject enables the reader to effectively interpret the text, generate inferences, construct mental imagery and critically assess the author's perspective. Okurumeh, Okurumeh and Asarhasa (2019) also had the same idea of activating background knowledge to comprehend any reading text. They stated that in order to make sense of any text, a reader needs to have preexisted knowledge of the world of the writer. It can be assumed that the wider a reader have background knowledge, the easier he or she comprehend what they are reading. If a reader is familiar with the background of the writer, he or she will not need to think hard to catch the idea in the text.

Since reading comprehension is defined as the level of understanding of a text/message, vocabulary and grammatical knowledge have a big role within this context (Galle, Alaku& Paul, 2020). This understanding comes from the interaction among the words that are written and how they trigger knowledge outside the text/message. Reading is thinking and understanding and getting at the meaning behind a text. They emphasized that reading activity must be directed toward the understanding and catching the idea that the text provides. In this situation, activating prior knowledge before, during and after reading a text will be proficient to the readers. They think about what they already know about a text's structure or topic before they read. They make connections to their lives, other books and the world as they read. These connections are brought to bare when they have finished reading.

Good readers spend time thinking and talking about what they read and connect it to their personal experiences (Ugwu, Jatau &Gwamna, 2020). Pronouncing every word in a proper way without identifying the meaning of the text, reading activity will just be a waste of time. Readers have to realize that they are in the situation of learning someone else's experience (author) and try to reflect it in their own experience. The more they can connect what they read to their own experience, the better it benefits their lives.

Carter and Nunan (2021) explained that reading comprehension is an active process rather than passive one. Thus, the reader has been typically described as 'extracting' meaning from a text. In another vein, the ground has shifted again to talk of reading as 'interactive' rather than simply 'active'. Readers are seen as negotiating meaning; meaning is partial within the text and writers' intentions may not be

privileged over readers' interpretations. The term interactive refers to the situation of two ways communication. The readers and the writer actually are doing an indirect communication in which readers try to get the meaning of what the writer want to communicate by their writing.

Jatau, Ugwu and Gwamna (2021) on the other hand, states that comprehension is the reconstruction of the author's message. The author constructs a message and encodes it in printed language and the reader decodes the printed language and reconstructs the message. When all goes well, communication occurs. Thus. two minds with one thought and the implications of that thought reader must see the writer's point of view. Reading is usually conceived as a solitary activity in which the reader interacts with the text in isolation. To gain the information contained in the text, readers must have such kind of willing to comprehend what the text is about and try to make connection within the text. If there is no such connection, reading will be meaningless since the reader has no interaction with the ideas and the information that is available in a reading passage. The information is isolated in written form and the readers just need to reveal it through doing reading activity.

Reading Comprehension Skills

Identifying Main Ideas

Identifying the main idea is crucial for comprehending a text's central point or theme. It involves recognizing the most important information or argument that the author is trying to convey. This skill requires careful reading and analysis to determine the overarching message or purpose of the text. Mitchell and Carter (2020) postulated that identifying the main idea, readers can better understand the context and significance of the information presented. The main idea represents the primary message or argument that the author wants to convey. By understanding the main idea, readers are able to identify the key points and supporting details within the text. This allows for a deeper comprehension of the author's intended meaning and helps to establish a stronger connection between the reader and the text. In addition, being able to extract the main idea from a text can aid in summarizing and synthesizing information, making it easier to recall and apply the knowledge gained from reading. In essence, the main idea serves as a guiding thread that helps readers navigate through the text and extract its core essence. Lampariello (2017) observed that it serves as the foundation upon which the rest of the information in the text is built. For example, in a scientific research paper about the effects of climate change on coral reefs, the main idea could be "Climate change is causing significant damage to coral reefs worldwide." This main idea

would then be supported by evidence, such as data on rising ocean temperatures and increasing acidity levels, as well as studies documenting the decline of coral reef ecosystems.

Identifying Supporting Details

Supporting details provide evidence, examples, or explanations that reinforce the main idea. They help to further clarify and support the main idea by providing specific information or examples. To Mitchel and Carter (2020) these details can include statistics, research findings, expert opinions, or personal anecdotes. They offer additional information to support the author's claims or arguments. For example, if the author is discussing the benefits of exercise, they could provide specific statistics on how regular physical activity reduces the risk of chronic diseases such as heart disease and diabetes.

Critical Thinking

Assessing a reader's ability to analyze, evaluate and synthesize information from the text. According to Ismail (2020) this skill is crucial in today's information age, where individuals are constantly bombarded with a vast amount of information from various sources. Being able to critically think allows individuals to distinguish between credible and unreliable sources, as well as form their own opinions based on evidence and logical reasoning. By such as assessments that measure critical thinking strategy, education and employment processes are ensuring that individuals are equipped to make informed decisions and contribute to a well-informed society.

Summarization

Summarization involves condensing the main ideas and key details of a text into a concise and coherent form. This process requires readers to analyze the text and determine which information is most important. Thompson (2018) opined that by summarizing a text, readers can gain a clear understanding of the main points without getting bogged down in unnecessary details. Summarization is a valuable skill that can help readers quickly grasp the main message of a text and retain key information. It requires readers to extract the most important information while omitting minor details. Summarization is an essential skill that allows readers to effectively comprehend and remember the main points of a text. Summarizing helps readers consolidate their understanding of the text and enhances their ability to communicate the main points to others. For example, when reading a research article on a complex scientific topic, summarizing the key findings and methodologies allows a reader to quickly understand the main conclusions without having to delve into every

technical detail. This summary can then be shared with colleagues or used as a reference point for further discussions or research.

Retelling

Retelling refers to the ability to recount or narrate the main events or ideas of a text in one's own words. Retelling is a valuable skill as it helps individuals better understand and remember what they have read. The ability to retell a text accurately and effectively plays a crucial role in comprehension and knowledge retention. To Khansir (2020), it requires readers to comprehend and internalize the content before expressing it in a coherent and organised manner. Furthermore, retelling a text helps readers identify key points and main ideas, enabling them to summarize and condense complex information into a concise form. This process enhances their critical thinking strategy as they evaluate and prioritize the most important aspects of the text. For example, in a classroom setting, after reading a chapter from a history textbook, students are asked to retell the main events and key figures in their own words. This exercise not only helps them understand the material better but also allows them to analyze and synthesize the information, ultimately deepening their understanding of the subject. In addition, when studying for an exam, summarizing and condensing complex information into concise notes can help students review and remember important concepts more effectively. Moreover, retelling allows readers to engage with the material on a deeper level, as they actively process and synthesize the information, fostering a deeper understanding and connection to the content. The ability to retell a text not only improves comprehension and knowledge retention but also promotes analytical thinking and meaningful engagement with the material. Retelling helps solidify understanding, as it requires readers to actively engage with the text and construct meaning from their perspective. This process of retelling allows readers to make connections between the text and their own experiences, facilitating a more personalized and meaningful understanding of the material. In addition, retelling encourages critical thinking strategy by requiring readers to analyze and evaluate the information they have read.

Making Notes

Making notes involves recording key points, main ideas, supporting details and personal reflections while reading. This strategy helps readers to stay engaged with the material and actively process information. According to Christopher (2017) this not only enhances comprehension but also aids in organizing thoughts and making meaningful connections between different concepts. Moreover, the act of reflecting on the text through note-taking promotes critical thinking and analysis skills. Note-taking helps readers organise their thoughts, capture important information and create a reference for future review. In addition, notes serve as a visual representation of the text, allowing readers to see the main ideas and supporting details at a glance. This active involvement promotes better comprehension and enhances overall learning outcomes. It enhances active reading by promoting engagement with the text and facilitating critical thinking.

The Concept of Pre-Reading Activities

Pre-reading activities are activities that are used with the students prior to the actual reading material. These activities aim to provide students with required background knowledge needed to have a better comprehension when they interact with a text. Pre-reading activities are also useful tools for setting up a purpose for reading. That is why, it should be considered as vital activities in order for the learners' schema to be activated to prevent any failure in comprehending a piece of written text. Through the use of pre-reading activities, students get familiar with the topic, vocabulary, or complex structures in the passage.

According to Anderson (2020), pre-reading activities are strategies used to prepare learners for reading by activating their prior knowledge, building their background knowledge and setting a purpose for reading. This means pre-reading activities are instructional strategies used to prepare learners for the reading process by introducing them to the content and context of a text before reading. These activities help learners to activate their prior knowledge, build background knowledge and develop a purpose for reading. Pre-reading activities play a crucial role in enhancing reading comprehension. Harmer (2020) defines pre-reading activities as activities that prepare learners to read by introducing them to the topic, vocabulary and structure of a text. These preparatory activities act as stepping stones for learners to familiarize themselves with the subject matter, key terms and overall organization of the text. Through these activities, learners can establish a stronger foundation for comprehending the material they are about to read.

Wallace (2022) defines pre-reading activities as techniques used to help learners access their prior knowledge, build their background knowledge and develop a framework for understanding new information before reading. This definition emphasizes the importance of building a mental framework that learners can use to connect new information to what they already know. Celce-Murcia and Olshtain (2020) describe pre-reading activities as

techniques used to engage learners in the content of a text, activate their prior knowledge and set a purpose for reading. Engaging learners in the text's content from the beginning fosters curiosity and motivates them to explore the material further. In this definition, pre-reading activities are referred to as techniques used for guiding learners before reading comprehension properly begins. This guidance sets the stage for successful comprehension and paves the way for a more rewarding reading experience. However, Richards and Schmidt (2020) define pre-reading activities as strategies used to help learners prepare for reading by developing their comprehension skills, activating their prior knowledge and building their vocabulary. In this definition, the focus shifts towards enhancing learners' comprehension skills and vocabulary, both of which are integral components of successful reading.

Types of Pre-reading Activities

Hassan (2020) has postulated the following as major pre-reading activities: previewing, pre-questioning, semantic mapping, brainstorming and providing background knowledge

- **Previewing:** This type of pre-reading activity is, particularly, suitable for passages that are culturally not familiar. Students are encouraged to draw inferences before reading by decoding contextual clues like pictures, titles and headings.
- **Pre-questioning:** According to Royer (2022), pre-questioning should consist of a set of written questions. Taglieber (2018) stated that students can generate their own questions about the topic of the passage.
- **Semantic mapping:** In semantic mapping, students use brainstorming strategies. Nevertheless, this strategy is organized and controlled by the teacher. As students suggest their personal ideas about a topic, the teacher writes these ideas on the board.
- **Brainstorming:** one of the most popular kinds of pre-reading task is 'brainstorming' in which teachers ask the students to examine together the title of the selected material they are about to read. The teacher makes a list of all the information that comes to his/her mind as students read the title on the board. These pieces of information are then used to further recall and in the process considerable knowledge will be activated.
- **Providing background knowledge:** This activity is especially suitable for culturally unfamiliar passages. As one culture may be different from the other one, it becomes very difficult for the teacher to activate the students' existing schema towards the target culture, which results in having a lack of comprehension to have a sufficient comprehension; students should be supported to have enough background knowledge.

Effect of Using Pre-Reading Activities on Reading Comprehension

Many studies aimed to investigate whether pre-reading activities were efficient and effective for language learners' reading comprehension. These studies reported positive results when incorporating pre-reading activities, as compared with classes with no pre-reading activities. According to Alemi and Ebadi (2020), the participants were divided into experimental group and control group. Three types of pre-reading activities, pictorial context, vocabulary pre-teaching and pre-questioning were carried out for the experimental group. They found that the pre-reading treatment group demonstrated better comprehension as compared to the non-treatment group. That is, regardless of the type of pre-reading activities, they were all comparatively more effective in improving the participants' reading comprehension skills.

Yeeding (2023) investigated the effects of pre-reading activities on learners' motivation and reading comprehension ability. Results showed that the students were highly motivated, enthusiastic to read. After the experiment, they scored significantly higher. In another experimental study Taglieber, Johnson, & Yarbrough (2018) provided the experiment subjects with 3 pre-reading activities: guessing reading content from pictures, learning vocabulary before reading and pre-reading question. The control group did not receive any of the 3 pre-reading activities. A pre-test and post-test were administered to both groups. It was discovered that the experimental group performed better than the control group. In addition, the reading scores from the reading with guessing reading content from pictures and pre-reading questioning were better than the reading with learning vocabulary before reading.

Hashemi, Mobini and Karimkhanlooie (2022) investigated three treatment groups with three pre-reading activities (pre-questioning, brainstorming and KWL) compared to a control group. The findings showed that high school students who received the pre-reading treatment were more successful than those who received no treatment. Also, the KWL activity (what I already know, what I want to know, what I have learned) outperformed the other two pre-reading activities (brainstorming and pre-questioning) in terms of beneficial impacts.

Han and Im (2020) also conducted a study incorporating three pre-reading activities: providing pictures, pre-questioning and pre-teaching vocabulary, with no such activity for the control group. Pre-reading activities' groups received higher scores than the control group. Also, pre-questioning was most effective for high-level students, while pre-teaching vocabulary was most effective for low-level students.

Mihara (2020) investigated the effects of two pre-reading activities, vocabulary pre-teaching and pre-questioning on EFL university students. The results revealed that pre-questioning was more effective than vocabulary pre-teaching. Jamalinesari (2022) also examined two types of pre-reading activities (guessing meaning from pre-reading questions and vocabulary definition) on the reading improvement of high school students and their findings revealed that the guessing meaning from pre-reading questions group performed better than the vocabulary definition group. The pre-questioning activity was also better than other activities.

Theoretical Framework

The Schema Theory, propounded by Frederic Bartlett in 1932 and later expanded by Richard Anderson in 1977, serves as a suitable theoretical framework for this study on the effects of pre-reading activities on the achievement of NCE students of French in reading comprehension. Schema Theory posits that prior knowledge, organized into cognitive structures called schemata, plays a crucial role in understanding and interpreting new information. The theory emphasizes that comprehension is an interactive process where readers activate relevant background knowledge to make sense of a text. Key principles of Schema Theory include the activation of prior knowledge, the integration of new information with existing schemata and the restructuring of schemata based on new learning experiences. In the context of this study, pre-reading activities such as brainstorming, previewing and discussion help students activate their prior knowledge, making it easier to understand and retain new reading materials. By engaging students in pre-reading activities,

educators can enhance their comprehension skills, as these activities bridge the gap between their existing knowledge and the new concepts introduced in the reading passages. This aligns with Schema Theory's assertion that learning is most effective when new information is connected to what learners already know, thereby improving their reading achievement.

METHODOLOGY

This study employed the quasi-experimental design, specifically the non-equivalent pre-test and post-test control group design. The choice of this design was to help the researcher ascertain the effects of the discussion method on Nigeria Certificate in Education students' achievement in reading comprehension in Federal College of Education, Pankshin, Plateau State, Nigeria. The population for this study consisted of a total of 125 NCE II students enrolled in the French Department of the School of Languages at the Federal College of Education Pankshin. The sample for the study consisted of 108 NCE II students from the department of French in Federal College of Education, Pankshin. The students were divided into experimental and control groups. The experimental group consisted of 52 students, while the control group had 56 students. The instrument that was used to collect data for the study was the Reading Comprehension Achievement Test (RCAT), which measured NCE II students' achievement in reading skills as outlined in the objectives of the study. The research questions were answered using the mean score method, while the Analysis of Covariance (ANCOVA) was used to test the hypotheses to determine whether there existed any significant differences between the groups in their achievement in reading comprehension.

RESULTS
Answering Research Questions
Research Question One
What are the pre-test and post-test achievements of students in identifying main ideas in the experimental and control groups?

Table 1: Pre-test and Post-test Achievement Mean Scores of Students in identifying main Ideas in the Experimental and Control Groups

Group	N	Pre-test		Post-test		Mean Gain	Mean Difference
		Mean	SD	Mean	SD		
Experimental	52	29.87	6.648	56.71	8.978	26.84	23.54
Control	56	33.13	9.852	36.43	6.586	3.3	

Table 1 presents the pre-test and post-test achievement mean score of students in identifying main ideas in reading comprehension in the experimental and control groups. In the experimental group the post-test achievement mean score was 56.71and standard deviation of 8.98, higher than the pre-test mean score of 29.87 and standard deviation of 6.65 with a mean gain of 26.84, indicating that there was improvement in the achievement of students after treatment using pre-reading activities. For the control group, the pre-test mean score was 33.13 and a standard deviation of 9.85. The post-test mean score of students was 36.43 with a standard deviation of 6.59 indicating a mean score gain of 3.3. The results show that students in the experimental group had a higher achievement mean score (56.71) after treatment

than those in the control group (36.43) who were not given treatment with a mean difference of 23.54. This means that at the pre-test the students in both groups had a poor achievement and were at the same level, but after the intervention using pre-reading activities, the experimental group performed better than the control group. It means that pre-reading activities did improve the students' achievement in identifying main ideas in reading comprehension.

Research Question Two
What are the pre-test and post-test achievements of students in identifying supporting ideas in the experimental and control groups?

Table 2: Pre-test and Post-test Achievement Mean Scores of Students in Identifying supporting Ideas in the Experimental and Control Groups

Group		Pre-test		Post-test			
	N	Mean	SD	Mean	SD	Mean Gain	Mean Difference
Experimental	52	31.33	8.24	60.81	9.30	29.48	
							19.21
Control	56	30.36	8.15	40.63	7.50	10.27	

Table 2 shows the pre-test and post-test achievement mean score of students in identifying supporting ideas in reading comprehension in the experimental and control groups. The experimental and control groups have mean scores of 31.33 and 30.36 respectively at the pre-test, indicating that both groups performed poorly and were almost at the same level. At the post-test achievement mean scores were 60.81 and 40.63 and standard deviations of 9.30 and 7.50 and mean gains of 29.48 and 10.27 for the experimental and control groups respectively. The results show that students in the experimental group had a higher achievement mean score

(60.81) after treatment than those in the control group (40.63) who were not given treatment with a mean difference of 19.21. This means that after intervention using pre-reading activities, the experimental group performed better than the control group. It means that pre-reading activities did improve the SSII students' achievement in identifying supporting ideas in reading comprehension.

Research Question Three
What are the pre-test and post-test achievements of students in summarisations in the experimental and control groups?

Table 3: Pre-test and Post-test Achievement Mean Scores of Students in Summarisation in the Experimental and Control Groups

Group		Pre-test		Post-test			
	N	Mean	SD	Mean	SD	Mean Gain	Mean Difference
Experimental	52	25.67	7.009	53.48	10.245	27.81	
							25.31
Control	56	34.13	10.518	36.63	8.461	2.5	

Table 3 presents the pre-test and post-test achievement mean score of students in summarisation in reading comprehension in the experimental and control groups. In the experimental group the post-test achievement mean score was 53.48 and standard deviation of 10.25, higher than

the pre-test mean score of 25.67 and standard deviation of 7.01 with a mean gain of 27.81, indicating that there was improvement in the achievement of students after treatment using pre-reading activities. For the control group, the pre-test mean score was 34.13 and a standard deviation of 10.52.

The post-test mean score of students was 36.63 with a standard deviation of 8.46 indicating a mean score gain of 2.5. The results show that students in the experimental group had a higher achievement mean score (53.48) after treatment than those in the control group (36.63) who were not given treatment with a mean difference of 25.31. This means that at the pre-test the students in both groups had a poor achievement and were at the same level, but after the intervention using pre-reading activities, the experimental

group performed better than the control group. It means that pre-reading activities did improve the students' achievement in summarisation in reading comprehension.
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Research Question Four
What are the pre-test and post-test achievements of students in retelling in the experimental and control groups?

Table 4: Pre-test and Post-test Achievement Mean Scores of Students in Retelling in the Experimental and Control Groups

Group		Pre-test		Post-test			
	N	Mean	SD	Mean	SD	Mean Gain	Mean Difference
Experimental	52	29.02	7.506	58.48	11.17	29.46	
							23.62
Control	56	32.34	7.735	38.18	9.84	5.84	

Table 4 reveals the pre-test and post-test achievement mean score of students in retelling in reading comprehension in the experimental and control groups. In the experimental group the post-test achievement mean score was 58.48 and standard deviation of 11.17, higher than the pre-test mean score of 29.02 and standard deviation of 7.51 with a mean gain of 29.46, indicating that there was improvement in the achievement of students in paragraph creation skill after treatment using pre-reading activities. For the control group, the pre-test mean score was 32.34 and a standard deviation of 7.74. The post-test mean score of students was 38.18 with a standard deviation of 9.84 indicating a mean score gain of 5.84. The results show that students in the experimental group had a higher achievement mean score (58.48) after treatment than those in the control group (38.18) who were

not given treatment with a mean difference of 23.62. This means that at the pre-test the students in both groups had a poor achievement and were at the same level, but after the intervention using pre-reading activities, the experimental group performed better than the control group. It means that pre-reading activities did improve the students' achievement in retelling in reading comprehension.

Testing Hypotheses
Hypothesis One
There is no significant difference between the pre-test and post-test achievements of students in identification of main ideas in the experimental and control groups.

Table 5: ANCOVA Result on Post-test Achievement Mean Scores of Students in identification of main ideas in the Experimental and Control Groups

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11881.198ᵃ	2	5940.599	109.284	.000	.675
Intercept	9478.948	1	9478.948	174.376	.000	.624
Pre-composition	788.668	1	788.668	14.508	.000	.121
Group	11825.181	1	11825.181	217.538	.000	.674
Error	5707.719	105	54.359			
Total	248053.000	108				
Corrected Total	17588.917	107				

a. R Squared = .675 (Adjusted R Squared = .669)

Table 5 indicates that $F_{(1,105)} = 217.54$, $p < 0.05$, since the p-value of 0.000 is less than 0.05 level of significance, the null hypothesis was rejected, indicating that there was a

significant effect of pre-reading activities on achievement of students in identifying main ideas in reading comprehension .The result further reveals an adjusted R squared value of

.669, which means that 66.9 percent of the variation in the dependent variable which is achievement inidentifying main ideas in reading comprehension is explained by variation in the treatment of pre-reading activities, while the remaining is due to other factors not included in this study. This implies that pre-reading activities can help improve students' achievement in identifying main ideas in reading

comprehension among French students in Federal College of Education, Pankshin.

Hypothesis Two
There is no significant difference between the pre-test and post-test achievements of students in identification of supporting ideas in the experimental and control groups.

Table 6: ANCOVA Result on Post-test Achievement Mean Scores of Students in identification of supporting ideas in the Experimental and Control Groups

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	14638.187[a]	2	7319.094	199.708	.000	.792
Intercept	5730.190	1	5730.190	156.354	.000	.598
Pre-composition	3655.065	1	3655.065	99.732	.000	.487
Group	10203.468	1	10203.468	278.411	.000	.726
Error	3848.137	105	36.649			
Total	292199.000	108				
Corrected Total	18486.324	107				

a. R Squared = .792 (Adjusted R Squared = .788)

Analysis of Covariance (ANCOVA) was conducted to determine if a significant difference exists in the posttest achievement mean score of students in identifying supporting ideas in reading comprehension in the experimental and control groups. Table 10 shows that F(1,105) =278.411, p < 0.05, since the p-value of 0.000 is less than 0.05 level of significance, the null hypothesis was rejected, indicating that there was a significant effect of pre-reading activities on achievement of students in identification of supporting ideas in reading comprehension.The result further reveals an adjusted R squared value of .788, which means that 78.8 % of the variation in the dependent variable which is achievement in

identification of supporting ideas in reading comprehension is explained by variation in the treatment of pre-reading activities, while the remaining is due to other factors not included in this study. This implies that pre-reading activities can help improve students' achievement in identifying supporting ideas in reading comprehension among French students in Federal College of Education, Pankshin.

Hypothesis Three
There is no significant difference between the pre-test and post-test achievements of students in summarisation in the experimental and control groups.

Table 7: ANCOVA Result on Post-test Achievement Mean Scores of Students in summarisation in the Experimental and Control Groups

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	7768.330[a]	2	3884.165	44.415	.000	.458
Intercept	15345.089	1	15345.089	175.470	.000	.626
Pre-composition	107.695	1	107.695	1.231	.270	.012
Group	6979.869	1	6979.869	79.814	.000	.432
Error	9182.411	105	87.452			
Total	233138.000	108				
Corrected Total	16950.741	107				

a. R Squared = .458 (Adjusted R Squared = .448)

Table 7 shows that F(1,105) =79.81, p < 0.05, since the p-value of 0.000 is less than 0.05 level of significance, the null hypothesis was rejected, indicating that there was a significant effect of pre-reading activities on achievement of students in summarisation in reading comprehension .The result further reveals an adjusted R squared value of .448, which means that 44.8 % of the variation in the dependent variable which is achievement in summarisation in reading comprehension is explained by variation in the treatment of pre-reading activities, while the remaining is due to other factors not included in this study. This implies that pre-reading activities can help improve students' achievement in summarisation in reading comprehension among French students in Federal College of Education, Pankshin.

Hypothesis Four

There is no significant difference between the pre-test and post-test achievements of students in retelling in the experimental and control groups.

Table 8: ANCOVA Result on Post-test Achievement Mean Scores of Students in retelling in the Experimental and Control Groups

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	14956.972[a]	2	7478.486	100.110	.000	.656
Intercept	3586.698	1	3586.698	48.013	.000	.314
Pre-composition	3843.399	1	3843.399	51.449	.000	.329
Group	13517.401	1	13517.401	180.949	.000	.633
Error	7843.796	105	74.703			
Total	271153.000	108				
Corrected Total	22800.769	107				

a. R Squared = .656 (Adjusted R Squared = .649)

Analysis of Covariance (ANCOVA) was conducted to determine if a significant difference exists in the posttest achievement mean score of students in retelling in the experimental and control groups. Table 8 shows that F(1,105) =180.95, p < 0.05, since the p-value of 0.000 is less than 0.05 level of significance, the null hypothesis was rejected, indicating that there was a significant effect of pre-reading activities on achievement of students in retelling in reading comprehension .The result further reveals an adjusted R squared value of .649, which means that 64.9 % of the variation in the dependent variable which is achievement in retelling in reading comprehension is explained by variation in the treatment of pre-reading activities, while the remaining is due to other factors not included in this study. This implies that pre-reading activities can help improve students' achievement in retelling in reading comprehension Federal College of Education, Pankshin.

Discussion of Findings

The findings from Research Question One reveal that students in the experimental group showed significant improvement in identifying main ideas after exposure to pre-reading activities, as indicated by the mean gain of 26.84 compared to 3.3 in the control group. This aligns with the study by Oyetunde and Muodumogu (1999), who found that pre-reading strategies such as previewing and activating prior knowledge enhance students' ability to comprehend and identify main ideas in texts. The substantial mean difference of 23.54 between the experimental and control groups further confirms that engaging students in pre-reading tasks significantly improves their reading comprehension skills. The results suggest that structured pre-reading activities provide students with the necessary cognitive framework to better understand and extract key points from texts.

For Research Question Two, the results indicate that students in the experimental group improved significantly in identifying supporting ideas, with a mean gain of 29.48 compared to 10.27 in the control group. This finding is in agreement with the work of Al Odwan (2012), who found that pre-reading activities, such as questioning and predicting, help students develop better comprehension skills by directing their attention to essential supporting details in a text. The mean difference of 19.21 further reinforces the effectiveness of pre-reading activities in improving students' ability to identify supporting ideas. These results suggest that activating students' background knowledge before reading not only aids in understanding the main ideas but also strengthens their ability to recognize and analyze supporting information.

In response to Research Question Three, the findings demonstrate that students in the experimental group achieved higher scores in summarization, with a mean gain of 27.81 compared to 2.5 in the control group. This supports the study by Duke and Pearson (2002), which found that pre-reading activities, such as discussing key vocabulary and previewing text structures, enhance students' summarization skills by providing them with a clear roadmap for reading. The mean difference of 25.31 between the groups suggests that pre-reading activities enable students to filter essential points and construct concise summaries effectively. These results indicate that engaging students in pre-reading discussions and guided questioning before reading improves their ability to condense information into meaningful summaries.

For Research Question Four, the findings show that students in the experimental group performed significantly better in retelling, with a mean gain of 29.46 compared to 5.84 in the control group. This aligns with the study by Pressley (2006), who found that pre-reading activities, such as story mapping and making predictions, improve students' ability to recall and retell texts accurately. The mean difference of 23.62 highlights the impact of pre-reading strategies on students' ability to process, retain and articulate information in a structured manner. These results suggest that pre-reading activities provide students with the cognitive scaffolding needed to enhance their comprehension and recall, ultimately improving their retelling abilities.

Conclusion

The findings of this study demonstrate that pre-reading activities significantly enhance students' achievement in reading comprehension across various skills, such as identifying main ideas, identifying supporting ideas, summarization and retelling. The experimental group consistently outperformed the control group in all assessed areas, highlighting the effectiveness of pre-reading strategies in fostering comprehension. Therefore, integrating pre-reading activities into reading instruction is essential for improving comprehension skills among NCE students, ultimately enhancing their academic performance in reading-related tasks.

Recommendations

Based on the study's findings, the following recommendations are made:

1. Educators should incorporate structured pre-reading strategies, such as previewing and activating prior knowledge, into reading lessons to enhance students' ability to identify main ideas effectively. This approach will help create a cognitive framework that supports deeper comprehension.

2. Teachers should employ questioning, predicting and other pre-reading techniques to help students focus on key supporting details in texts. This will strengthen their analytical skills and improve their ability to recognize essential information that supports the main idea.

3. Educators should engage students in pre-reading discussions, vocabulary previews and guided questioning to enhance their summarization skills. These activities will help students extract and condense essential information, improving their overall reading comprehension.

4. Teachers should utilize strategies such as story mapping and prediction exercises before reading to help students retain and accurately retell texts. These activities will improve students' recall abilities, making them more effective in articulating key points from reading materials.

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ASSESSING THE INFLUENCE OF INFORMATION AND COMMUNICATION TECHNOLOGY FOR NEWS SOURCING: A CASE STUDY OF NIGERIAN TELEVISION AUTHORITY, JOS

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ABSTRACT

The paper assessed the influence of information and communication technology (ICTs) for news sourcing by staff of NTA Jos network centre. Three research objectives and questions were guided the study. The Network social theory, developed by Manuels Castells in the 1930s was used as theoretical framework. The survey research design was adopted for the study. The population of the study comprises the 98 staff of Nigeria Television Authority (NTA) with a sample size of 87 respondents. The convenience sampling technique was used to select the sample. The method of data analysis was mean score. Finding of the study showed that ICT has a great impact as a tool for news sourcing and dissemination. The adoption of ICTs in media reportage by NTA Jos network centre has drastically reduce harassment faced by media staff and has promote widespread of information across heterogeneous audience; a fundamental shift from the traditional method of news sourcing and dissemination. Base on the findings of the study, the study concludes that in spite the effectiveness of the tool (ICT) for news sourcing and dissemination, there seems to be no full familiarization of the practical knowledge on the use of the tool as attested by the 87 staff of NTA Jos network centre sampled for the study. Therefore, the study recommend that the government should equip the staff of the media station with adequate knowledge of technical skills needed to drive the mission of the station in terms of handling modern equipment among other recommendations.

Keywords: Keywords: Assessing, Influence, ICTs, news sourcing, Dissemination

INTRODUCTION

The advancement of simultaneous technologies has become deeply intertwined with modern society and is rapidly transforming the process of news gathering. History, as documented in various literatures, has witnessed humanity undergoing several revolutions. The latest of these is the Information and Communication Technology (ICT) revolution. According to Okunna (2021), whenever we think of ICT, our minds immediately turn to computers, satellites, fax machines, fiber optics, digital networks and ultimately, the internet. This is due to the continuous evolution and features that come with emerging digital technologies. Digitization, in this regard, has significantly reshaped the information landscape through advanced technological innovations.

Alum (2014) posits that "Information Communication Technologies have made it easier for reporters to gather and disseminate information with advanced equipment, allowing information to go viral at the

click of a button." The modern digital era has witnessed a rapid transformation in information dissemination, enhancing both the quantity and accessibility of information. This shift has paved the way for citizen journalism, where individuals can act as self-employed journalists, further underscoring the growing significance of information systems in satisfying human needs. Given the necessity of verifying accurate information against misinformation in this evolving ICT landscape, Nwabueze (2015) asserts that "reporting is the process of giving an account of news events through a medium to an audience." This process involves gathering facts about an event, incident, or people through objective observation, reasoning, verification, organization and presentation as a news story for mass communication. However, this fact-gathering and presentation process has evolved from traditional methods of news collection to a more simplified and logical approach, now facilitated by the information and communication technology space. ICT serves as a nexus encompassing all communication devices and applications, including television, radio, cellular phones and computers, as well as services like video conferencing and distance learning.

Dugo (2018) asserts that ICT has transformed the world in all aspects of life, significantly reducing manual operations and fostering growth in the media industry. In alignment with Dugo's assertion, ICT has made information more accessible to the mass audience—whether verified or unverified (as seen in citizen journalism). For instance, individuals can now communicate in real-time across different countries using technologies such as instant messaging, voice-over services and video conferencing.

Statement of the Problem

The advancement of the information and communication technology has availed almost if not every member of the society who owns a smart/multi-media phone or media related tool for information distribution the freedom to be an originator of (verified or unverified) information. The reverse is the case as the primary source of information sourcing is becoming obsolete making even some of the legally trained journalist to dive into the citizen journalism to maintain top notch in breaking news. To mention a few in a staggering economy like Nigeria, journalistic source of news has move from objectivity to subjectivity following the secondary source of news gathering (information and communication technology) without adhering to the journalistic adage (when people run in, we run out to ascertain the situation). However, an electronic information source has made it possible to link beyond the immediate community. This electronic

information source that journalists used is online reporter's blog. They used this to access information for their stories and networking with other journalists as well as social contacts on this views/fact, the research assessed the influence of the trending information and communication technology as a tool for news sources in the Nigerian Television Authority Jos zonal Centre. To this end the research intends to access if the information and communication offering can be the best and verified sources of news gathering in NTA Jos network Centre.

Objectives of the Study

The aim of this study is to assess the influence of information and communication technology for news sourcing: a case study of Nigerian Television Authority, Jos. The specific objectives of this study are:

1. To ascertain the influence of ICT as news sources by NTA Jos network Centre
2. To find out the impact of Information Communication and Technologies on information sourcing by NTA Jos network Centre
3. To examine possible challenges associated with information and communication technology as a news source in NTA Jos network Centre

Research Questions

The study is guided by the following research question:

1. To what extent do ICT influence news sourcing in NTA Jos network Centre?
2. What is the impact of ICT on information sourcing by NTA network Centre?
3. What are the possible challenges associated ICT as a news source in NTA Jos network Centre?

LITERATURE REVIEW
Information and communication technology

Information and communications technology (ICT) is a new world information order that is seen as an extensional term for information technology (IT) that houses the role of acceptable and unified communications and the integration of diverse communications , as well as necessary application software, storage and audiovisual, that aid users to access, store, transmit, understand and even distort the information. Awati (2023) notes, information and communications technology (or technologies), is the infrastructure and components that enable modern computing. This computing includes sourcing for information and dissemination of information by private of government media institution or even the citizens Journalist who are the major beneficiaries of the technology for information sharing (verified or unverified).

ICT is also used to refer to the convergence of diverse media platform through a single cabling or link system. It has indeed transformed the world in all spheres for the purpose of development through a single unified system of cabling, signal distribution and management. Amagbu (2019) ICT is an umbrella term that includes any communication device, encompassing radio, television, cell phones, computer and network hardware, satellite systems and so on, as well as the various services and appliances with them such as video conferencing and distance learning. It is not limited to advance technology but it also incorporates analog technology, such as paper communication and any mode that transmits communication. The baseline for ICT is easier access to information, simultaneous feedback and rapid communication at a flip of a finger.

Utilization in Information Sourcing

The media industry cannot survive without information. Information sourcing is the basic that give any media outfit the relevance to remain in contemporary era. The process of sourcing for information involves the reporters to travel to the width and breathe of the community/nation to scout for information, which will be used to keep the society informed on the happenings around them. These processes are carried out using different means which includes interview; opinion polls in order to bring the duty of information/news sourcing to perfection to avoid arising emotions. Zamith (2017) define source as any person, organization, document, or object that provides information to journalists. This may include the spokesperson for an international aid group, an academic, or a regular citizen who witnessed an event. This thence mean that information is sourced for, using different channels, method or technology for the purpose of news or enlightenment. Information gathering is the act of conveying or relaying or communicating the message sourced for, to the audience (Muhammed 2014) it can also be referring to the activity of researching news items meant for broadcast or publication, this act of information sourcing is commonly carried out by journalists which is thence researched into, compiled and made known to the masses as news or feature article.

Today, ICT has maintained the center stage for information as people with smart devices are on the rise to maintain best content agent in the Zukerberg evolution which pave way for citizen Journalism. Branda (2011) posits that citizen journalism is a rapidly evolving form of journalism where common citizens take the initiative to repot news or express views about happenings within their communities. MacBride et al (2020) affirm the statement when he asserts that "human beings sought to improve their ability to receive and assimilate information about their surroundings and at the same time to increase the speed,

clarity and variety of their methods for transmission of information" the rise of Information Communication and Technologies given reporters of today the flexibility of information sourcing, making reportorial duties easy for reporters and their organizations since

Television news rely on pictures, words and places where the information is collated from, this in turns outlines the basic features of the ICT as a machinery that bridge the dalliance of information communication which the traditional media were initially known for, thus traditional media rely heavily on the principle of media objectivity.

However, in trying to determine the effectiveness of Information and Communication Technology to the mass media news sourcing, television in focus, of NTA Jos network center,

Television news sourcing requires that the reporter goes out of his/her comfort to collate the news facts, backgrounds story, organize them in an objective manner and present them to the audience/viewer in a logical way to cut ills that are likely arise. The aim of the television broadcast is to tell its viewers what is happening in a manner that is as complete as possible.

Technology is behind nearly everything we do from the computer animation in movies to the research we carry out. Our dependence on Information Communication and Technologies matches its growth, as technology steadily revolutionizes, our way of life. Gralf (2018), affirmed the notion when he notes that ICT is an integration and utilization of computer mediated technologies to source and disseminate information to scattered target destination.

NTA Jos network center is a state own media establishment. The takeover of Nigeria by a new Federal Military Government in 1977 reorganized all of the existing television stations and incorporated them to the current Nigerian Television Authority. Jos was integrated into Zone D, encompassing central-northern Nigeria, which also included Kano and Kaduna. NTA Jos also sent its programming to nearby stations, NTA Yola and NTA Makurdi. In 1980, NTA set up a television college in Jos. By the early 1980s, NTA Jos had its own functional "color processing, developing and printing plant" in its studios and its local programmes were "well produced". In February 2008, it was announced that NTA Jos was set to become a Zonal Network Centre, with the ability of producing programmes nationwide. On 4 February 2015, parts of the NTA Jos building were hit by a fire at 3pm. The fire was contained within thirty minutes (Wikipedia, 2024).

However, in September 2016, President Muhammadu Buhari approved the release of 10 Billion Naira to the National Broadcasting Commission (NBC) for the Digital Switch-Over. NTA's Digital Switch-Over was

first successfully carried out in Abuja. This offered thirty local, regional and national channels to viewers in Abuja an upgrade to 15 channels offered in Jos, Plateau state when NBC launched the pilot phase of the DSO. Following the successful launch in Abuja, NBC planned to launch in one state from each of the six geo-political zones of Nigeria (BellaNaija, 2020).

In 2015, the then Director-General of the Nigerian Television Authority (NTA), Sola Omole, requested $15 million (₦5, 452, 500, 000) to complete the agency's digitization program and an additional ₦6 billion for restructuring across Nigeria, bringing the total request to slightly over ₦11 billion. This request coincided with the International Telecommunications Union (ITU)'s commemoration of the switchover from analog to digital terrestrial television broadcasting in June 2015. However, despite initiating the process nine years earlier, Nigeria missed the deadline. The implication of this failure was that analog signals from Nigerian broadcasting stations would receive no protection in the event of interference with or from digital signals originating from neighboring countries (Premium Times, 2015).

Theoretical Framework

Network social theory, developed by Manuels Castells in the 1930, explores the social, economic and cultural transformations brought about by the wide spread use of information and communication technologies (ICTs) The theory holds the following as its basic tenants: Networks are the fundamental unit of social organization which replaces the traditional hierarchies and bureaucracies as the primary form of social organization. Informationalism, globalization, space of flow, timeless time, decentralization, interconnectedness, flexibility and adaptability. These tenants form the foundation of network society theory which aims to understand social being of the rise of ICTs.

METHODOLOGY

This study used survey research design. The population of the study consisted of 98 staff of NTA Jos Network Centre. The sample of the study were 87 respondents. The convenience sampling technique was used where all the subjects of the population available were used. A structured questionnaire of 5 points Likert scale with "SA" (Strongly Agree), "A" (Agree), "Un" (Undecided/Neutral), "D" (Disagree) and "SD" (Strongly Disagree). The instrument was validated by experts through face validity. The data collected were analyzed through descriptive statistics which involves mean score with a decision rule of 3.0 mean score was used as criteria for accepting or rejecting a factor.

RESULTS

This section of the study presents data that was collected from the field work. It is presented in tables with interpretation beneath each table.

Research Question One: What is the impact of ICT on information gathering and dissemination by NTA network Centre?

Table 1: Impact of ICT on information sourcing by NTA Network centre

S/No	Items statement	S/A (5)	A (4)	UD (3)	D (2)	SD (1)	Mean Score	Decision
1	NTA Jos network Centre have reliable ICT tools for information sourcing and dissemination	27	50	3	5	2	4.07	Accepted
2	NTA Jos network Centre need more ICT tools to function effectively	32	44	5	0	6	4.08	Accepted
3	There are no modern tools in NTA Jos network Centre to use in news sourcing and dissemination	6	19	14	36	12	2.64	Accepted
4	NTA Jos network Centre has all the ICT modern facilities for news sourcing and dissemination	20	40	6	19	2	3.8	Accepted
5	NTA Jos network Centre have limited staff to handle the ICT tools	8	34	13	27	5	3.12	Accepted
	Overall mean						**3.54**	**Accepted**

Source: field survey 2024 (number of respondents = 87).

The results presented in Table 1 summarize responses on the impact of ICT on information gathering and dissemination at NTA Jos Network Centre. The findings indicate that all five items were accepted based on the 3.00 decision point set in the study. The highest mean score (4.08) corresponds to "NTA Jos Network Centre needs more ICT tools to function effectively," highlighting the need for improved infrastructure. Similarly, respondents acknowledged that "NTA Jos Network Centre has reliable ICT tools for information sourcing and dissemination" (Mean = 4.07), reinforcing the positive role of ICT in news processes.

However, the relatively lower mean score (2.64) for "There are no modern tools in NTA Jos Network Centre to use in news sourcing and dissemination" suggests that while ICT tools exist, there is still room for improvement. The overall mean score of 3.54 confirms that ICT has a positive impact on news sourcing and dissemination at NTA Jos Network Centre.

Research Question Two
To what extent do ICT influence news sourcing in NTA Jos network Centre?

Table 2: Extent to which ICT influence news sourcing in NTA Jos Network centre

S/No	Items Statement	S/A (5)	A (4)	UD (3)	D (2)	SD (1)	Mean Score	Decision
1	NTA Jos network Centre rely on citizen journalism report as a means to source news	10	61	4	5	7	3.69	Accepted
2	ICT has made NTA Jos network Centre news sourcing and dissemination not objective	7	18	18	35	9	2.74	Accepted
3	ICT has reduced reporters' harassment during news sourcing and dissemination	8	37	23	19	0	3.37	Accepted
4	ICT has boost news reporting and dissemination by staff of NTA Jos network Centre	16	42	15	14	0	3.67	Accepted
5	ICT has created 2 ways flow for instantaneous news sourcing and reportage	12	48	17	6	4	3.63	Accepted
	Overall Mean						**3.42**	**Accepted**

Source: Field survey 2024 (number of respondents = 87)

The results in Table 2 summarize the extent to which ICT influences news sourcing at NTA Jos Network Centre. All five items were accepted based on the 3.00 decision point set in the study, confirming the substantial impact of ICT on news sourcing. The highest mean score (3.69) corresponds to "NTA Jos Network Centre relies on citizen journalism reports as a means to source news," suggesting that user generated content plays a vital role in news reporting. Another significant impact is the creation of a "two-way flow for instantaneous news sourcing and reportage" (Mean = 3.63), emphasizing ICT's role in real-time information exchange. Additionally, ICT has boosted news reporting and

dissemination (Mean = 3.67) and reduced reporters' harassment (Mean = 3.37), highlighting its benefits in journalism safety and efficiency. However, "ICT has made NTA Jos Network Centre news sourcing and dissemination not objective" recorded the lowest mean (2.74), indicating concerns about media bias and credibility. The overall mean score of 3.42 affirms that ICT has positively influenced news sourcing at NTA Jos Network Centre, although certain challenges, such as objectivity, still exist.

Research question three: What are the possible challenges associated ICT as a news source in NTA Jos network Centre?

Table 3: possible challenges associated with ICT as news sources in NTA Jos Network centre

S/No	Statement	S/A (5)	A (4)	UD (3)	D (2)	SD (1)	Mean Score	Decision
1	ICT has made NTA Jos Network Centre's news sourcing and dissemination not fully objective.	5	17	16	40	9	2.62	Accepted
2	ICT has delimited the news sourcing and dissemination process by staff of NTA Jos Network Centre.	8	18	23	33	5	2.86	Accepted
3	ICT has reduced employment opportunities in NTA Jos Network Centre.	9	7	23	43	5	2.65	Accepted
4	ICT has reduced the originality and authenticity of news sourcing and reportage.	2	15	25	38	7	2.60	Accepted
5	NTA Jos Network Centre has little or no ICT technical staff to handle modern facilities.	4	14	22	42	5	2.62	Accepted
	Overall Mean						**2.67**	**Accepted**

Source: Field survey 2024 (number of respondents = 87)

The results in Table 3 present the frequency and mean responses on the possible challenges associated with ICT as a news source in NTA Jos Network Centre. Five key challenges were identified and all items were accepted based on the 3.00 decision point set in the study. The highest mean score (2.86) corresponds to "ICT has delimited news sourcing and dissemination processes by staff of NTA Jos Network Centre," indicating concerns that ICT imposes limitations on journalistic operations. Similarly, "ICT has reduced employment opportunities in NTA Jos Network Centre" (Mean = 2.65) and "ICT has made NTA Jos Network Centre news sourcing and dissemination not fully objective" (Mean = 2.62) highlight workforce and credibility concerns. Other challenges include the lack of ICT technical staff to handle modern facilities (Mean = 2.62) and the reduction in originality and authenticity of news sourcing and reportage (Mean = 2.60). The overall mean score of 2.67 confirms that ICT presents significant challenges to news sourcing and dissemination at NTA Jos Network Centre, despite its advantages.

Discussion of Findings

The findings from this study indicate that ICT has a significant impact on information gathering and dissemination at NTA Jos Network Centre. The overall mean score of 3.54 suggests that ICT tools are widely used and effective for news reporting. However, while respondents acknowledged that ICT tools enhance news sourcing, the study also highlighted a gap in the availability of modern tools, as seen in the relatively lower mean score (2.64) for the item assessing the presence of modern ICT facilities. These findings align with Smith (2020), who emphasized that ICT has become an essential tool for information sourcing, enabling media professionals to transition from traditional news collection methods to realtime reporting through digital platforms. The need for more advanced ICT infrastructure at NTA Jos Network Centre underscores the importance of continuous investment in technological upgrades to optimize news-gathering processes.

The study further revealed that ICT significantly influences news sourcing at NTA Jos Network Centre, as indicated by the overall mean score of 3.42. A key finding was that citizen journalism plays a crucial role in news sourcing, with a mean score of 3.69, demonstrating that digital platforms have enabled audience participation in news production. However, concerns about the objectivity of ICT-based news sourcing were evident in the relatively lower mean score (2.74) for the item assessing the objectivity of news dissemination. This aligns with Tandoc (2022), who observed that while ICT facilitates accessibility and speed in news sourcing, it also introduces challenges such as media bias and reduced editorial control. The study suggests that while ICT provides benefits such as real-time reporting and reduced harassment of journalists, NTA Jos Network Centre should implement measures to ensure journalistic integrity and factual accuracy in ICT-driven news sourcing.

Despite the benefits of ICT in news reporting, the study identified several challenges associated with its use at NTA Jos Network Centre, with an overall mean score of 2.67. The most notable challenge was the limitation ICT places on traditional journalistic processes, as reflected in the highest mean score (2.86) for the item assessing the restrictive nature of ICT in news dissemination. Additionally, concerns regarding reduced employment opportunities (2.65) and lack of ICT technical staff (2.62) suggest that while technology enhances efficiency, it also presents workforce-related challenges. These findings align with Hermida (2021), who identified issues such as information overload, evolving journalism practices and economic challenges as key limitations of ICT in news production. The study highlights the need for continuous training of journalists and technical staff at NTA Jos Network Centre to address these challenges and maximize the potential of ICT in journalism.

Conclusion

Based on the findings, the study concludes that despite the effectiveness of ICT as a tool for news sourcing and dissemination, there is a lack of full practical knowledge on its use among the 87 staff members of NTA Jos Network Centre sampled for this study. However, the study also establishes that staff members have a foundational understanding of ICT as a news source, which can be further improved through efficient and effective training programs implemented by the management of NTA Jos Network Centre. Through such training, staff members will develop credibility, expertise and adequate knowledge of ICT tools, ensuring that their limited experience does not hinder ICT utilization. This will enable all staff of NTA Jos Network Centre to acquire sufficient knowledge of ICT and its application in news sourcing and dissemination, irrespective of the challenges posed by unverified or citizen journalism.

Recommendation

Arising from the findings and conclusion of this study which assessed the influence of information and communication technology (ICTs) on staff of NTA Jos network centre, the study recommends the following:

1. Holding on the fact that NTA is a government own media outlet, the research recommends for a technical upgrade to the modern ICTs equipment to measure up to other media outlet and to remain relevant in terms of breaking news and to achieve the media objective.

2. While information and communication technology has provided more security to media reportage in terms of human harassment among staff of NTA Jos network centre, NCC are advised to organized more workshop that educates more on the practical effects of utilizing the tools efficiently and effectively.

3. The prime of the objectivity of news reportage through the utilization of information and communication technology tools by staff of NTA Jos network centre calls for more fact checking and proper investigation while rolling to be the first at breaking news. Therefore, the media editors should rise up from the concept of ICTs to a combination of proper investigation to ensure originality and objectivity of the reportage.

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ROLE OF THE CONTEMPORARY PERFORMANCE POET IN NATIONAL DEVELOPMENT: THE DIKE CHUKWUMERIJE EXAMPLE

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ABSTRACT

Performance poetry in Africa has always been in the service of humanity. In spite of the massive cultural shift in Africa owing to the impact of colonialism and globalisation, oral poetry has remained resilient yet dynamic as it retains its place in most African societies. Contemporary oral poetry, also known as 'performance poetry' or popularly known as 'spokenword' or 'spokenword poetry', is the extant form of oral poetry which gains attention in public spaces and uses both primary and secondary oralities as its medium. Contemporary oral poetry has the unique advantage of reaching thousands of people at once and therefore could be used as a powerful tool for cultural reorientation and national development. Dike Chukwumerije is widely recognized for his outstanding oral poetry which mostly concerns national integration, social justice and national development. National development is not limited to infrastructure and physical facilities; it also includes the quality of education and orientation citizens of a given country receive. Anchored on the postcolonial literary theory and functionalist theory of oral literature, the paper focuses on two of Dike Chukwumerije's spoken word poems, "The Wall and The Bridge" and "They Say I Come From a Free Country", highlighting the role of the contemporary oral poet in national development from the preoccupation and performance of these poems.

Key words: Oral poetry, orality, national development, orientation, Dike Chukwumerije

Introduction

Contemporary oral poetry is also commonly known as 'spoken word' or 'performance poetry', which is also a modern day realisation of traditional oral poetry. Oral poetry itself is an offshoot of the oral tradition or oral literature or orature. Liz Gunner asserts that, "the continent of Africa can be viewed as a site of enormous, long and ongoing creativity in relation to orality as a vector for the production of social life, religious beliefs and reconstituting of society and ideology" (67). Oral poetry is a verbal art that has always been in the service of the African man from time immemorial. The use of oral poetry can hardly be divorced from its context (Ojaide, 109; Yadok & Irmiya, 110). As such there are poems for work, hunting, rituals, seasons, birth,

death, festivals and so on. Oral poetry cannot be fully understood without a comprehension of oral literature.

According to Ruth Finnegan, "oral literature is a type of literature characterized by particular features to do with performance, transmission and social context which has various implications on culture norms, values, identity, tradition, history and politics of a people" (5). Lending credence to Finnegan's assertion, Peace Longdet affirms that oral literature shares with written literature the use of heightened expressions in various genres but it is set apart by being actualised only in performance and by the fact that the performer can improvise so that the oral text constitutes an event. Longdet adds that, "most simply, oral literature refers to any form of verbal art which is transmitted orally or delivered by word of mouth" (124). Many scholars of oral

literature agree that the spoken form, the sung form and the performance form of orature correspond to the prose, poetry, and drama genres of written literature respectively. The African continent obviously manifests a vast repertoire of verbal arts, earning the reputation of the oral continent per excellence (Gunner, 67; Irele, 79; Longdet 122).

The art of orally transmitting ideologies aesthetically is known as orality. Walter Ong, cited in Ola-Koyi, makes a distinction between what he terms 'primary orality' and 'secondary orality' in the sense that primary orality refers to oral arts "totally untouched by any knowledge of writing or print." By contrast, secondary orality refers to "present day, high-technology culture, in which a new orality is sustained by telephone, radio, television and other electronic devices" (377). With the advent of digital technology and the social media, orature has demonstrated its dynamism, resilience and adaptability in that it still survives in the present day. In modern scholarship, secondary orality is otherwise known as media orature, digital orature, or cybernetic orature.

Traditional oral poetry typically utilizes a language for its composition and expression. As such, oral poems are mostly understood in the languages with which they are composed and the functions which these poems serve. In this regards, the Oriki (a sort of praise poem) in the Yoruba tradition can hardly be comprehended outside the Yoruba language and culture. However, with the assailing forces of globalisation and language encroachment, oral poetry has found a way of surviving in different languages yet maintaining its societal function of orientation, moral development and education. Liz Gunner avers that "the evidence from contemporary studies shows that many oral genres are resilient and adaptable to intense changes that have accompanied modern technology, urban living, and often difficult and oppressive industrial conditions" (71). It is therefore important to state that today's oral poet who maintains the spirit of an African tradition using a foreign language in a physical or virtual medium to transmit cultural values should be termed as a 'contemporary oral poet.'

Contemporary oral poetry has become a popular form of orality as it is increasingly being witnessed in urban spaces while attracting massive attention on social media platforms, thus further widening its reach among the populace. There is an increase of contemporary oral poetry/spoken word houses and events in Nigeria like poetry slams. For example, in Jos, Nigeria, there poetry clubs like E.B Sword, J-Town Shakatawa and COAL. In Abuja there is

the Abuja Literary Society (ALS) which has a spoken word arm; and there is the Poetry Court in Lagos. Some of the popular contemporary oral poets in Nigeria include Dike Chuwumerije, Bash Amuneni, Rudolph Adidi, Wana Wana, Patience Andrew, Daisy Odey, Decipher Moore, David Onotu, and Mandela Josiah, to name a few.

Despite the growing composition and performance of contemporary oral poetry, Tanure Ojaide argues that, "modern/contemporary poetry meant for poetry slams and jams tends to rely mainly on voice manipulation and not what is essentially figurative language" (111). However, a closer look at many contemporary oral poems reveals that figurative qualities of poems are also readily obtainable as F.B.O Akporobaro states that, "most of the qualities which define the literary values of written literature are also the very ones which are present in oral literary expressions." Admittedly, there are unskilled contemporary oral poets in as much as the unskilled page poets abound. Nonetheless, the relevance of the contemporary oral poet not just an entertainer but also as an agent of change and cultural orientation cannot be overemphasized, especially the poet's contribution to peaceful co-existence and national development.

Dike Chukwumerije is one outstanding example of a contemporary oral poet who maximizes the potential within his means to deliberately tailor his art for the sustenance of national integration, national identity, brotherhood, tolerance, and harmonious relationships. This is imperative in the face of the growing tensions, agitations, mutual suspicion, tribalism, nepotism, insecurity and corruption that is threatening the unity of Nigeria as a country. Dike Chuwumerije has organised marathon oral poems that were presented in major cities of Nigeria including Lagos, Enugu, Abuja, Jos, Kaduna, Benin, Maiduguri, among others. Additionally, Dike has performed in National and global events and some of his poems are widely shared across social media platforms, giving him a global visibility while retaining his identity as a Nigerian.

This paper therefore examines two of Dike Chukwumerije's oral poems, "The Wall and The Bridge" and "They Say I Come From a Free Country", highlighting the role of the contemporary oral poet in combating social injustice, mutual distrust, and insecurity while at the same time fostering national cohesion and development.

Theoretical Framework

The thought in this paper hangs on two theories; the postcolonial literary theory and the theory of functionalism in oral literature.

Postcolonialism has everything to do with the effects and aftereffects of colonialism. Colonialism brought about the delineation of African territories into countries as we know them today. Therefore, our sense of nationhood is a function of the colonialism. Furthermore, colonialism has also led to massive language and cultural erosion in most African societies. Colonialism's minimal effect brought about the notion of dual consciousness in which Ann Dobbie iterates that, "the interaction of cultures creates blended ones, mixtures of native and colonial, a process called hybridity" (210). The postcolonial theory therefore arrived as a fitting way of understanding the condition of the postcolonial. In their seminal work on postcolonial criticism, *The Empire Writes Back: Theory and Practice of Postcolonial Criticism* (1989), Ashcroft, Griffiths, and Tifflin outline four critical models of postcolonial literatures namely: national and regional models; race based models; comparative models of varying complexity; and more comprehensive comparative models (14-34). However, this paper is hinged on the national and regional model which accounts for shared culture and experiences of a people within the same region or nation as well as their peculiar problems and challenges. Their literatures, including oral compositions, are usually considered in relation to their social and political history and they serve as a source for creating national identity. Dike Chuwumerije's oral poems mostly have a national outlook.

The functionalist theory of oral literature on the other hand is derived from the works of British anthropologists, who emphasize the importance of looking at the society as a system wherein social institutions are integrated and each part operate in its way, hence making the whole function as it should (Longdet, 141). In this regards, the oral poet's absence creates a vacuum in the holistic picture of the societal system just as the absence of bards and griots could be felt in primitive societies. Commenting on the functionalism in oral poetry, Yadok & Irmiya posit that, "the beneficial effect of what counts most in the final analysis is the impact of any oral literary presentation on an audience; and whether that effect brings about moral, cultural, social or political transformation" (111). The functionalist believes that oral traditions are not just for entertainment but a behavioural motive lies behind every oral literary delivery.

Who is Dike Chukwumerije?

Dike Chukwumerije is a lawyer, a writer and a contemporary oral poet who prefers to be called a 'spoken word artist' or a 'performance poet'. Born in Surelere, Lagos, Dike had his primary and secondary education in Lagos before he moved to Abuja where he obtained a degree in Law at the University of Abuja. Dike also has a master's degree in Law and Development from SOAS University of London. His creativity was heavily influenced by his older brother, Che Chukwumerije who was an avid poet and a musician, as well as his mother, father, and one of his friends, Onesi Dominic.

Dike Chukwumerije has eight published books to his credit including *Urichindere*, a novel, which won the 2013 Association of Nigerian Authors (ANA) Prize for Prose Fiction. Dike's enterprise in contemporary oral poetry started when he won the ALS Poetry Slam in Abuja. Since then, Dike has won several grand slams in Nigeria including the maiden edition of the African Poet (Nigeria) Grand Slam competition. Apart from organising open mic and poetry slams, Dike Chukwumerije has, since 2013, hosted and directed the annual Night of Spoken Word (NWS) performance poetry event in which many contemporary oral poets are featured. In addition to live performances, Dike has also produced poetry audios and videos that have been widely circulated in digital formats.

Among his most popular lengthy oral performances are "Let's Be Honest", "Man-made gods", and "Made in Nigeria". "Made in Nigeria" poetry show has been performed in about 15 major cities in Nigeria including Lagos, Benin, Abuja, Jos, Kaduna, among others. Dike is an artist who fuses entertainment and a call for national consciousness. At the 23rd Nigeria Economic Summit, in October 2017, Dike's rendition of his poem, "The Wall and the Bridge" gained public attention as it focused on the need for national re-orientation and a re-awakening of social consciousness. Subsequently, on the 1st of May, 2018, Nigeria's Vice President, Prof. Yemi Osinbajo recited Dike Chukwumerije's poem, "The Revolution has no tribe" during his remarks on how Nigerians are shaping the future. Dike Chuwumerije has also been on several platforms and has shared the stage with Wole Soyinka at the 5th Lafarge Africa National Literacy Competition in Lagos on the 15th November, 2018.

Dike Chukwumerije is currently rated as Nigeria's most prolific contemporary oral poet

(www.tokinpen.wordpress.com; www.vanguardngr.com; www.greeninstitute.ng). Dike's poems come alive because they do not appeal to one's imagination but also to one's audio-visual senses. As such, he stands as one phenomenal poet that meaningfully contributes to the citizens' mental development outside the perimeters of formal learning. His poems do not just entertain, they enlighten lay people, expose evils perpetuated by the greedy, and the promote tolerance and understanding.

The Role of the Contemporary Oral Poet in National Development

Development, put simply, refers to a process of systematic growth or directed change. It can, then, be deduced that national development implies a process of collective or national systemic growth. Also, for a nation to achieve national development, all its sectors must make meaningful contributions. Thus, a developed nation has all is sectors, e.g transport, defence, economy, entertainment, agriculture, and education, progressing at significant rates such that the growth of one sector affects the other. Both orature and literature have a long history in fashioning out a people's identity and even their ideology. In corroboration, Isa and Hassan maintain that the artists use their art (verbal and written) "to carry the weight of literary creation of socio-cultural experience that is entirely Nigerian. They do this to project the image of the nation, correct social ills and advance the cause of the generality of Nigerians and to promote national unity, integration and development" (67).

As mentioned earlier, the contemporary oral poet has the unique advantage of entertaining both live and virtual audiences at the same time or different times using a foreign language or a mixture or both local and foreign language to convey the burden of a people's socio-cultural experience. The contemporary oral poet also harnesses the potential of digital technology in the production, processing, retrieving and sharing of verbal arts in such a way that it could be economically beneficial to him, gives him more visibility and, most importantly, enables him to transmit cultural values and ideals to his audience.

Dike Chuwumerije's poems, "The Wall and the Bridge" and "They Say I Come From a Free Country", in this paper, are sampled among his myriad oral performances to highlight the role of the contemporary oral poet in national development, chiefly by introspecting the collective consciousness of Nigerians and correcting negative stereotypes that inhibit national progress. Dike's poems are mainly crafted in accessible language such that some critics argue that his poems are 'spoken words' and not 'poetry', but Tanure Ojaide also says, "what makes good poetry is not its difficulty or obscurity but its expressive mode anchored in figurative language" (111) and, as we will soon find out, Dike Chukwumerije's oral poems do not fall short of Ojaide's prescription.

Both poems that will be looked at are videos accessed via YouTube and were published in 2018. However, "They Say I Come From a Free Country" was a live performance presented during one of his annual Night of Spoken Words (NWS) events in Abuja which was video-recorded and uploaded to a YouTube Channel from where it was republished on several YouTube Channels. Without being recorded it stands as an example of primary orality in which both the poet and his audience share the same space. The particular rendition of "The Wall and The Bridge" chosen for this paper involved a performance of the poets and different actors in different settings playing out the spoken words. This particular production by Ajifa Atuluku involved editing, background music and use of graphics. As such is an example of Ong's secondary orality more commonly known now as digital orature or cybernetic orature.

In "The Wall and the Bridge", the poet sits on a chair and in a flat tone he gently delivers his poem. During the 3 minutes and 18 seconds poem, his voice becomes louder as the poem develops and the accompanying tensions and actions rise higher. Towards the end of the delivery the poet becomes melancholic and the tension is relieved. For the purpose of this analysis, the digital time stamp will be used to locate some of the words that are spoken in the poem although what is visualized may not be adequately represented. The first few words of the poem go thus:

> If a white man turned and called me Nigger
> My blood will boil in righteous anger
> For the evil of discrimination is clearly established
> When a white man treats me like rubbish (0:10 – 0:23)

It is noteworthy that that "wall" and "bridge" are metaphorically used in the poem to connote 'division/discrimination' and 'connection/brotherliness' respectively. Hence, the wall created by the white man here is racism which denies that black man the right to be human. The poet, using the phrase, "righteous anger" makes an allusion to an occasion in the Bible where Jesus had to angrily chase out prostitutes and gamblers in the temple of

worship. The poet's reaction then demonstrates a natural reaction to social injustice. As the poem progresses, the poet uses the same analogy but brings it closer to the national reality in Nigeria:

> If those who were settlers but now indigenes
> Say those who are settlers can't become indigenes
> While the constitution says we are all citizens
> Local Governments keep issuing certificates of origin (0:51- 1:04)

The indigene versus settler dichotomy is responsible for civil disturbances in many places in Nigeria. Most of the crises in Jos, Plateau State, for example boil down to arguments over indigeneship whereas the constitution clearly makes provision for citizenship, guaranteeing all citizens the right to live, work, vote and be voted for anywhere in the country without recourse to one's place of birth or origin. The Igbos and Fulanis whose presence is felt in almost every Local Government in Nigeria are mostly barred from accessing citizenship rights in many places outside their own states.

Closely related to the man-made wall of indigeneship, is the wall of ethnicity, which is perhaps the most perilous paradox of the Nigerian society. While it mainly accounts for Nigeria's plurality and diversity of cultures, it is at the same time responsible for more than half of the socio-economic imbalances and crises in Nigeria. The poet gives an example, "If my brother passed JAMB but cannot go Uni because he is Tiv and not Kanuri and Unimaid has a Quota for its catchment area . . . ." (1:04 – 1:13). Toxic ethnicity is also the cause of the tacit ban on certain inter-tribal marriages owing to ethnic stereotypes. Once again, the poet establishes that tribalism and racism are identical twins as it can be gleaned from the words below:

> I don't get the logic of thinking it is different
> To be tribalistic and then to be racist;
> If you are happy to judge him just hearing his name
> Whatever you call it, my friend, it's the same (2:00 – 2:12)

Using, the apostrophe, the direct address to "you" and at the same time pointing to the viewer, the poet subtly admonishes the viewer to look inwards and judge himself whether he is also guilty of perpetuating ethnicism, racism or any other 'wall' that could impede national development. The poet then charges his audience to be courageous enough to surmount the walls that stand in the way of our collective progress, stating that no culture is older than humanity.

> Where there is no courage to cross this divide
> Where there is no faith to look deep inside
> And stop judging accents and surnames and dressing
> This fire we are quenching will only keep burning
> Which nation can stand dividing its people?
> How can one build on foundation so brittle?
> If we can not see ourselves in each other
> This journey ends here, we are going no further
> For when God made man, he gave him no facial marks
> He did not make Gbagyi, Okun or Angas
> As sure as a black man is just like a white man
> No culture is older than being human (2:00 – 2:53)

On a final note, on this poem, Dike Chukwumerije pauses to drop the last dose of truth, which is the kernel of the poem. That is, both "the wall and the bridge" are products of man's ingenuity and that building "walls" in a multi-ethnic society like Nigeria negatively affects national development whereas building "bridges" quenches tensions and accelerates collective progress. He says:

> This is the truth! Until we accept it
> Our nation will stumble on its broken feet
> The same things can bind us that drive us apart
> For the wall and bridge are both in the heart (2:55 – 3:18)

In the other poem, "They Say I Come from a Free Country", Dike Chukwumerije stands in front of a microphone with his hands folded behind his back wearing a black T-Shirt with the inscription, "THE REVOLUTION HAS NO TRIBE". He begins the poem prosaically from the point of Nigeria's independence, and then reels out the ethnic groups of each successive President or head of State Nigeria has ever had up until 2015 when President Muhammadu Buhari was elected. Here's an excerpt of the beginning:

> Every time I ask, people tell me
> Nigeria became independent in nineteen-sixty
> And furthermore, to show she was truly free
> She became a republic in nineteen-sixty three (0:00 – 0:13)

It is curious to note that Dike has the element of rhyme as one of his stylistics devices. A cursory look at all the excerpts from his poems mentioned here will reveal that fact. The end rhyme in the words above bear witness to this. This feature has helped the author of this paper to break the poem into lines but because the poem is not written is would

rather be awkward to judge the poem on the strength of its lines which were formed arbitrarily by the author. Perhaps it is in this regard that Ruth Finnegan says, "On the surface, this rule of thumb makes it easy for a school child to differentiate quickly between prose and poetry. But while listening it is hard to distinguish as the two genres could be mixed." (1970: 25). Additionally, as a style in this poem, the poet conceals the names of all the Presidents, making reference to their native languages only. For example:

> (laughs) But our first Head of State was Igbo
> And the next, though a soldier, also, Igbo
> Then Angas ruled followed by Hausa
> And then came the turn of Yoruba (0:35 – 0:48)

Having reached the present from the first head of stead, the poet poses a fundamental question: "Leaving me with this troublesome thought, where in all this is my own President?"(1:22 – 1:25). Once again, the ethnicity narrative comes to the fore and, regrettably, it takes priority over nationalism. Therefore, the patriotic Nigerian who desires to explore the benefits of being a Nigerian feels out of place once he is out of a tribe.

Tightly knitted with ethnicity is the issue of religion, which, like ethnicity in Nigeria, is both a constructive and destructive tool. Religion has fuelled several crises in Nigeria. Many have killed and maimed in the name of religion. Still on the matter, in the poem, Dike continues:

> Nobody asked when we were children,
> Before we play, "are you a muslim"
> We share a space that nobody claimed
> But now you ask me to choose a side
> When we were students nobody asked
> If north and south could share a desk
> If east and west could study together
> But now you tell me that I am a stranger
> Stranger? Yes! To these ways of thinking
> Thinking that tribe is everything
> The Niger and Benue, they meet in my hand
> I am not an indigene, but this is my land (1:36 – 2:02)

The words above aptly underscore the situation that Nigeria has been grappling with since independence: Mainly, religious intolerance, ethnic chauvinism, and regional discrimination. These factors largely account for the underdevelopment of Nigeria as they hinder unity and progress. Ironically, as the poet recounts, these invisible lines of division are absent among children and students yet

they manifest when one is expected to be wiser as an adult. But the poet takes a neutral, detribalized and more patriotic stand by saying:

> This is my language, I speak nothing else;
> My home is here, I know nothing else;
> My tribe is my nation, I have nothing else;
> And this is my country, I have nowhere else. (2:07 – 2:14)

Finally, the poet concludes on an optimistic note while admitting the presence of the ethnicity and discrimination. Here, the poet places his hope in the future having been disenchanted with the situations of the past and the present.

> And so, while the flag of ethnicity still flutters
> Over this land of two shining rivers
> And the tribes take their turn to misgovern my country
> I look to the future, for I am not yet free (2:51 – 3:04)

Of pertinence is the fact that, from the poems briefly analysed, the role of the contemporary oral poet should not be neglected or overlooked in the development of a nation like Nigeria especially when we consider its capacity to reach thousands or even millions of Nigerians within a short space of time. For example, Dike Chukwumerije's "The Wall and the Bridge" was presented before a live audience of at least a thousand people and was televised by national television stations which had live secondary audience of at least five million people and was further shared on the internet and social media handles to an uncountable number of viewers. The YouTube Channels where the author accessed the both of the analysed videos had a minimum of 20,000 views each as of time they were viewed. This means that when we have more contemporary oral poets consciously directing their art towards correcting societal ills and at the same time fostering national growth, Nigeria will become a better place.

Conclusion

While other professions seek to develop the physical world, the artist primarily aims for the unwiring and rewiring of the mind through cultural reorientation of the people with whom the artist shares a space. Achebe, cited in Adimora-Ezeigbo, instructs that the artist "should march right in front in the task of re-education and regeneration that must be done, for the writer (even oral artist) in the sensitive point in his community"(25). Oral artists' function, besides

entertainment, since primordial times, is also to edify his audience (Longdet and Deme, 315). Although globalisation has brought about new cultural influences and technology, vestiges of the oral tradition still exist even in the digital media and they still find expression such that they function in the society almost in the same way they had functioned in precolonial times. Isidore Okpweho declares that there has been an increasing tendency on the part of modern artists to identify with literary traditions in both content and technique to express their cultural experiences (83). Dike Chukwumerije, through his poems, fights to establish the consciously patriotic Nigerian caught in the clash between globalisation and ethnicity. He then becomes a vivid example of such artist who lend their artistic prowess to the unity, growth and development of Nigeria most especially at a time when mutual suspicion, enthnicity, religious intolerance, nepotism and the like have teamed up to assail one's faith in a country like Nigeria. Dike's contemporary oral poetry offers a broad ray of hope for Nigeria's development.

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AN OVERVIEW OF REGULATORY FRAMEWORKS FOR GENETIC ENGINEERING AND PLANTS VARIETIES IN NIGERIA

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ABSTRACT

The rise in use of biotechnology comes with its accompanying wave of problems that affect almost every fragment of the human life. Suffice to say, the results of those innovations have great bearing with respect to their protection as *"property rights"*. With development in many indispensable state-of-the-art equipment, there have been consequential innovations, advantageous mutations and varied explorations in diverse fields of human endeavor, which, to say the least, are methodological based and solution oriented. The reality of these innovations informs a corresponding need to protect various sorts of property rights, either via the grant of patents, copyrights, trademarks or industrial designs and in specific context pertaining to this discourse, plant breeders' rights. Employing the use of doctrinal research methodology, the focus of the ensuing discourse is targeted towards navigating the regulation of genetically engineered plants and plant breeding in Nigeria, whilst taking into consideration applicable regulatory frameworks relevant to the subject under view (international and domestic legal frameworks). Using the public interest theory, the research explores how the regime of the Plant Variety Protection Act, 2021 has brought increased development in the Nigerian agricultural landscape, obviously for public benefit. The paper further examine the strengths and lacunas inherent in the Nigeria Plant Variety Protection Act, 2021. As part of its findings, the discourse establishes that paucity in awareness of the laws regulating the industry and recommends the need for robust information dissemination and fortified implementation mechanisms/collaborations to ensure the intended objective of the Act is realized and impact maximized to impart the Nigeria's economy.

Keywords: Genetic Engineering, Plants Varieties, Public Interest Theory, Seeds, Breeder's Rights.

INTRODUCTION

Need for increased food security, reduction in agriculture-related pollution, development of sustainable sources of energy; sustainable agricultural practices and related benefits were the benchmarks necessitating stakeholders in the agricultural sector, with the backing of the legislature to develop a framework addressing plant breeding rights in Nigeria. Signed in May 2021 by President Mohammadu Buhari, the **Plant Variety Protection Act,** heralds the beginning of a regulated plant breeding practice in

Nigeria. The thrust of the framework is for the protection of plant varieties, encouragement of investment in plant breeding and crop variety development, and the establishment of Plant Variety Protection Office for the promotion of increased staple crop productivity for smallholder farmers in Nigeria.

As the largest growing economy in Africa with a population of over 200 million people[1], agriculture contributed about 28.65% to the nominal GDP of the nation in the third quarter of year 2024[2]. Importantly, Nigeria's agricultural sector is said to comprise four

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[1] Worldometer, "The Current Population in Nigeria", available at <htpps://www.worldmetwres.info/world-

population/nigeria-population/#> accessed on 11th February, 2025.

[2] Businessday, 'Services, Industry, Agric, Fuel Nigeria's Growth in Quarter 3',

sub-activities: crop production, livestock, forestry and fishing with crop production as the dominant player, making up 88.06% of the sector's overall nominal value. [3].

Nigeria's growing population and its implications for economic development makes the country a leader in Sub-Saharan Africa. The country is a prime destination for foreign investments; attracting scientists, breeders, farmers, and other agriculture stakeholders. According to the National Agricultural Seeds Council,[4] there are 157 registered seed companies in Nigeria, with the majority producing fewer than 1,000 metric tons of seeds annually. The Seed Entrepreneurs' Association of Nigeria is the country's main private seed trading body, with approximately 67 registered members. The new legislation thus commercializes seeds and propagate material and as such it is hoped to encourage national and multi-national investments in the Nigerian agricultural/seed sector[5].

THEORETICAL FRAMEWORK

The adapted theoretical framework used for this study, is the public interest theory. The elements of this theory though traceable to Pigou, was very much expanded by Max Weber[6]. The theory posits that government regulations, law and policies are made with a view to benefitting the general public and society. It is a theory commonly used in economics[7], politics and public policy and it is to the effect that government decisions and policies should be guided by the interests of the general public, rather than by the interests of specific individuals, group or corporations. The key principles of public interest theory are: serving the greater good, promoting social welfare, protecting vulnerable groups, encouraging

transparency and accountability. In tune with the subject focus, the Plant Variety Protection Act, 2021 was undoubtedly one of such laws made with the aim of expanding the frontiers of the Nigerian agricultural sector in line with best global practices and for the interest of the Nigerian people. Creation of visibility for plant breeder's in the nation and the recognition of plant breeder's rights, explicates a policy that is geared towards serving the greater good and more-so, protecting the values and ideals that makes for a vibrant agricultural industry. The fund as provided in the Act, shows intentions in ensuring the Seed and food industry in Nigeria is empowered and sustained to enable increased staple crops production, lead development in disease resistant, drought-resistant and high yielding varieties to support the Country's crop production. Also, the implementation of the law would drive value for Nigerian local farmers and propel socio-economic development of the nation.

NATURE AND MEANING OF GENETIC ENGINEERING AND PLANT VARIETIES

Genetics Engineering is the process by which geneticists, shift, delete, add or rotate genes. Specifically, plant breeders often seek to produce in plants a resistance to pests, more succulent taste, larger or more nutritious fruits and resistance to disease. This process results in organisms commonly referred to as genetically modifies or genetically engineered species[8].

J.S Robert and F. Baylis, described the process of genetic engineering as comprising multiple techniques for the intentional manipulation of genetic material (primarily deoxyribonucleic acid or DNA) to alter,

https://www.google.com/amp/s/businessday.ng> accessed on 11th February, 2025.

[3] Stephen Angbulu, 'Nigeria's Livestock Contribution to GDP Lags Despite 156 Million Cattle' <https://punchng.com/nigerias-livestock-contribution-to-gdp-lags-despite-156-million-cattle/?amp> accessed on 28th November, 2024

[4] The NASC was established in December, 2007 as an Agency of the Federal Ministry of Agriculture and Rural Development in line with the provisions of the national agricultural seeds act no. 72 of 1992.

[5] USDA Report, Government of Nigeria signed Plant Variety Protection Bill, by Ebenezer Boluwade, June 23rd, 2021, Report No. N12021-0005, p. 2.

[6] Wikipedia, '**Public Interest Theory'**, available at <https://en.m.wikipedia.org/wiki/public-interest-theory>

[7] Andrei Shleifer, *'Understanding Regulation'*, European Financial Management, vol. 11, no. 4, 2005, 439-451.

[8] Ibid at n 4

repair or enhance form or function[9]. Eugene Rosenberg, postulates that genetic engineering is also called recombinant DNA technology, which involves the group of techniques used to cut up and join together genetic material, especially DNA from different biological species, and to introduce the resulting hybrid DNA into an organism in order to form new combinations of heritable genetic material[10].

As the wordings imply, genetic engineering simply involves the process of modifying species DNA, in order create a recombinant breed of specie, informed by the hybridization or combination of the genetic or hereditary characteristics of the donor specie into the recipient specie. Genetic engineering also known as genetic modification or genetic manipulation, is the modification or manipulation of an organism's genes using technology. It is a set of technologies used to change the genetic makeup of cells, including the transfer of genes within and across species boundaries to produce improved or novel organisms. New DNA is obtained by either isolating and copying the genetic material of interest using recombinant DNA methods or by artificially synthesizing the DNA. A construct is usually created and used to insert this DNA into the host organism[11]. An organism that is generated through genetic engineering is considered to be genetically modifies (GM) and the resulting entity is a genetically modified organism (GMO). It is worth noting that genetic engineering has been applied in numerous fields, including research, medicine, industrial biotechnology and agriculture. In research, GMOs are used to study gene function and expression through loss of function, gain of function, tracking and expression experiments. By knocking our genes responsible for certain conditions it is possible to create animal model organisms of human disease, produce hormones, vaccines and other drugs. Genetic

engineering also has the potential to cure genetic diseases through gene therapy.[12]

The advantages of genetic modified crops, inter-alia, are: pest resistance, herbicide tolerance (making weed control easier), it allows more affordable prices for fruits and vegetables, it increases staple crop production, enhances nutritional contents, enhance development of sustainable sources of energy and enable reduction in agriculture related pollution[13].

On the other hand, **PLANT VARIETIES** aptly represents a more precisely defined group of plants, selected from within a species, with a common set of characteristics and genetically modified to bring about different varieties. Both processes are may furnish very minimal distinction, it is worthy to note that:

a. While genetic engineering involves the mutation of the genes of a specie or the recombination of the gene of different species altogether plant breeding/variety is usually developed through traditional breeding techniques such as selection, hybridization and mutation breeding.

b. The process of genetic engineering can introduce new and desired traits from unrelated species, however, plant breeding rely on traits from within the same or closely related species. i.e. using iterative techniques to combine desirable traits from parent plants to create new varieties such as, parent plant selection, cross-pollination, selection and evaluation, stabilization etc.

c. Genetic engineering or GMO are subject to stricter regulations and involves more controlled and precise process, however, plant breeding are usually regulated through intellectual or industrial property rights and

[9]J.S Robert and F. Baylis, 'International Encyclopedia of Public Health, (1st ed.) 2008
[10] Eugene Rosenberg, 'Genetic Engineering', [21st April, 2017], available at https://foi.org/10.2016/b978-0-12-812502-1.00010-x> accessed on 11th September, 2024

[11] En.mikipedia.org , available at <https://en.m.wikipedia.org/wiki/Genetic_engineering> accessed on 16th October, 2024
[12] Ibid, n 8
[13] National Institute of Food and Agriculture, USDA, 'Plant Breeding', available at <https://www.nifa.usda.giv/topics/plant-breeding> accessed on 27th November, 2024.

involves a more traditional and iterative process[14]

d. The process of "Genetic engineering" has been infused into a wide range of research studies cutting across various fields, plant variety/breeding is usually confined to ***"plants genera and species".*** Notwithstanding, the principles and techniques of breeding and variety development can as well apply to other organisms, areas or fields.

It is estimated that about 30% of people living in developing countries suffer from protein-energy malnutrition (PEM), a condition that imparts a heightened risk for diseases and causes slow or retarded development. PEM is caused by a deficiency of certain essential amino acids, the building blocks of proteins. Without these necessary components, the body is unable to manufacture the protein it needs, thus resulting in the aforementioned symptoms. However, plant breeders believe that having the requisite technology needed to mitigate the prevalence of this harmful condition would lead to promoting a balanced nutritional life. Instead of looking to doctors for the cure, plant breeders dug to the root of the problem and proposed a solution: ***Genetic Engineering[15]***. Aside this scientific process, plant breeding has been a conventional and even more contemporary way of creating nutritional sensitive varieties of plants. E.g. of such varieties are; hybridized corn, disease resistant wheat or high yielding soybean, etc.

CONCERNS ON PROTECTION OF PROPERTY RIGHTS ON GENETIC ENGINEERED PROCESSES/PLANT BREEDING

Amidst concerns surrounding the technology used in the genetic modification of species, of relevance to this research is issues arising from the ownership rights pertaining to the mutation of biological species to form a different breed. In other words, can there be an assigned industrial property right(s) arising from the modification or manipulation of an organism's genes to produce, improved or novel organisms?

According to Krupa Solanki and Dr. Tushar Chauhan,[16] Scientists research for years to develop new varieties which are economically important to us. Thus, it is very important to reserve their rights for using those transgenic plant species, especially for developing new Genetic Modified Organisms. IPR-Intellectual Property Rights for biotechnology or genetic engineering reserves these rights in forms of trademark, trade secret or patent. In addition to this, ideas, protocols, SOPs, software and other publications related to the product can also be considered in IPR documentations as well. This literally means that no one can use any form of one's idea or product arising from a genetic engineered process, either partially or fully without its original developer's permission.

Significantly, the right of producing, selling or importing inventions are commonly monopolized through patents. Once the period of patent expired, the product can be used in the form of ***"no profit share"*** publicly. The trade secret is another form of IPR in which the product information, SOPs, protocol, business ideas and clientele remains protected.[17] Notwithstanding these measures, most laws regarding protection of a breeder's right of their genetically modified novel species are regulated by the domestic laws of various nations.

For example, in Nigeria, the Plant Variety Protection Act, 2021 is of absolute importance in filling the gap is Nigeria's Variety Protection Policy, breeder's registration, breeder's protection, variety propagation etc.

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[14] For example, GMOs are regulated by Government Agencies, such as USDA, EPA and FDA in the United States.

[15] Gwinn Makayla, *'A Survey of Plant Breeding and Genetic Engineering',* the idea of an essay. Vol. 6, Article 15, available at <https://digitalcommons.cerdarville.edu/idea_of_an_

essay/vol6/iss1/15> accessed on 20th November, 2024.

[16] In their article, "*Values of IPRS Intellectual Property Rights in Genetic Engineering'',* [2019], IJRAR, June 2019, Vol. 6, Issue 2

[17] Ibid at n 1

Similarly, In Africa, about 10 countries, including South Africa, Kenya, Morocco, Tanzania, Ghana etc., have their own versions of policies in place protecting plant breeders' innovations. This has elevated the introduction and disbursement of new varieties in those countries. South Africa, for instance, one of the leaders in the Africa's seed market, has had a Plant Breeder's Rights Law since, 1976, while Ghana recently, also passed its own Plant Variety Protection Act (Act 1050), passed in 2020. The moves by these nations has not only cemented the void in intellectual property right of plant breeder's in Africa but as well encourage breeders of plants who are, scientists, researchers or common farmers to be recognized, protected, paid for the work they do and also incentivize them to deliver quality seeds to boost ongoing agricultural initiatives[18].

REGULATORY FRAMEWORKS ON PLANT VARIETIES RIGHTS

- **Highlights of the International Convention for the Protection of New Varieties of Plants (ICPNVP), 1991**

The International Convention for the Protection of New Varieties of Plants (ICPNVP), 1991 is the more recent international framework for the protection and regulation of plant varieties amongst Members to the Convention. The Convention was an amendment to the preceding convention of 1978.[19]The Convention sets the mark as a unifying framework for the recognition, protection, grant and enforcement of plant breeder's right, especially amongst members states who are part of the UPOV[20]. Although, it is to be earmarked that the Convention did not specifically capture any *'industrial property title'* to be approved for a developer or breeder of a novel plant variety, however, any such developer or breeder of a variety by way of application and passing of some criteria would be granted "*Breeder's Right*" against all others (unless

as exempted) over the variety. However, the Convention allows reservations by State parties to the Convention to provide protection for such rights through the use of an industrial property title as far as varieties produced asexually are concerned[21]. The Convention also allows members of the **Union** right to conclude among themselves special agreements for the protection of varieties, in so far such agreements do not contravene the provisions of the Convention.[22] The Convention, in its definition clause, emphasizes the meaning of concepts such as "**breeder, breeder's variety**", etc. The *breeder* is defined as:

a. A person who has selected, discovered or developed a variety
b. The person who employed or is the employer of the person mentioned above or who has commissioned the work, where the legislation of the relevant Contracting Party, so provides, or
c. The successor in title of the first or second person mentioned above, as the case may be[23]

On the other hand, "*breeder's right*" was described to mean, the right of the breeder as provided for in the Convention[24]. These can be said to mean privileges that are exclusively enjoyed by a plant breeder who has applied and have been granted such rights.

Consequently, "*variety*" designates a grouping of plants within a single botanical taxon of the lowest known rank, which grouping, despite the fact that the conditions for granting the breeder's right are fully met, may be:

i. Determined by the expression of characters resulting from a given genotype or combination of genotypes,
ii. Is distinguished from any other group of plants by the expression of at least one of the mentioned characters and

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[18] Joseph Opoku Gakpo, "New Law Gives Ghana's Plant Researchers Incentive to Develop New Varieties" available at https://allianceforscienceorg/blog/2021/01/new-law-gives-ghanas-plant-researchers-incentive-to-develop-new-varieties/ accessed on 11th February, 2025.
[19] See Art 1(iii) of the ICPNVP, 1991

[20] Union for the Protection of Varieties.
[21] Art 35(2), ICPNVP, 1991
[22] Art 32, ICPNVP, 1991
[23] Art 1 (iv) ICPNVP, 1991
[24] Art 1 (v) ICPNVP, 1991. These rights can be gleaned from Art 14 of the Convention.

iii. Is considered a unit in relation to its capacity to reproduce or propagate without being modified[25].

On the recognition and protection of a breeder's right by member's States, the ICPNVP 1991 imposes as a fundamental obligation on each contracting party to the Convention on the need to ensure the granting and protection of the right of the obligor or breeder[26]. In this sense, a contracting party is intended to be a State or an intergovernmental organization party to the Convention[27].

Article 3 of the Convention also requires State Parties which are already members of the Union for the Protection of New Varieties of Plants and new members of the Union on the date on which they become bound by the Convention; later on the expiry of a period of 5 years (for old members) and 10 years (for new members) from the date on which they become signatories to the agreement, to ensure the protection of all plant genera and species[28].

The Convention also provides for *National Treatment* by the Contracting Parties in respect of breeders' rights. The Convention grants nationals of a Contracting Party, as well as natural and legal persons having their regional headquarters in the territory of a Contracting Party (as far as the granting of breeders' rights is concerned), the right to enjoy in the territory of every Contracting Party to the Convention, the same treatment as that which is or may be granted by the legislation of another Contracting Party to its nationals, provided that the nationals, natural or legal persons comply with the conditions and formalities imposed on citizens of that other Contracting Party[29].

CONDITIONS FOR THE GRANT OF RIGHTS UNDER ICPNVP, 1991

The Convention specifically specifies 4 criteria which must be met for the grant of a breeder's right. The Convention provides that a breeder's right will be granted when the variety is:

1. New or novel
2. Distinctive
3. Uniform and
4. Stable

New or Novel

Novelty here, is synonymous to innovation and it means new or unpublished. A variety is considered new if, at the date of filing of the application for the breeder's right, the propagating or harvesting material of the variety has not been sold or otherwise transferred to third parties, by or with the consent of the breeder, for the purposes of exploiting the variety.

Consequently, in the territory of the Contracting Party in which the application is filed, the variety in question has not been propagated or harvested earlier than one year before the date and time of the filing of the application, and if it was in a territory other than that of the Contracting Party, four years before the date and time of the filing of the application, or in the case of trees or vines, six years before the said date[30].

In the case of recent creations, when a Contracting Party applies this Convention to a genus or species of plant to which it has not previously applied this Convention or a previous act, it may consider that a variety of the recent creation existed at the date of creation. This extension of protection shall satisfy the condition of novelty defined in paragraph (1) even if the sale or transfer to other persons described in this paragraph took place before the time defined in this paragraph[31].

Distinction:

A variety is considered distinct if it is clearly distinguishable from any other variety whose existence is well known at the time the application is filed. In particular, the filing of an application for the grant of a breeder's right or the registration of another variety in an official variety register, in any country, is considered to be recognition of the other variety at the date of the application, provided that the application

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[25] Art 1(5) ICPNVP, 1991
[26] Art 2, ICPNVP, 1991
[27] Art 1 (vi) ICPNVP, 1991
[28] Art 3, ICPNVP, 1991

[29] Art 4, ICPNVP, 1991
[30] Art 6(1), ICPNVP, 1991
[31] Art 6(2) ICPNVP, 1991

leads to the grant of a breeder's right or the registration of the other variety in the official variety register, as the case may be[32].

Uniformity:

By convention, a variety is considered to be uniform or homogeneous if, in view of the variation that can be expected from the characteristics of its propagation, it is sufficient that same is uniform in its relevant characteristics[33].

Stability

The variety shall be deemed to be stable if its relevant characteristics remain unchanged after repeated propagation or, in the case of a particular cycle of propagation, at the end of each such cycle[34].

The above 4 (four) criteria reflects similar conditions in the domestic frameworks enacted by contracting parties to the Convention on conditions necessitating the granting breeders' right within their municipal States.

APPLICATION FOR THE GRANT OF THE BREEDER'S RIGHT.

The procedure for the grant of a breeder's right is enumerated in Article 10 of the Convention. The said provision, provides for the place of the first request. At this stage, the breeder can choose the authority of the Contracting Party to which he wants to submit the request for his right to be the first breeder of that variety[35].

In same vein, the Convention allows an Applicant (producer) to submit subsequent requests for the grant of the breeder's right. This can be done by applying to the authorities of other Contracting Parties for the grant of the breeder's right without waiting for the authority of the Contracting Party with which the first request for the grant of the breeder's right was made or first filed[36].

The Convention also provides for the **Independence of the protection of a breeder**. In that, no Contracting Party may refuse to grant a breeder's right or limit its duration on the grounds that protection of the same variety has not been requested, refused or expired in another country or intergovernmental organization[37].

The Convention further made provision with respect to **Right of Priority** on plant breeding. It allows any breeder who has duly filed an application for the protection of a variety in one of the Contracting Parties (the "first application"), for the purpose of filing an application for the grant of a breeder's right for the same variety with the authority of any other Contracting Party (the "subsequent application"), to enjoy a right of priority for a period of 12 months. This period is calculated from the date of presentation of the first application. The day of filing is not included in the subsequent period[38].

The Convention also requires Contracting Parties to examine/consider the application for the grant of a breeder's right. In this regard, any decision to grant a breeder's right requires an examination of compliance with the conditions laid down in Articles 5 to 9 of the Convention[39]. During the examination, the authority may grow the variety or carry out other necessary tests, have the variety grown or carried out other necessary tests, or take into account the results of growing tests or other tests already carried out[40]. For the purposes of the examination, the authority may request the breeder to provide all necessary information, documents or materials to enable them adequately examine the variety. The competent authority in question, is the municipal parastatal organization of the country of the contracting party, responsible for the implementation of the convention with regard to the granting of breeders' rights[41].

Within the designated procedures for applying for the granting of breeders' rights, the Convention as well

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[32] Art 7, ICPNVP, 1991
[33] Art 8, ICPNVP, 1991.
[34] Art 9 of the ICPNVP, 1991
[35] Art 10 (1) ICPNVP, 1991
[36] Art 10(2) ICPNVP, 1991
[37] Art 10(3) ICPNVP, 1991

[38] Art 11, ICPNVP, 1991
[39] These are the 4 criteria to be satisfied for the grant of the breeder's right.
[40] Art 12, ICPNVP, 1991
[41] Art 13(1)(ii) ICPNVP, 1991.

provided for ***temporary protection***, this implies recognizing the intellectual property right of a prospecting breeder. Here, the Convention categorically emphasized that each Contracting Party must take measures to protect the interests of the breeder during the period between the submission or publication of the application for the granting of the breeders' right and the actual granting of that right. It is noteworthy to state that the provisional protective measures shall have the effect that the holder of the breeders' right is entitled to at least fair remuneration from any person who, during the period in question, has carried out acts which, after the granting of the right, require the authorization of the breeder. A Contracting Party may provide that the said measures shall only take effect in relation to persons whom the breeder has notified of the filing of the application[42].

RIGHTS AND LIMITATIONS OF THE BREEDER

Article 14 of the Convention lists the scope of the breeder's right. Subject to Articles 15 and 16, the following acts concerning "**propagating material of the protected variety**" shall require the breeder's authorization:

(i) production or reproduction (multiplication),
(ii) the condition for multiplication,
(iii) offering for sale,
(iv) sale or any other form of marketing,
(v) export,
(vi) import, storage for any of the purposes mentioned in points (i) to (vi) above[43].

The above-mentioned privileges or rights belonging to a breeder under Article 14 of the Convention can only be availed a third party, only, subject to certain limitations, with the authorization of the breeder. However, it is not mentioned in the Convention the modus operandi

in which such authorization can be applied and granted.

Consequently, the Convention provides for the following exceptions to the rights of the breeder. They are:

Acts taken privately and for non-commercial purposes, acts taken for experimental purposes and action taken with the aim of creating other varieties (except where such other varieties are essentially derived varieties)[44] are compulsory exemptions to the rights of a breeder. In other words, any actions carried out for the foregoing purposes are exempted from and do not extend to those rights enjoyed by a breeder.

There is another category of optional exceptions. Here, each Contracting Party may, within reasonable limits and subject to the protection of the legitimate interests of the breeder, restrict the breeder's right for any variety, in order to allow farmers to use it for propagating purposes, in their own farm, the product of the harvest which they have obtained by planting in such farm or the said protected variety or a variety that is deemed essentially derived[45].
A variety is deemed essentially derived from another variety (known as the initial variety) where;

it is predominantly derived from the initial variety, or from a variety that is itself predominantly derived from the initial variety, while retaining the expression of the essential characteristics that result from the genotype or combination of the genotypes of the initial variety or it is clearly distinguishable from the initial variety.[46]

THE NIGERIAN PLANT VARIETY PROTECTION ACT 2021

The concept of creating new plant varieties through the process of plant breeding is not entirely new to

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[42] Art 13 and 14, ICPNVP, 1991.
[43] Art 14, ICPNVP, 1991.
[44] Art 15(1); 14 (5) ICPNVP, 1991.

[45] Art 15(2) ICPNVP, 1991.
[46] Art 14(5)(b)(i)-(iii).

Nigeria, as there have been some amateurish practices by farmers in this field before the intervention of any regulatory framework. Prior to 2021, there was no framework for the protection, regulation and enforcement of plant breeder's rights; more so, Nigeria was not a signatory to the International Union for the Protection of New Varieties of Plants (UPOV) Convention. The previous position to a large extent, impeded the exploitation of such rights; it even deprived plant breeders in Nigeria access to high-quality new varieties from foreign countries, as such relations may be discouraging to foreign plant breeders where the new variety cannot be protected.

Consequently, in May 2021, President Muhammadu Buhari signed into law the Plant Variety Protection Act 2021 to establish a functioning regime protecting plant varieties in Nigeria. Consequent to the promulgation of the Act, Nigeria became signatory to the International Convention for the Protection of New Varieties of Plants, 1999 and the Union for the Protection of Varieties of Plants (UPOV) reaffirmed Nigeria's conformity with the ICPNVP, 1991, allowing Nigeria to become a UPOV member[47]. The PVP Act demonstrates Nigeria's commitment in transforming agricultural production while encouraging global companies to invest in local seed business activities in Nigeria[48].

MAJOR ELEMENTS OF THE ACT
The Plant Variety Protection Act, 2021 protect plant varieties, encourages investment in plant breeding and crop variety development and establishes a Plant Variety Protection Office for the promotion of increased staple crop productivity for smallholder farmers in Nigeria. The Act makes provision for a Plant Variety Protection Office, known as **'the office',** which is domiciled in the National Agricultural Seeds Council (NASC) and same is administered by Registrar[49] who is appointed by the Board of the NASC on the recommendation of the Director General.

The Office as maintained by the Registrar is responsible for the Granting of breeder's right, maintaining a register and providing information on plant breeder's rights that are issued in Nigeria by the Plant Variety Protection Office. The Registrar further has a duty to facilitate the transfer and licensing of plant breeder's rights, ensure networking and collaboration with local and international bodies whose functions relate to issues surrounding a breeders' rights and as well perform other functions as are necessary for the facilitation of the Nigerian Plant Variety Protection Act, 2021[50].

Significantly, the Plant Variety Protection Act, 2021 was promulgated majorly to enhance the following Objectives:

i. Promote increased staple crops productivity for smallholder farmers in Nigeria and encourage investment in plant breeding and crop variety development.
ii. Promote increased mutual accountability in the seed sector
iii. Protect new varieties of plants.
iv. Promote food Security and Livelihood in Nigeria as well as enhance Nigeria's agricultural landscape in line with best global practices.
v. Bridge the gap in agricultural financing initiatives in Africa.

To bolster the objective of the Act, a Breeder's right development fund was established[51]. The fund is applied towards the development and promotion of the rights of plant breeders. The fund is also applied for

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[47] Managing IP, *'Nigeria's Plant Variety Protection: in line with international IP Norms'* <https://www.managingip.com/article/2a5d034hr8td8p0rej669/nigerias-plant-variety-protection-in-linw-with-international-ip-norms> accessed on 27th November, 2024.
[48] Ifeanyi E., Blessing Udo & Kayode Ikumelo, "*Overview of the Nigeria's Plant Variety Protection*

Act, 2021 and its Impact of Section 43(2) on Plant Breeders", available at <https://sssrn.com/abstract=3928965> accessed 11th September, 2024.
[49] The Registrar referred to in the act is the Registrar of Plant Breeders Rights
[50] S. 5 of the Plant Variety Protection Act, 2021
[51] S. 44 of the PVP Act, 2021

the training of plant breeders and establishment and maintenance of plant variety collection and data base. The funds can as well be used for any other activity relating to the administration of the Act. The establishment of the fund is a collaborative effort between the Ministry of Agriculture and Ministry of Finance and it presents an attempt towards maintaining viable development in Nigeria's agriculture landscape, especially towards breeder's intellectual property rights.

The Plant Variety Protection Advisory Committee
The Act makes provision for the establishment of the Plant Variety Protection Advisory Committee. This is an ad-hoc committee, comprising relevant key stakeholders in the seed value chain sector. These stakeholders is appointed by Director General of the National Agricultural Seeds Council (NASC)[52].

The Advisory Committee in accordance with the Act, is mandated to take on the following roles:

i. Advising the Minister of Agriculture on the enforcement of the provision of the Plant Variety Protection Act, 2021.
ii. Receive reports of plant breeders' rights applications from the Registrar
iii. Receive information on the plant breeders' right reports and as well get information of the registrar's test results.
iv. Manage the operations of the Plant Breeder's Rights Development Fund.[53]

Protected Varieties and Conditions for grant of a breeder's right
The Act makes provision for the protection of varieties. This protection applies to all plant genera and species. Furthermore, the Act stipulates conditions necessitating the protection of a breeder's rights. To this end, the right of a plant breeder can only be granted with respect to a variety which is **New, Distinct, Uniform** and **Stable**[54]. This is akin to conditions for protection as stipulated under the International Convention for the Protection of New Varieties of Plants.

Application for Breeder's right
According to the Act, the breeder of a new plant variety is enjoined to apply for the grant of a 'breeder's right' for that variety. Such application should specify the following[55]:

a. The name and address of the applicant.
b. Where the Applicant is the successor-in-title of the person who bred or discovered and developed the variety:
   - Proof of title or authority in the form and content satisfactory to the registrar or may be specified by regulations establishing the existence and validity of assignment or succession, and
   - The name and address of the person who bred or discovered and developed the variety.
c. The proposed denomination and description of the characteristics of the variety as the Registrar may require.
d. Samples of the propagating material in quantities as the registrar may require, and
e. Any additional information, documents and material that may be required in connection with the application as may be prescribed in the Act.

Nullity, Cancellation and Surrender of the breeder's right
The rights of a breeder are not absolute and can be neutralized, based on stipulated infraction. The Registrar of NASC has power to declare a breeder's right granted by him null, where it is proven that:

1. The variety did not comply with the conditions specified in sections 14 and 15 of the Act at the time the breeder's right was granted.[56]

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[52] S. 9 of the PVP Act, 2021
[53] S. 10 and 11 of the PVP Act 2021
[54] Section 13 PVP, 2021

[55] Pt IV of the Plant Variety Protection Act, 2021
[56] Section 14 and 15 of the Act has to do with the conditions for the grant of a breeder's right

2. Where the grant of the breeder's right has been essentially based upon information and documents furnished by the applicant, the conditions laid down in section 16 of the Act were not complied with at the time of granting the breeder's right; or

3. The breeder's right has been granted to the person who is not entitled to it, unless it is transferred to the person who is so entitled[57].

Similarly, the Registrar can cancel a breeder's right, where it is established that the conditions as specified in Section 16 of the Act are no longer fulfilled[58]. Again, the Registrar may as well cancel a breeder's right where the holder of the breeder's right does not provide the information, documents or materials deemed necessary for verifying the maintenance of the variety within the period as provided in the regulation made under the Act[59]. In same vein, Where the holder of the breeder's right fails to pay the fees which may be payable to keep his right in force or does not propose another suitable denomination where the denomination of the variety is cancelled after the grant of the right, the registrar would cancel any such breeder's right[60].

Furthermore, the Act allows the holder of a breeder's right by a written notice to the Registrar make a surrender of any right previously granted to them. Where this is the case, the Registrar shall within one month from the date of receiving the notice of surrender, terminate the breeder's right and publish a notice in the Federal Government Gazette or two national daily newspapers effecting such termination[61].

CHALLENGES ARISING FROM THE ENFORCEMENT OF A BREEDER'S RIGHT UNDER THE PLANT VARIETY PROTECTION ACT, 2021

One of the notable shortcomings in the Act is the provisions of section 42 and 43 of the Nigeria Plant Variety Protection Act, 2021. Here the Act makes the decision of the Minister of Agriculture, sitting as an appellate body, final, with respect to any issue arising from the grant of a breeder's right.

Section 42 of the Act is hereby reproduced;
"42(1) an appeal from the decisions of the registrar made under this act shall lie to the minister (of agriculture)
(2) A person who is aggrieved by any of the decisions of the registrar may appeal to the minister by submitting a notice of the appeal within 60 days following the publication, or of the receipt, of the individual notice of such decision by the person whose interest is the source or subject of the appeal.
43(1) the minister;

  (a) May conduct an investigation, if he deems necessary to do so, and may hold a hearing of the appeal or make a decision based on a written submission.
  (b) May confirm, set aside, or vary any decision or action of the registrar and may order the registrar to carry out his decision; and
  (c) Shall give the reasons for his decision in writing, and copies of the decision shall be given to the appellant, the registrar, and any other interested party.
(2) Subject to the provision of this section, a decision of the Minister (of agriculture) shall be final".

It has been argued that aforesaid provision of the PVP Act is unconstitutional and inconsistent with the provision of the Nigerian Constitution by allowing the decision of the Minister (of Agriculture) sitting on appeal, to be final in respect of matters arising from the Act. This is more so as it implies ousting jurisdiction of the court of law in sitting over disputes arising from a breeder's right. Section 4(8) of the 1999 Constitution provides:

> *"save as otherwise provided by this Constitution, the exercise of legislative powers by the National Assembly or by a House of Assembly shall be subject to the jurisdiction of a court of law and of judicial*

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[57] S. 35(a)(b) and (c) of the PVPA, 2021
[58] S. 36(1) of the PVPA, 2021
[59] S. 36(2)(a) of the PVPA, 2021

[60] S. 36(2)(b)(C) of the PVPA, 2021
[61] S. 38 of the PVPA, 2021.

tribunals established by law, and accordingly, the National Assembly or House of Assembly shall not enact any law, that ousts or purports to oust the jurisdiction of a court of law or of a judicial tribunal established by law".

From the clear wording of the above provision, the supremacy of the Constitution was affirmed as against statutory provisions, especially those provision providing ouster clauses, since the Constitution expressly prohibit the legislature from enacting any law which ousts or purports to ousts the jurisdiction of a court of law, except as permitted by the Constitution. **Consequently, in Inakoju v. Adeleke[62] the Court held that:**

> *"Ouster clauses are generally regarded as antithesis to democracy as the judicial system regards them as unusual and unfriendly. When ouster clauses are provided in statutes, the courts invoke section 6 as barometer to police their constitutionality or constitutionalism" (@ pp. 597, paras E-H)*

Therefore, since the legitimacy of section 43(2) of the PVP Act is tethered to the constituency of the Constitution, it is safe to say that in specific situations, the operation of the appeal procedure provided under both sections may fall short of this salient requirement for validity and will therefore be void to the extent of its inconsistency. In any case, where section 43(2) of the PVP Act becomes *sub-judice*, the court will not strip itself of jurisdiction as it will find the same provision to be unconstitutional and *Ultra Vires* the power of the legislature[63].

The point has been made that section 43(2) may present a business-friendly atmosphere through which parties may expediently resolve their disputes by the Minister in its appellate capacity from the decision brought before it from the Registrar by foreclosing the cumbersome and lengthy litigation proceedings.

However, the point still remains that the procedure is unconstitutional and it cannot effectively stop parties from exploring appeals to the court of law in necessary instances. The point should be made clear that, in any case, the office of the Minister is not the suitable channel in resolving disputes in the finality between parties as to the adjudication of their rights and duties, notwithstanding the hitches fraught with litigation[64].

Ifeanyi E. Okonkwo, etal, further recommended in their work that, to prevent this challenge, section 43(2) of the PVP Act has to be amended to expressly include appeals to the court from the decision of the registrar in lieu of appeals to the Minister. This ensures that such disputes are brought to the right forum which could then boost stakeholder's confidence in the dispute resolution mechanisms established by the Act. As an alternative, the act could be amended to create an Arbitration Tribunal to which appeals from the decision of the registrar would lie. Similarly, further appeals from the decision of the tribunal would lie to the court in accordance with the provisions of this Constitution[65].

Impact of the Nigerian Plant Variety Protection Act 2021

In alignment with the public interest theory, the PVP Act as one of its take-away, will provide legal intellectual property rights to plant breeders who developed new and improved seeds for increased crop production. The PVP Act is calculated to help the country move from generation $0 from seed export to generating well over $2.0 billion USD from seeds export within the first by years of the operationalization of the law. With Nigeria's growing population, set to double about 400 million by the year 2050, there is the urgency in putting together steps to enhance strategic investment in the agricultural sector, especially by providing high quality seeds to farmers to boost food production and strengthen national food security and livelihoods[66]. The PVP Act would give breeders and investors in the seed sector the assurance

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[62] (2007) 4 NWLR (Pt. 128) 500
[63] Ibid, n 40, p. 11
[64] Ibid, n 40 p. 12
[65] Ibis, n 40 p. 12

[66] USDA Report, Government of Nigeria signed Plant Variety Protection Bill, by Ebenezer Boluwade, June 23rd, 2021, Report No. N12021-0005

and confidence to invest in Nigeria while addressing the current issue of unacceptably low yield per hectare produced by farmer. Increase in investment in the seed sector arising from the operationalization of the Act would no doubt create well-meaning jobs, especially in rural areas and further result in massive contribution to Nigeria's GDP.

The Act also creates a structure for protecting plant varieties in Nigeria and while providing recognition and proper remuneration for the breeders who developed these varieties. Further, the Act enhances collaborations amongst relevant stakeholders in the agricultural sector to providing value to the industry as well as creates an enabling environment for agricultural research. These initiatives would no doubt lead to a vibrant and competitive agricultural landscape.

CONCLUSION AND RECOMMENDATIONS

The quest to cover the gaps in the agricultural industry in Nigeria informed the enactment of the Plant Variety Protection Act, 2021. The Act undoubtedly sets to be a game changer as the country envisions economic growth through agricultural value chains for the improvement of her food security. It is said that the existence of a legal framework and administrative structure as enshrined in the Act will spur private sector investment in developing new and novel varieties.

Amidst the promising impacts of the Act, it is recommended that all hands be on deck to ensuring the provisions of the Act is duly implemented. It is further recommended that collaborations both at the local, regional and international level be effected to actualize the objectives of the Act. There should be provisions for agricultural sensitive interventions, which cuts across key sectors, such as, finance, technology, policy advocacy, inclusivity, labour etc., to enable maximization and effectiveness of the provisions of the Act in the relevant industry.

Finally, awareness creation and information dissemination on plant breeding should be disseminated across stakeholders in relevant sectors to accentuate the actualization of the intendment in the Act.

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EFFECTS OF COLLABORATIVE LEARNING ON STUDENTS' INTEREST AND ACADEMIC PERFORMANCE IN SOCIAL STUDIES IN KATSINA-ALA LOCAL GOVERNMENT OF BENUE STATE

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ABSTRACT

This paper examines effects of collaborative learning on students' interest and academic performance in Social Studies in Katsina-Ala Local Government of Benue State . The study was guided by two research questions. Two hypotheses were formulated and tested. The study employed quasi-experimental design. The population of the study comprised 5,258 Upper Basic II students from Katsina-Ala Local Government in Benue State comprising 3,210 male and 2,048 female students, out of which 215 students comprising 113 male and 102 female Upper Basic II students was used for the study. Social Studies Performance Test (SSPT) and Social Studies Interest Questionnaire (SSIQ) developed by the researcher were used for data collection. SSPT consists of Sections A and B. Section A sought bio data of the respondents, while section B has 40 multiple choice items with options lettered A – D. Topics covered are culture, marriage, family and drug abuse from Upper Basic II Social Studies curriculum. SSIQ is also made up of sections A and B. Section A sought bio data of the respondents like gender while section B has 20 items on interest with response options ranging from very high (4 points), high (3 points), low (2 points) and very low (1 point) for positive items; but however in reverse order for negative items. Mean and standard deviations were used to answer the research questions. Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 level of significance. The findings revealed that there is significant difference in the mean interest ratings of students taught Social Studies using collaborative learning approach and those taught using conventional approach. Finally, there is significant difference in the mean performance scores of students taught Social Studies using collaborative learning approach and those taught using conventional approach at Upper Basic II Education level. It was recommended among others that Social Studies teachers should use collaborative approach to ensure effective teaching and learning so as to enhance students' interest and performance in Social Studies instead of the conventional approach..

Keywords: Social Studies, Collaborative learning, students' interest and academic performance.

INTRODUCTION

Social Studies is one of the disciplines offered in Upper Basic schools today. Social studies examine a wide range of human experience. Over the years, academics have given social studies various definitions. According to Samad & Rashari (2022), social studies is a course of study that a society utilizes to impart to students (learners), the knowledge, abilities, attitudes, and behaviors it deems crucial for understanding how people relate with one another, their environment, and themselves. Social Studies is a discipline aimed at achieving the national goals of education in Nigeria, which are national unity, national consciousness, self-reliance, and national rehabilitation by inculcating positive values, concepts, beliefs ideology in learners, helping them in the needed behavioral changes. It focused in preparing Nigerian youngsters to become decent citizens capable of contributing significantly to national progress between man and his environment. In recognition of its importance, the Federal Republic of Nigeria in 2013 made Social Studies a compulsory subject both at primary school level and junior secondary school level.

Social Studies draw its concepts rom multiple disciplines within the social sciences and humanities at the primary and secondary levels of education such as History, Government, Economics and Religion. Social Studies is a crucial subject that helps students understand the world they live in. It covers history, geography, civics, economics, and culture, shaping well-rounded individuals who can contribute positively to society. It teaches students about their rights, responsibilities, and the importance of participating in society. Professions like law, journalism, public administration, and teaching require strong social studies skills. A good grasp of the subject helps students address and respond to global challenges like climate change and social justice. By excelling in Social Studies, students not only improve academically but also become responsible citizens who contribute to a better society. It is against this backdrop that it became imperative to carry out a study on the effect of collaborative learning approach on students' interest and academic performance in Social Studies in Katsina-Ala Local Government in Benue State

Statement of the problem

Social studies play an important role in instilling positive values, attitudes, and social skills in citizens, as well as presenting appropriate solutions to the country's social problems. Unfortunately, evidence from the literature suggests both male and female students' enthusiasm and performance in the subject have been poor.

This lack of student enthusiasm and performance in the subject has been attributed to the employment of a flawed teacher-centered teaching strategy, which only provides learners with passive learning experiences. The search for an effective teaching approach that may engender high performance and interest in Social Studies has become vital as learners' performance and interest in the subject decline, regardless of gender.

Contemporary teaching approaches promote the use of learner-centered and engaging teaching and learning approaches, such as collaborative learning, which involves the collective sharing of ideas when learners are exposed to learning activities. According to the researcher's personal observations based on literature data, there are few studies on the effects of collaborative learning on students' interest and performance in Social Studies in the studied region. Again, there is no consensus in research reports on the effect of collaborative learning on interest and performance of students in Social Studies based on gender. The conflicting nature of the research reports necessitated this study which is set to determine the effects of collaborative learning on students' interest and academic performance in Social Studies in Katsina-Ala Local Government in Benue State.

Purpose of the Study

The purpose of this study is to:
1. determined the difference in the interest ratings of students taught Social Studies using collaborative learning approach and those taught using conventional approach;
2. compared the difference between the performance of students taught Social Studies using collaborative learning approach and those taught using conventional approach

Research Questions

The following research questions are formulated to guide the study:
1. What is the difference in the mean interest ratings of students taught Social Studies using collaborative learning approach and those taught using conventional approach?
2. What is the difference in the mean performance scores of students taught Social Studies using collaborative learning approach and those taught using conventional approach?

Hypotheses

The following hypotheses are formulated and tested for the study:

1. There is no significant difference between the mean interest ratings of students taught Social Studies using collaborative learning approach and those taught using conventional approach

2. There is no significant difference between the mean performance scores of students taught Social Studies using collaborative learning approach and those taught using conventional approach.

LITERATURE REVIEW

Conceptual Framework

Collaborative learning, in which students work together to solve problems and complete tasks, has been found to improve engagement and performance, particularly when using approaches such as peer discussions and group problem solving. This approach fosters positive interdependence, with students' success depending on group collaboration and individual accountability, ensuring that all members contribute actively. Such participation not only improves knowledge retention, but it also encourages skills such as critical thinking and communication, both of which are important in social studies.

Collaborative learning is an educational approach where students work together in groups to achieve shared learning goals. Rather than focusing solely on individual achievement, collaborative learning emphasizes interaction and mutual support to build understanding and solve problems. This approach encourages students to actively engage with each other's ideas, share insights, and learn from diverse perspectives. According to Johnson & Johnson (2017), a key feature is positive interdependence, where each member's success is linked to the group's success, fostering a sense of responsibility and teamwork. In collaborative learning, students often engage in activities such as discussions, debates, peer teaching, and group projects. These activities require students to develop and practice social skills like communication, empathy, and conflict resolution. Collaborative learning also includes individual accountability, which ensures that each participant contributes to the group's objectives, mitigating "social loafing" (when some students rely on others' efforts).

One's interests are the activities he/she enjoys doing as well as subjects him/her would like to spend time learning about. Interest is an important variable in learning because when one becomes interested in an activity, one is likely to become more deeply involved in that activity. According to Akinbobola (2016), interest is a subjective feeling of concentration or curiosity over something. People work most diligently and most effectively at tasks they are genuinely interested in. Interest is a disposition an individual exhibit in a subject and it is also a psychological factor that an individual brings into his or her academic experience which will either result into high or low achievement.

Ajaja and Mezieobi (2018) described interest as a powerful motivational process that energizes learning, guides academic and career trajectories and is essential to academic success. Interest is both a psychological state of attention that affects particular object or topic and an enduring predisposition to reengage students over time. The four interest enhancing intervention seems useful in promoting interest. That is; attention-getting, contexts evoking prior individual interest, problem based learning and enhancing utility value. It is expected that promoting interest can contribute to a more engaged, motivated learning experience for students (Akinbobola, 2016).

In the today's education reform era, students' performance is key. In the opinions of Ayomi and Tokpe (2018), academic performance refers to how students deal with their studies and how they cope with or accomplish different learning tasks given to them by their teachers. Jirgba, Eriba, & Achor, (2018), maintains that successful students, learned to effectively balance the social and academic aspects of school, expect to succeed, and may be described as socially proficient, goal oriented, and intrinsically motivated. They maintained that in educational institutions, success is measured by academic performance, or how well a student meets standards set out by local government or ministry of education and the institution itself. As career competition grows ever fiercer in the working world, the importance of students doing well in school has caught the attention of parents, legislators and government education departments alike. Parents like teacher want their kids and students respectively to succeed academically. They want to see tests scores rise, with the high hopes that they can compete better against foreign counterparts. There is this craving desire for assurance that the students are getting a top-notch education measured by results and not by processes (Emaikwu, 2017).

Students performance is not simply a matter of what happens in school, although schools can and do make a significant difference. Ayomi and Tokpe (2018) maintains that students' academic performance in Social Studies can be viewed from two clear

perspectives: one view point is from the criteria of the system such as the profile of students' performance in continuous assessment and terminal examinations in school and in standardized examinations like JSSCE, SSCE, JAMB, NABTE and University examinations.

THEORETICAL PERSPECTIVES

This study uses Vygotsky's (1978) theory of social constructivism as the theoretical framework to further the researchers' knowledge of developing views and issues that teaching faculty and learners confront in higher education organizations. This study was carried out to improve the investigator's understanding of emerging views and issues. Social constructivism is a communication and knowledge paradigm that focuses on how individuals interact to gain a better understanding of their surroundings. Vygotsky's Social Constructivism Theory (1978) emphasizes that learning is a social process where students develop knowledge through interactions with others. This theory highlights the role of social interaction, scaffolding, and the Zone of Proximal Development (ZPD) in learning. Social Constructivism Theory helps students understand historical events and government functions by acting out real-life scenarios. The theory also encourages students to analyze historical events, policies, and social issues from different perspectives and promotes critical thinking and problem-solving. By integrating Vygotsky's Social Constructivism and collaborative learning, Social Studies becomes more dynamic, helping students stay motivated and perform better academically.

Applying Vygotsky's (1978) Social Constructivism Theory in Social Studies through collaborative learning enhances students' engagement, critical thinking, and academic performance. By leveraging social interaction, scaffolding, and the Zone of Proximal Development (ZPD), students move from basic understanding to deeper knowledge with the support of teachers and peers. Collaborative learning strategies such as group discussions, debates, role-playing, and project-based learning make Social Studies more interactive and meaningful. These methods not only improve students' interest but also help them develop essential skills like problem-solving, communication, and teamwork, which are valuable beyond the classroom. Ultimately, integrating Vygotsky's principles into Social Studies fosters an environment where students actively participate in their learning, become independent thinkers, and

perform better academically, preparing them to be informed and responsible citizens in society.

METHODOLOGY

The researcher adopts quasi-experimental design, specifically the pre-test, post-test, non-equivalent, control group design. Quasi- experimental design, according to Emaikwu (2014), involves the administration of pre and post-tests on Pre-existing group assignment. This design was particularly chosen for the study because true experimental studies cannot be conducted in an educational environment, as certain classroom situations do not allow themselves for easy randomization.

The population comprised of 5,258 Upper Basic II students from Katsina-Ala Local Government in Benue State comprising 3,210 male and 2,048 female students (Teaching Service Board Makurdi, 2023).A sample of 215 students comprising 113 male and 102 female Upper Basic II students was used for the study. Social Studies Performance Test (SSPT) and Social Studies Interest Questionnaire (SSIQ) developed by the researcher were used for data collection. SSPT consists of Sections A and B. Section A sought bio-data of the respondents like gender, while section B has 40 multiple choice items with options lettered A – D. Topics covered are culture, marriage, family and drug abuse from Upper Basic II Social Studies curriculum. SSIQ is also made up of sections A and B. Section A sought bio-data of the respondents like gender while section B has 20 items on interest with response options ranging from very high(4 points), high (3 points), low(2 points) and very low (1 point) for positive items; but however in reverse order for negative items . The respondents ticked the option that best express their level of interest.

Mean and standard deviations were used to answer the research questions. Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 level of significance.

RESULTS

The results of data analysis and interpretation are presented in accordance with the research questions and hypotheses that guides the study:

Research Question One: What is the difference in the mean interest ratings of students taught Social Studies using experimental Group and those taught using control group?

Table 1: Mean and Standard Deviation of Interest Ratings of Students Taught Social Studies Using Collaborative and Conventional Approaches.

Approach		Pre-Interest	Post-Interest	Mean Gain
Experimental Group	Mean	1.89	3.35	1.46
	Std. Deviation	0.44	0.32	
	N	98	98	
Control Group	Mean	1.88	1.95	0.07
	Std. Deviation	0.26	0.41	
	N	117	117	
Mean Difference		0.01	1.40	1.39

Table 1 shows that students taught Social Studies using collaborate method had a mean interest level of 1.89 with a standard deviation of 0.44 at pre-test. In the post-test, the mean value is 3.35, with a standard deviation of 0.32. During the pre-test, the mean interest ratings of students taught Social Studies using Control Group were 1.88 with a standard deviation of 0.26. In the post-test, it has a mean of 1.95 and a standard deviation of 0.41. Table 1 also demonstrated that students taught Social Studies utilizing experimental Group had a mean gain of 1.46, whereas those taught using a Control Group had a mean gain of 0.07. The Experimental group outperformed Control Group by a mean of 1.39.

Research Question Two: What is the difference in the mean performance scores of students taught Social Studies using Katsina-Ala Local Government in Benue State?

Table 2: Mean and Standard Deviation of Performance Test Scores of Students Taught Social Studies Using Collaborative and Conventional Approaches.

Approach		Pretest	Posttest	Mean Gain
Experimental Group	Mean	8.04	17.62	9.58
	Std. Deviation	1.60	1.39	
	N	98	98	
Control Group	Mean	6.99	10.72	3.73
	Std. Deviation	1.49	1.57	
	N	117	117	
Mean difference		1.05	6.90	5.85

Data from table 2 shows that the mean performance score of students taught Social Studies utilizing experimental Group was 8.04 with a standard deviation of 1.60 in the pretest. In the post-test, the mean is 17.62 with a standard deviation of 1.39. During the pre-test, the mean performance scores of students taught Social Studies using control Group were 6.99 with a standard deviation of 1.49. In the posttest, the mean is 10.72, with a standard deviation of 1.57. Table 2 also shows that students taught Social Studies in experimental Group had a mean increase of 9.58, whereas those in control Group had a mean gain of 3.73. The mean difference between the groups is 5.85 in favor of students taught in experimental Group.

Hypothesis One: There is no significant difference in the mean interest ratings of students taught Social Studies using collaborative learning approach and those taught using conventional approach.

Table 3:ANCOVA Result of the Difference in the Mean Interest Ratings of Students Taught Social Studies Using Collaborative and Conventional Approaches.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	105.126[a]	2	52.563	375.808	.000
Intercept	54.042	1	54.042	386.379	.000
Preinterest	.049	1	.049	.352	.553
Method	105.124	1	105.124	751.596	.000
Error	29.652	212	.140		
Total	1572.155	215			
Corrected Total	**134.778**	**214**			

a.   R Squared = .780 (Adjusted R Squared = .778)

The result from table 3 reveals that $F(1,214) = 751.596$; p = 0.000 < 0.05. Since p < 0.05, the null hypothesis is therefore, rejected. Thus, it implies that there is significant difference in the mean interest ratings of students taught Social Studies using collaborative learning approach and those taught using conventional approach. Thus, based on evidence from data analysis, collaborative learning approach significantly facilitated students' interest more compared to conventional approach.

Hypothesis Two: There is no significant difference in the mean performance scores of students taught Social Studies using collaborative learning approach and those taught using conventional approach.

Table 4: ANCOVA Result of the Difference in the Mean Performance Scores of Students Taught Social Studies Using Collaborative and Conventional Approaches.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	2548.503[a]	2	1274.251	578.975	.000
Intercept	1936.445	1	1936.445	879.852	.000
Pretest	6.137	1	6.137	2.789	.096
Method	2355.220	1	2355.220	1070.128	.000
Error	466.586	212	2.201		
Total	44347.000	215			
Corrected Total	**3015.088**	**214**			

Table 4 reveals that $F(1,214) = 1070.128$; p = 0.000 < 0.05. Thus, the null hypothesis is rejected. This implies that, there is significant difference in the mean performance scores of students taught Social Studies using collaborative learning approach and those taught using conventional approach. Thus, based on evidence from data analysis, collaborative learning approach significantly enhance students' performance than conventional approach.

Discussion of Findings

This study found in the research question and hypothesis one that there is significant difference in the mean interest ratings of students taught Social Studies using collaborative learning approach and those taught using conventional approach. This finding agrees with the finding of Wise, Knight & Shum (2021) who's study found that collaborative instructional approach enhanced students' interest. Finding of this study is also consistent with Mooman, Ali & Lashari (2023) who found out that students' interest could be enhanced through the use of innovative strategies that stimulate their interest such as collaborative learning approach

Finding in the research question two further revealed that, there is significant difference in the mean performance scores of students taught Social Studies using collaborative learning approach and those taught using conventional approach. This finding is in conformity with Ariani and Variantien (2022) study, that students taught using collaborative learning approach, performed better than the group taught using conventional approach. The reason for this finding could be because, collaborative instructional approach utilizes the principle Conventional approach of learning in groups in which students actively engage in learning, interact with themselves and materials and create knowledge. Furthermore, scaffolding and guidance from the teacher stimulate deep thought processes capable of enforcing meaningful learning and improving performance.

Implications

The implications of the findings of this study is that Social Studies teachers could promote interest and performance of students by developing and stimulating students' interest in the subject through the use of collaborative learning approach. The use of collaborative learning approach will assist the teacher in providing learning environment that will be conducive for the students to actively learn.

Collaborative learning approach was effective in reducing gender gaps in students' performance in Social Studies but not interest. This implies that the regular use of collaborative learning approach by Social Studies teachers could greatly enhance the performance of students.

Conclusion

The study concluded that collaborative approach is capable of enhancing the interest and performance of students in Social Studies. Furthermore, the findings in this study revealed that collaborative learning is efficacious in eliminating gender related differences in performance in Social Studies learning, indicating that the approach is gender friendly. Therefore, collaborative promotes the development of critical thinking through discussion, clarification of ideas and evaluation of others' ideas.

Recommendations

Based on findings of the present study, the following recommendations are outlined:

1. To increase students' interest equally, teachers should support both male and female students throughout instruction and learning by using a collaborative method.
2. Social studies teachers and supervisors should emphasize that collaborative approaches improve students' engagement and performance in comparison to traditional approaches, and as such, they should promote their use in the classroom.

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DUST HAZE AND IMPLICATIONS ON AVIATION AND HUMAN HEALTH OVER NORTHERN NIGERIA

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ABSTRACT

Dust haze is a recurring environmental phenomenon known to cause serious meteorological hazards, affecting the entire environment and, more specifically, the aviation industry and human health in northern Nigeria. This region experiences thick dust haze due to its proximity to the Sahara Desert, the primary source of the dust. This review was conducted to identify the most likely implications of thick dust haze on the aviation industry and human health. Data were retrieved from PubMed/MEDLINE, Web of Science, and Scopus to identify studies reporting the effects of thick dust haze on both sectors. Findings revealed that flight incidents and fatal accidents have occurred in dust-laden air due to reduced visibility, strong gusty winds, and wind shear. Additionally, atmospheric dust has both long- and short-term effects on flight operations, including corrosion and abrasion of aircraft surfaces as well as molten ingress deterioration of engine hot components. These combined impacts can increase operating and maintenance costs, ultimately raising the overall expenses for air lines. Furthermore, most studies reported significant public health risks associated with thick dust haze, including allergic reactions, respiratory illnesses, and cardiovascular diseases. Given the severe implications of this natural catastrophe on both the aviation industry and human health, this study recommends that greater attention be given to preparing for, responding to, and mitigating these hazardous events. Implementing appropriate measures can help reduce their negative impacts on aviation operations and public health.

Key Words: Dust haze, implications, Aviation, Human Health, Northern Nigeria.

1.1 Introduction

The atmosphere contains various types of particles known as aerosols. Sunnu (2006) asserted that aerosols occur in different forms, such as dust, fume, smoke, or pollen sprays. According to Friedlander (1977), "Particle size, besides concentration and chemical composition, is ranked as the most important factor determining such effects." The term "dust haze" refers to a light cloud of fine particles that reduces visibility. The extent of visibility loss depends on the type and quantity of particles in the air, as well as the thickness of the dust haze. Dust hazes are natural hazards and are among the most common sources of natural airborne particles, including very fine materials, potential allergens, and pollutants (Goudie & Middleton, 2006). Depending on the dust's source, these materials and substances may

include quartz, silicon dioxide, oxides of magnesium, calcium, iron, aluminum, organic matter, anthropogenic pollutants, and salts. Dust haze carries millions of tons of soil into the air each year, often traveling thousands of kilometers. It can last from a few hours to several days, distributing a significant number of fine particles into the atmosphere, increasing their concentration above permissible thresholds, and negatively affecting flight operations, human health, and the broader environment (Grineski et al., 2019).

On a global scale, the largest dust sources are found in Northern Africa, the Middle East, Central and Eastern Asia, Central Australia, the west coasts of Southern Africa and South America, and the south western United States (Ginoux et al, 2012). Dust events in other regions, including higher latitudes, are increasingly gaining attention due to the growing impact of climate change (Vukovic & Vimic, 2021; Meinander et al., 2022; UNCCD, 2022). While the impact of dust on aviation is most severe near major dust source regions, such as Northern Nigeria, significant problems can also arise in distant areas due to long-range transport (dust traveling thousands of kilometers) and indirect atmospheric effects.

Crooks et al. (2016) noted that dust haze is becoming more frequent in desert and arid regions worldwide, causing substantial damage and emergencies each year. Consequently, dust haze has garnered increasing attention in recent studies on PM 2.5 (particles with an aerodynamic diameter <2.5 µm), as their levels often exceed the World Health Organization's recommended thresholds. Studies conducted separately by Akhlaq et al. (2012) and Habnenberger & Nicoll (2012) found that particles in dust haze impact weather conditions, the aviation industry, human health, agricultural production, and ecosystems. In addition to threatening the ecosystem, dust haze significantly affects the aviation industry and public health (Goudie & Middleton, 2006). Similarly, Corfidi (2013) asserted that dust haze is not entirely a natural phenomenon and warrants attention for several reasons, particularly its impacts on human health. For instance, researchers at New York University Medical Center found that acid droplets in dust haze are hazardous to lung tissues and breathing passages. A comprehensive understanding of dust's impact on aviation and human health is crucial for minimizing associated safety risks, addressing health challenges, and mitigating economic losses.

Barbara et al. (2025) stated that dust haze storms are among the most abundant aerosols on a global scale, yet their impact management remains under recognized in the aviation community. Several air traffic incidents and accidents have been attributed to mineral sand and dust emitted from hyper-arid, arid, and semi-arid regions (Middleton, 2017; Nickovic et al., 2021). A historical analysis of air traffic incidents in Australia revealed a declining trend in sand- and dust-related incidents between 1969 and 2010, attributed to technological advancements (Baddock et al., 2013). However, aviation safety in dust-laden air is still compromised by reduced visibility, strong gusty winds, and wind shear (Middleton et al., 2019; Cuevas et al., 2021; Monteiro et al., 2022).

For instance, in May 2002, 14 people were killed in an aircraft accident in Tunisia due to a severe dust storm and poor visibility conditions (Tunisia Republic, 2004). Similar accidents occurred in India in May, 2011 (with 10 fatalities) and Sudan in August, 2012 (with 31 fatalities) (Middleton, 2017). Dust-induced icing also contributed to two fatal aviation accidents in 2009 and 2014 (Nickovic et al., 2021). Apart from civil aviation accidents, dust haze storms have severely impacted air ambulance services in Australia (Holyoak et al., 2011) and military operations in the Middle East (Henderson, 2014). To prevent dust-related aviation accidents, aircraft are often grounded or rerouted during severe dust storms. However, flight cancellations, delays, and rerouting lead to substantial economic losses for the aviation industry (Williams & Young, 1999; Tozer & Leys, 2013; Cuevas et al., 2021; Monteiro et al., 2022) and cause inconvenience for passengers.

Dust haze in northern Nigeria is a phenomenon that occurs when fine opalescence dust particles are lifted and laid in suspension in the air for weeks or even months by wind of low speed. According to Alozie (2002) dust haze weather is brought about by the dry, continental air mass that enters the country form the north east

after a passage over the Sahara desert during dry season. He further maintained that between January and March each year 'bouts' of harmattan dust haze in low visibility affects flight operations in Nigeria, as the impairment makes it difficult to see the runway. He asserted that visibility normally follows known trends and as a result, flight control measures are scheduled in order to suit these periods, thereby causing a lot of flight delays, cancellations and airport congestions. This is therefore the crux of the work and it is very imperative to review the negative thick dust haze impacts affecting different phases of flight operations as well as that of human health.

Dust haze usually obscured visibility. Visibility that is a measure of the distance at which an object can be seen is one of the major meteorological hazards that affect flight operations especially in a tropical environment like Nigeria. Ayoade (1993) explained that visibility is assessed according to how far the observer can see into the distance". He further highlighted that usually markers are installed at known distances from the point of observation so that the distance away of the farthest marker the observer can see at a given time will indicate the degree of visibility at that time. Visibility therefore, is dependent upon the transmission of light through the atmosphere and the ability of the eye to distinguish an object because it contrasts with the background.

The effect of poor visibility on air transportation has been revealed in two ways. When there is short term poor visibility at the airport, take- offs and landings are delayed until the condition improves. On the other hand, when the poor visibility persists, flight schedules are cancelled while arriving aircraft are diverted to a nearby unaffected airport so as to land safely.

Olatunde (2012) explained that since harmattan dust haze occurs at the surface of the atmosphere it is primarily a hazard during landing and take-off of aircraft. He also noted that Nigeria is not the potential source of this phenomena, it is only adverted to Nigeria through West Africa in the north eastern Sahara along the alluvial plain of Bulma Faya Largeau. Dust haze is derived from the action of wind erosion of soil and it is characterized by fine dust particles of microscopic nature, high wind and low precipitation which bring about visibility reduction. Visibility less than 800 meters and severe dust spell has been reported as having adverse effects on flight operations such as landing and take-off of aircraft. When visibility is brought to a minimum level, this immensely affects flight operations. This automatically leads to delays, cancellations of already scheduled flights and even accidents.

Olatunde (2012) further highlighted that when the climatic condition is not favourable, the passengers will not be assured of their safety, they will be in the state of despair. Any complication developed by the aircraft, even when it is not going to result in a crash could have caused passengers to have fainted, developed heart attack or even risen their blood pressure due to the insecurity they already have. All these could make a journey which is supposed to be pleasurable, a frustrating experience.

Studies again, have revealed that the effect of harmattan dust haze on pilot's visibility is such that when the sky is not clear, the pilot will find it difficult to see where he/she is heading to. When light rays that should reach a focus in the eyes of the pilot has been scattered by harmattan haze particles, definitely the visibility of such a pilot will be reduced. For example, studies have revealed that on January 23, 2001, a terrible plane crash was recorded in Maiduguri at about 2020 GMT as a result of reduction in visibility to about 150 meters due to harmattan dust haze.

The extent of the obscured visibility that affects flight operations vary from one aircraft to another and also depends on the location and topography of a particular airport. For example, weather approach minimal manual for Aminu Kano International airport shows that this ranges from 1000 meters with aircraft category A (Small aircraft) to 2400 meters with 747, 8080.This implies that if the landmark or light beyond the distance of 1000 meters cannot be seen, aircraft is not supposed to land or take off. However, any aircraft that insist on landing or taking off is likely to crash.

Thus, dust haze storm can cause flight delays, cancellations and diversions or flight incidents and even accidents when there is obscured visibility, wind shears and gusty winds that can led to flight incidents and accidents.

However, as rightly observed by Williams and Young (1999); Tozer and Leys, (2013); Cuevas et al 2021) flight cancellations, delays or rerouting cause a significant loss for the aviation industry.

Essienimo, Momoh and Akpootu (2016) asserted that the winter (dry) season in north western Nigeria, which usually covers a period of about five months has for years been associated with the presence of large volumes of dust haze particles over the atmosphere. They added that in West Africa, and northern Nigeria in particular, dust haze dominates during the dry season from November to March, conveying dust across West Africa to the Atlantic Ocean and the wind system is associated with the ejection and transportation of dust haze from the Sahara Desert periodically to some areas in West Africa is known as the harmattan. They further observed and noted that the dust that affects a greater part of West Africa in winter south of latitude 15 ^{0}N particularly the Nigerian zone comes mainly from North eastern Sahara, usually along the alluvian plain of Bilma (18 ^{0}N, 12 ^{0}E) in the Southern Niger and Faya Largeau (18 ^{0}N, 19 ^{0}E) Chad of the western slope of Tibesti massive. Similarly, in the Nigerian context, the harmattan dust haze is a climatic condition of dry, dust-bearing desert breeze blowing from the northeast over West Africa, usually between late November and early March. This climatic condition of dust, smoke and other particles obscure the clarity of the sky and this usually forms a terrible atmosphere for man to live and operate effectively, most especially in the aviation industry of flight operations ranging from flight stake- off, landing, aircraft movement on the runway and even the flight process.

Thus, between January and March each year 'bouts' of harmattan dust haze in low visibility affects flight operations most especially in northern Nigeria, as the impairment makes it difficult to see the runway. However, the visibility normally follows known trends and as a result, flight control measures are scheduled in order to suit these periods, thereby causing a lot of flight delays and airport congestions. During the harmattan period too, the entire environment and to be precise, human health is equally been threaten as the thick dust haze usually poses and aggravate aliments and diseases among patients who are around where there is severity of this meteorological hazard.

1.2 Theoretical Framework

The Aerosol-Climate Interaction Theory, propounded by Charlson, Schwartz, Hales, Cess, Coakley, Hansen, and Hofmann in 1992, provides a suitable theoretical framework for understanding the implications of dust haze on aviation and human health over Northern Nigeria. This theory explains how aerosols, including dust particles, interact with radiation and clouds, influencing climate, weather conditions, and air quality. The principles of the theory highlight that aerosols affect atmospheric radiation balance by scattering and absorbing sunlight, modifying cloud properties, and altering precipitation patterns. Additionally, the theory emphasizes that the concentration, size, and composition of aerosols determine their impact on visibility, weather, and health. Applied to the present study, this theory helps explain how dust haze in Northern Nigeria reduces visibility, leading to flight disruptions, accidents, and increased operational risks in aviation. Furthermore, it accounts for the negative health effects of dust haze, such as respiratory diseases and cardiovascular issues, due to the inhalation of fine particulate matter (PM 2.5). The theory underscores the necessity for improved dust forecasting models, mitigation strategies for aviation safety, and public health interventions to minimize exposure to hazardous aerosols.

1.3 Methodology

1.3 The Study Area

1.3.1 Location

Anuforom (2007) has classified the climatic zones which comprises of northern Nigeria as whose ones lying between latitudes 9 ^{0} 11$^'$ N to 11^{0}14$^'$ N as northern- Central and Sahel climatic zones respectively. Figure1is the climatic map of northern Nigeria, showing the location of synoptic stations in the study area.
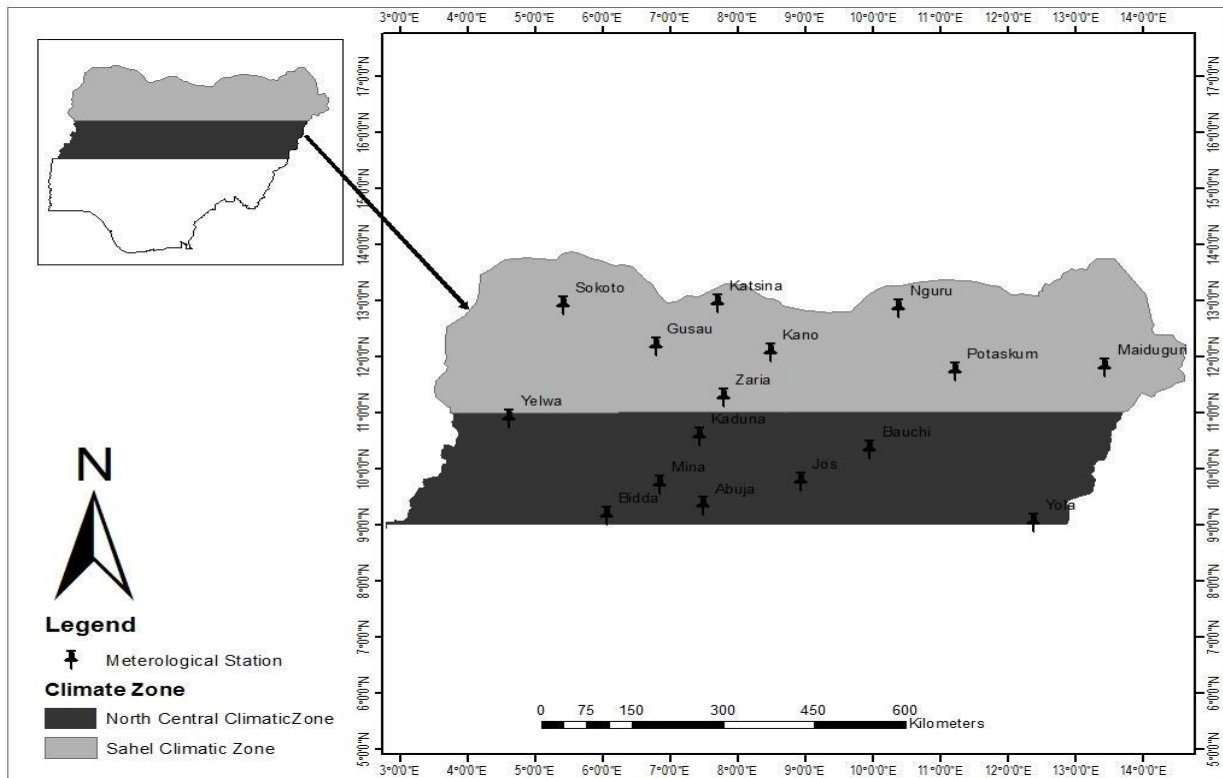
Figure1: The Location of the study area: Northern Nigeria showing the distribution of meteorological stations. Source: Anuforom (2007)

2.3.2 Materials and Methods

The study was designed to investigate dust haze and its implications on aviation and human health over northern Nigeria. The nature of the data generated includes information on the causes of dust haze, intensity of dust haze, and the effects of dust haze on aviation and human health. The source of data collection was basically from secondary sources of relevant scientific resources identified articles that were related to dust haze of both the aviation industry and human health. The empirical information which was obtained from PubMed, EMBASE, Scopus and ISI WoS (Web of Science) databases was searched and obtained to help review this meteorological hazard and its implication on aviation and human health over northern Nigeria.

3.0 Impact of Dust Haze over Northern Nigeria

3.1 Impact of Dust Haze on Aviation

The following sections review the negative thick dust haze impacts affecting different phases of flight operations. A detailed understanding of the impact of dust on aviation is important to minimize associated safety risks as well as economic loss. This is, therefore, the crux of the work, and it is imperative to review the negative thick dust haze affecting different phases of flight operations. Figure 2 summarizes most of these impacts on aircraft and runways for readers who are not familiar with the aviation-specific nomenclature.

According to Barbara et al. (2025) the impacts of dust hazards on civil aviation are diverse, but they can broadly be split into the different air traffic management phases (see Fig.2): (i) strategic

planning, which consists of forecasting and capacity planning, route optimization, and airspace design; (ii) pre-tactical planning (i.e., 24 hours before the departure) and tactical operations, which are affected by the immediate hazard [i.e., if an intense sand and dust storm (SDS) approaches an airport and limits airport operations]; and (iii) post operation, which is essential for stakeholders who undertake Maintenance Repair and Overhaul (MRO), to deal with long-term effects of dust exposure on aircraft and engine performance (e.g., Ryder et al. 2024).

Thus, to relate this to the study area, Nigerian Civil Aviation Authority (NCAA) are in charge of prescribing special conditions for flights that require specific safety measures, while the meteorological conditions(e.g. visibility, wind speed and direction) for each airport are published as observed by the Nigerian Meteorological Agency (NiMet) or forecasted by the aerodrome meteorological office. To reduce the risk for aviation, Nigerian Airspace Management Agency (NAMA) Air Traffic Controls

typically limit or suspend operational services during thick dust haze, reduced visibility, and high wind speeds. Service limitations can range from lowering the rate of operations (e.g., number of landings or takeoffs) to total airport closure if the conditions caused by thick dust haze are deemed unsafe (e.g. visibility is below a safe threshold). This has implications for airside operations, which include aircraft landing/takeoff and navigation, airport traffic management, runway management, and ground handling safety (ICAO 1986). Flights can therefore delayed, rerouted, or canceled disrupting the airport and airline operations and passenger travel. Passenger operations (e.g., check- in, baggage handling, and boarding) and landside operations (e.g., passenger pickup and drop-off curb areas of the airport, parking facilities, and other forms of transportation) can be affected as well.
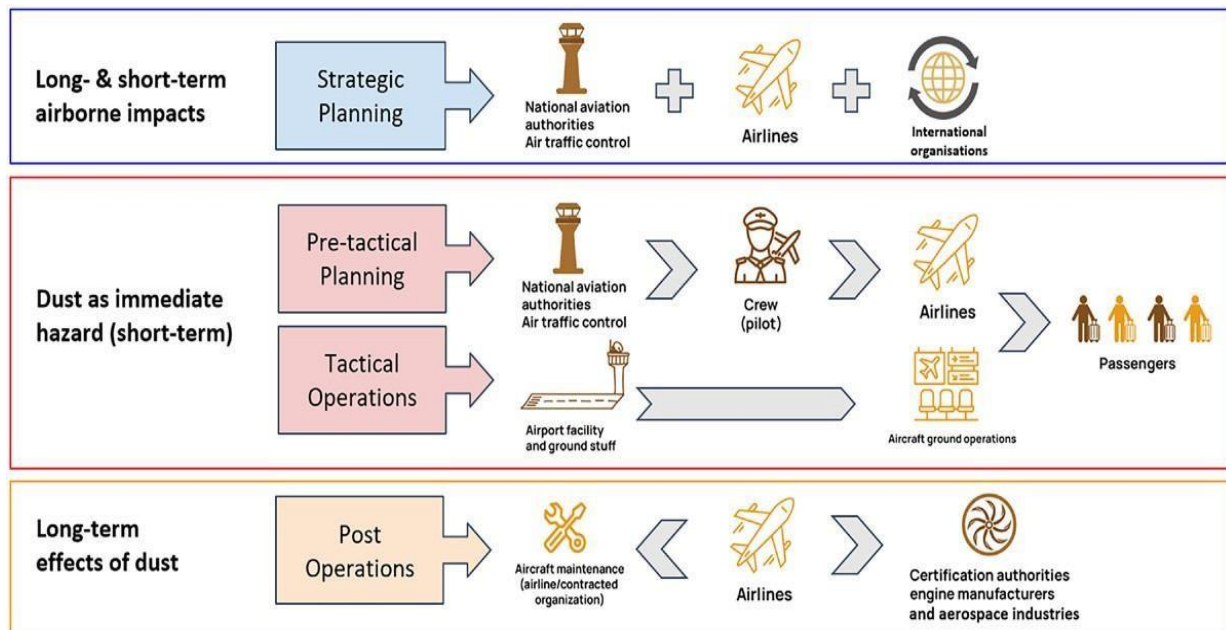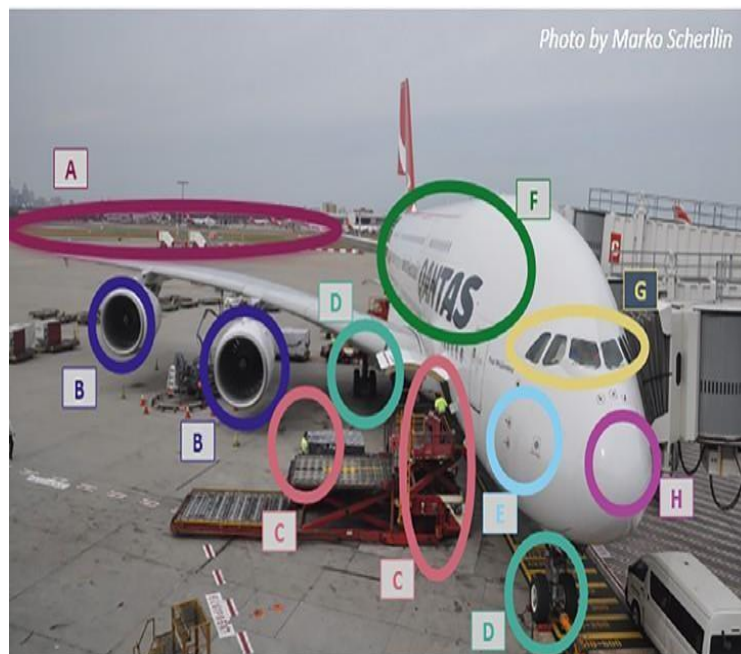

Fig.2:Impacts of dust haze on different ATM phases and affected stakeholders (After Barbara et al)

For example, studies which were conducted by the Nigerian Meteorological Agency (NiMet) (2011) showed the visibility reduction of 100–900 meters in the north and 600 – 800 meters in the south respectively, during the peak of these hazy conditions over most of the years under investigation. This is attributable to the dust haze phenomenon that originates at the Sahara desert of North Africa. Again, studies have shown that the signal of climate change in Nigeria has become visible as observed in other parts of the world. These include: the general increase in mean temperature, short rainfall duration and unusual patterns, increasing storm frequency, shift in onset/ cessation and duration of August break or dry spell and most importantly, increasing heat waves in the extreme north, which its eminent effects on flight operations is quite glaring..

3.1.1 Airport operations*:* As can be seen from the aircraft diagram below on figure 3, thick dust haze can significantly affect the activities at International airports of Abuja, the capital city of Nigeria, and others like Kano Yola, Kaduna, Maiduguri, Sokoto and so on, that are located in northern Nigeria. During very severe thick dust haze with high wind speed sand significantly reduced visibility, as a preventive measure, passengers and personnel need to stay inside the buildings. This helps prevent people from being Injured by flying debris and minimizes potential health effects from dust exposure (WHO 2021). All vulnerable parts of the grounded aircraft shall be covered to avoid intrusion and possible mechanical damage due to airborne aerosols. This includes nose cones, windscreens, wheel assemblies, engine cowlings, and pressure instruments that provide airspeed and altitude information(e.g. pitot tubes and static ports),which need to be protected against possible blockage due to dust sedimentation (e.g., Jackson 2015; EASA 2021) and subsequently incorrect measurements (e.g., AAIB 2022). Water- soluble minerals, contained in the dust, can cause metal corrosion to the airframe. To prevent this, dust deposits should be removed within an adequate time span (i.e., usually before the next flight). Since the contamination of the runway can adversely affect takeoff and landing performance, runway cleaning might be required after the event (ICAO 2002a, 2018a).

Fig.3: Aircraft and some airport-related impacts of mineral dust (After Barbara et al)

Reduced visibility is the major and most common problem of in-flight and ground traffic in dusty conditions, which typically requires reactive measures. During thick dust haze visibility can be reduced to near zero which makes any movement during the event difficult, dangerous, or even impossible (see Fig. 3). Visibility depends on the humidity (e.g., Häneland Zank, 1979; Zieger et al. 2013) and concentration of particles suspended in the air as well as aerosol optical properties (e.g., Waggoner and Charlson 1977). The literature shows large uncertainties in the estimation of the effects of aerosols on visibility in desert regions in North America (Chepil and Woodruff 1957; Patterson et al. 1976), Australia (Baddock et al. 2013), Asia (Shao and Wang 2003; Wang et al. 2008), and West Africa (d'Almeida1986; Ben Mohamed et al.1992; Camino et al. 2015). These large uncertainties can partly be explained by using particulate matter of different sizes as a proxy for dust and by different distances to the dust source region (optical obfuscation properties vary with size, dust size population decreases with the distance from the source because large particles drop out, and size and dust size population decreases with the distance from the source because large particles drop out and the remaining particles are finer sized far away from the source region).

`ECAC (1988) and ICAO (2013, 2016a) cited In Barbara et al highlighted that, if operations in low visibility conditions are permitted at an airport, the air traffic, meteorological and aeronautical information services provide relevant information, well defined and articulated procedures for operations in reduced visibility situations facilitate decision-making processes in aerodrome traffic management, including surface movement guidance and control.

3.1.2 Impact during takeoff and landing and at low flight levels:

Studies done by Barbara et al (2025) revealed that on dry dusty surfaces, flight operations of both small and giant aircrafts operating near the ground can generate dust concentration levels of several 100mg-3 which is usually referred to as brownout conditions. Several helicopter accidents were caused by brownout conditions which obscure the pilot's vision of the terrain and are therefore a significant safety threat, primarily affecting military operations in desert environments. In the lower atmosphere, dust can also reach very high concentration of up to 2-3 km above ground during

major thick dust haze as has been indicated in the works of Cuevas, et al; 2021; Moniteiro et al, 2022, which affect the critical phases of flights, such as takeoff, climb, descent, holding patterns, and landing, as it is cited by Ryder, et al in Barbara, et al.

Typical examples of flight incidents and fatalities because of the Saharan thick dust haze can be seen as follows: At Aminu Kano International Airport, Nigeria, in the morning of 22nd January, 1973, poor visibility of only 300 meters, resulted to the loss of lives 183 people in a plane crash of a Jordanian airliner, (Adedokun et al., 1989). Again, in December, 1985, a B-747 aircraft belonging to the Nigerian government made a missed approach landing at the Murtala Mohammed International Airport in Lagos, recording a loss of nine lives due to the thickness of the harmattan dust haze. On January 23rd, 2001, a terrible plane crash was recorded in Maiduguri at about 2020 GMT as a result of reduction in visibility to about 150metersdue to thick harmattan dust haze. Investigations further shows that during flight phases, storms dust particles rubbing against the air crafts skin can increase the process of charging it, (Matsusaka, et al (2020) Again, a continuous occurrence makes the aircraft to reach an electrostatic equilibrium. This then can induce noise in radio communications of the aircraft, (Alozie et al, 2023). This electrostatic charging also represents potential hazard for ground personnel during refuelling or loading operations and this can equally a problem for onboard electronic devices that are not well protected from electromagnetic interference, (Lekas, 2019). Conversely too, Smialek (1991) and Brun et al (2012) the long term exposure to thick dust haze during flight can scrape aircraft surface including windscreens, landing light screens, and propeller and jet engine blades, as well as avionics. Erosion of external surfaces increase total drag and results in higher thrust settings and fuel consumption (leading to economic and environmental impacts) as well as reduced endurance and range of the aircraft. Surface damage of an engine can lead to gas flow deterioration and a gradual loss of the engine's performance and efficiency, (Hamed et al, 2006; Bojdo and Filippone 2019; Clarkson and Sapson 2017). In the works of Wood et al (2017) increased maintenance intervals and economic costs can result from aircraft flying through moderately dusty regions on a regular basis. He added that this has become a more prominent issue in recent years due to; the rise in air craft in dusty environments like Middle East; and the use of engines which are less tolerant to atmospheric aerosols because of increasing operating temperatures. Ryder et al (2024) show that this can aggravate when hold patterns coincide with the altitude of the local elevated dust plume but could be

mitigated by night time takeoffs and landings.

Volcanic ash particles have been considered almost exclusively as a severe hazard because of melting in jet engines and depositing on the blades and inner parts. However, the continuous increase in turbine operating temperatures also raises the danger of dust melting (Wood et al. 2017) despite having up to a few hundred Kelvin higher melting points than volcanic ash. Furthermore, dust melting inside engines can lead to blockage of cooling holes (Cardwell et al. 2010).Therefore, dust exposure leads to a gradual reduction in engine efficiency and durability of certain components, mainly in the hot section of the engine.

The amount of melted dust deposit that builds up is a function of dust concentration, exposure time, engine thrust, and mineralogical composition (Clarkson and Simpson2017;Wood et al. 2017; Bojdo and Filippone 2019). Mineralogical composition of transported dust depends on the soil characteristics at dust sources (e.g., Nickovic et al. 2012; Gonçalves Ageitos et al. 2023). Mineralogical characteristics of transported thick dust haze are also important to predict because the combination of different molten minerals can exhibit different chemical properties and lead to thermal corrosion of engine components or electronic devices (Elms et al. 2021). Thus, due to the semi-arid and arid dusty soils in northern Nigeria this creates adverse effect on flight operations.

3.1.3 Impact during aircraft cruising at high flight levels: While volcanic ash is a severe risk at cruise levels (usually at an altitude between10and12km), the main threat from dust at these altitudes is associated with icing in and around convective weather systems. Thick dust haze particles can nucleate ice crystals in deep convective anvil cirrus. Over the last two decades, commercial airplanes have reported more than 150 cases of engine power losses and damage caused by cloud ice crystals (Haggertyet al. 2019). Furthermore, icing of instruments and sensors can result in false readings (e.g., barometric altimeters and airspeed and vertical speed indictors). Pitot tubes are particularly sensitive to icing which can cause obstruction and a bad airspeed indication, confuse pilots, and therefore degrade the flight safety.

Dust aerosols at a small concentrations in the upper troposphere can initiate efficient ice nucleation (Cziczo et al. 2013; Froyd et al. 2022). Aircraft on board weather radars often fail to observe ice crystals in anvils of convective clouds and so increase the risks due to icing (Haggerty, et al.2019).The role of dust in ice formation along the routes of two flights with catastrophic outcomes has been studied by Nickovic et al (2021).Official investigation reports identified icing along the routes crossing the periphery of the convective system as the cause of both accidents (BEA 2012; CEAIAC, 2016). Observations indicated the presence of high-altitude dust lifted from African sources by convection to the upper troposphere (Nickovic et al, 2012).

3.2.0 Impact of Dust Haze on Human Health over northern Nigeria

3.2.1 General Overview of Dust Haze on Human Health

According to Liu and Huza (1995) due to the small sizes of dust haze particulate matters, almost all dust haze particles, that is, airborne particles (PM) can enter the respiratory tracts. Larger particles are often deposited in the upper respiratory tract (nasopharyngeal region, tracheobronchial region), while smaller particles can enter deep lung tissue. Further studies reveal that the physical, biological, and chemical properties of these particles can cause disorders in the health of the body, and in addition to the respiratory tract, can damage other systems of the body, including the cerebral, cardiovascular, skin, blood, and immune systems, (Goudie, 2014). He further highlighted that contact to dust particles, which can remain in the air from hours to days, can result in other problems like conjunctivitis, meningitis, and yellow fever. In unusual cases, it can even lead to death. According to him frequent exposure to dust hazes can lead to increased adverse health effects in people of almost all age races and genders. Chen and Ng (2011) and Chen et al 2004) explained that people with a history of diabetes, hypertension, cerebrovascular, or pulmonary diseases are also at higher risk. Many epidemiological studies have determined the health effects of dust haze by comparing outcomes during dust hazes periods with- outcomes during non-dust haze periods and by assessing the relationship between dust haze or PM_{10} exposure and health outcomes. Many researchers have acknowledged the existence of a significant association between dust exposure and increased morbidity or mortality, but there is no consensus in this regard to date. Gianndaki et al stated that increased PM during dust storms caused a significant increase in mortality rate in Barcelona. Similarly, Chen et al. (2008), Kashima et al., (2012), and Delangizan and Jafari (2013) also noted that increased PM_{10} levels during Asian dust hazes increased cardiovascular mortality.

Thalib and AL-Taiar (2012) and Trianti (2017) reported that Middle Eastern dust haze can affect inflammation and coagulation markers in young adults, and have adverse effects on pulmonary function, and

increase the number of asthma patients. For humans, inhaling fine particles can generate and aggravate asthma, bronchitis, emphysema and silicosis. Finer dust haze also can deliver a range of pollutants, spores, bacteria, fungi and allergens. Other common problems include: eye infections, skin irritations and fever. In countries of the Sahel, dust haze loads arriving from the Sahara correlate strongly with meningitis outbreaks. Chronic exposure to fine dust contributes to premature death from respiratory and cardiovascular diseases, lung cancer and acute lower respiratory infections. According to Corfidi (2013), cited in Igbo- Uchi, (2020) poor visual air quality causes heightened levels of anxiety, tension and depression in humans, as well as interpersonal aggression and hostility. In other words, dust haze usually leads to multitudes of diseases.

Modarres (2008) in his study explains how dust hazes affect various aspects of human life. Aghababaeian et al (2012) explained that the current analysis indicated that the effects of dust storms on health can be divided into 2 general sections: short- and long-term effects. The researchers further explained that short-term effects have been defined here in as human health problems that occurred during or immediately after a dust haze storm, and long-term effects are defined as human health problems that occurred after a long exposure to several periods of thick dust storms. The short-term effects included all-cause mortality, emergency dispatch or air medical retrieval service, hospitalization or admission, healthcare visits, daily symptoms, decreased pulmonary function, and other problems, (Aghababaeian et al 2012).

According to Igbo –Uchi (2020) aerosol surface properties such as adhesion, sorption (i.e. adsorption and absorption), and condensation are involved in a large number of chemical reactions including surfaces for micro-organism transport and the spread of air borne diseases. It will therefore be interesting to know the influence of the Saharan dust on children and diseases like irritation in the throat, cold symptoms, catarrh and cerebrospinal meningitis (CSM), whose outbreak occurs in the harmattan period. This conclusion is in line with, Hayward and Oguntoyinbo (1987).The Saharan dust aerosol fills the surrounding air within which all atmospheric processes occur. The particles can directly affect the eye and skin, physically causing irritation to them. The Saharan dust also dehydrates the body causing injury to the parts sensitive to dryness such as the

sides of the feet and lip sof the mouth. The major effect is on the respiratory system of man and animals since dust particles smaller than 2.5 μm diameter can penetrate through the non- ciliated airways and then induce specific effects on the lungs (Wilson and Spengler, 1996). Scientists will therefore be interested in the Saharan dust particle size distribution, particularly over northern Nigeria.

Similarly, the Saharan dust aerosol particles reaching northern Nigeria are mostly less than 20 μm in diameter. Tsor (2003) and Sunnu (1997) observed that 95 per cent of the number of particles of the Saharan dust is composed of particle numbers with sizes less than 10 μm in diameter and the number of particles in the range 0.5-1.0μm constitute 80percent of the sample size range of 0.5-25 μm while studies other places northern Nigeria found 98.7percent of the number of particles of the Saharan dust particle numbers to be composed of less than orequalto5μm diameter particles. Hence, the Saharan dust particle size range reaching northern Nigeria is very significant for breathing, which involves particles less than 2.5 μm diameter. Therefore, through respiration, harmattan aerosol particles can reach the lungs, with possible health consequences on the respiratory system of mammals. The inhalation of large quantities of dust can result in a variety of lung damage, the degree of damage depending on the composition of the dust. Although particle size is important, the shape e.g. asbestos, density and reactivity of the particles together determine how the particles are transported and react in the human respiratory tract. Target sites within the respiratory tract vary with aerodynamic size of particles as well as other factors. This can be seen by examining the variation of respiratory penetration and retention with particle size shown in the Table1.1 below (Wilson and Spengler, 1996). Most of the particles greater than 10μm in diameter and about6 0- 80 percent of particles between 5μm and10μm are trapped in the nasopharyngeal region of the respiratory system. Larger particles are subject to inertial and centrifugal deposition before reaching the deeper respiratory system.

Very small particles (<0.1 μm diameter) penetrate and deposit deeper in lungs by diffusion forces. Here, the air movement is slow and distances between surfaces are short. The lungs are least efficient at retaining the particle sizes that accumulate in the atmosphere. These particles circumvent many of the respiratory system's defense mechanisms, such as cilia, and are capable of delivering relatively high concentrations of potentially harmful substances, often causing severe damage at the cellular level. Thus it is observed that the effect on health due to aerosol particles inhalation is associated with fine particles rather than coarse particles.

Table 1: Respiratory Penetration versus Particle Size. After Wilson and Spengler (1996)

Particlesize (µm)	Respiratory penetration
11 ≤	Particles do not penetrate
7-11	Particles penetrate nasal passage
4.7-7	Particles penetrate pharynx
3.3-4.7	Particles penetrate the trachea and Primary bronchi
2.1-3.3	Particles penetrate secondary Bronchi
1.1-2.1	Particles penetrate terminal bronchi
0.65-1.	1Particles penetrate bronchioli
0.43-0.65	Particles penetrate alveoli

The following are some mechanisms underlying association between atmospheric particulate dust pollution and mortality: increased airways permeability and airways inflammation leading to impaired gas exchange and hypoxia (or acute oxygen deficiency), increased susceptibility to infection from impaired host defences, increased lung permeability leading to pulmonary oedema, provocation of alveolar inflammation by ultra-fine (<0.02 µm) particles with release of mediators that exacerbate underlying lung disease and increase blood coagulability and specific toxicities, among others. Generally, ultra-fine particles cause greater inflammation than larger (coarse) particles of the same substance (Wilson and Spengler, 1996).Therefore, increased dust level in the tidal (respiratory/respirable) air can also put alot of stress on the respiratory system of mammals, resulting in chest and respiratory disease and sickness thus capable of increasing morbidity and mortality.

3.2.1 Impact of Dust Haze on Human Health and Mortality over northern Nigeria

Researches from almost all regions and most especially at the study area indicate that mortality due to dust storms by means of different health problems, such as increased total non- accidental deaths, cardiovascular deaths, mortality due to acute coronary syndrome and respiratory mortality are common among patients where the thick dust haze regions is quite eminent, (Crooks, et al 2016). Some studies reported, however, that the number of cases was not increased significantly for all causes, (Al-Taiar and Thalib 2014; Chawartz, 1999) respiratory (Chen, Ng 2011; Al-Taiar and Thalib 2014) cardiovascular mortality (Diaz, Tobias, Linares, 2012). As was cited by Aghababaeian (2012). reported that associations for respiratory mortality was -0.76 (-4.69.3.28) on thick dust days have a protective effect on non-accidental deaths, respiratory deaths and death in people older than 65 years of age.

3.2. 2 Hospitalization or admission due to Dust Haze Storm Phenomena

Studies have shown that almost all over the study area, there are cases of hospitalization or admission due to dust storms by means of different health problems or diseases. Jimme et al (2020) who conducted a research on the Human Perception on the effects of Dust Storm on the Health of Residents' of Damaturu Metroplis, Yobe (which is part of the study area of this work) asserted that the winds caused blowing sand and dust increases hospital admissions as well as increases in asthma and respiratory diseases. Thus, at the fringes of northern Nigeria due to the semi- arid and arid nature of the environment with limited vegetation, this scenario seems to be worse. Outdoor environmental dust has been linked to numerous health problems. Fine dust particles can carry a range of other harmful things including bacteria, virus, fungi, pollutants and allergies. Dust haze exposure may cause or worsen: irritation of the eyes, nose and throat, coughing and wheezing, low respiratory tract infections (viral bacterial and fungal including cococidiomyosis), obstructive airway diseases (asthma, bronochitis, COPD), lung fibrosis (sand and dust associated silicosis), interstitial lung diseases and cardiovascular diseases. The results indicated that in many studies, dust storms were associated with an increased risk of hospital admission due to cardiovascular, cerebrovascular, and respiratory diseases, among others.

3.2. 3 Other impacts

Some articles explored the relationship of dust storms with road traffic accidents, risk of suicide, placental abruption, and the health-related quality of life. Soy, Yaziel, and Kulduk et al (2016) found that sand- storms and number of vehicles were significantly responsible for road traffic accidents. They further reported that dust storms can have adverse effects on the quality of life of patients with asthma and allergies. Rutherford et al (1999) on their part too reported that, dust storms can decrease health-related quality of life in everyone exposed to them. It has been noted in several studies that exposure to dust storms was associated with even an increased risk of suicide.

4, Conclusion

Thick dust haze is among the natural environmental hazards that are most violent and unpredictable phenomena. Strong and gusty winds lift dust and sand particles into the atmosphere, unleashing a turbulent, suffocating cloud that can reduce visibility

to almost zero level in a matter of second sand cause catastropheric effects on the entire environment, including the aviation industry and human health that result to property damages, incident sand fatalities. Thick dust haze therefore has a strong correlation between dust events, aviation industry and human health, ranging from flight delays, cancellations, diversions, airport congestions, as well as flight incidents and accidents. This in turn increased workload for airport and airline staff, an inconvenience for passengers, and a considerable economic loss for the aviation industry. More so, thick dust haze causes a substantial cost of maintenance due to deterioration in aircraft and engine performance and in-service life. For instance, Luthansa Technik (2022) estimated that the engine can deteriorate up to 3 times quicker in dusty arid regions. Driven by military and civil aviation as it is the fastest means of transportation for socio-economic and political gains, the understanding of dust haze impacts on aircraft systems and aviation operations has improved in recent years. However, while individual effects such as dust damage to turbine blade are already known from the maintenance expert's point of view, they are not necessarily well quantified and cannot be prevented in an operational environment due to missing data and the missing information flow from data providers to aviation end users. In view of this, more information is a requirement also for more realistic and accurate cost benefit analysis.

Besides the increasing frequency and intensity of weather extremes and other climate hazards, (IPCC 2021) there are increasing risks of favourable

conditions for more globally distributed, more frequent and more intensive thick dust haze and other dust-related events (blowing dust, long –range dust transport and deposition). Land use and cover change due to agriculture, retreat of glaciers, drying of lakes and rivers, among others, can expose land to wind erosion in areas which do not currently recognize thick dust haze hazards and their impacts. For this reason, development and implementation of knowledge of all hazards, including the ones related to air borne dust, is welcomed in all sectors, especially in aviation which targets proactive mitigation measures to prevent great losses in lives and money. More so, the

aviation sector should be better recognized as a beneficiary of implementation of climate change and land degradation targets, defined by UNFCCC and UNCCD.

Conversely, although thick dust haze which affects a range of human health issues, including respiratory problems, cardiovascular complaints, meningococcal meningitis, conjunctivitis, skin irritation, and deaths and injuries associated with transport accidents in obscured visibility are enormous, inhabitants of such environments are taking the meteorological hazards with less caution. In view of this, there is strong need for public enlightenment and advocacy on the health and socio-economic implication of thick dust haze. Based on the insights gained from the research, residents should use a facial nose and mouth mask always. The eyes should be protected during a dust storm using spectacles to offer minimal protection from blowing microscopic particles and sand; protect themselves properly by avoiding exposure to thick dust haze and by staying indoors against flying objects moving around.

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PRAGMATIC ACTS ANALYSIS OF DR. TEDROS GHEBREYESUS' 2021 ADDRESSES ON COVID-19 AND HIV/AIDS

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ABSTRACT

This study, analyzed Ghebreyesus 2021 addresses on Covid-19 and HIV/AIDS. The study aimed to identify the broad categorizations of the pragmatic acts performed vis-à-vis the practs, together with their contextual tools, deployed by the speaker to address the world on the state of covid-19 pandemic and HIV/AIDS epidemic. The textual analytic research design was adopted for the study. It was anchored on Mey's theory of Pragmatic Acts (2001). The population of the study comprised of two Ghebreyesus' speeches on Covid-19 and HIV/AIDS from which his 2021 speeches on Covid-19 and HIV/AIDS were selected as sample using the purposive sampling technique. These sets of data were downloaded directly from the website of the World Health Organization, and subjected to both quantitative and qualitative analysis, using the basic principles of the adopted theoretical framework. The results of the study revealed that speech acts were the most dominant type of pragmatic act used. Results also indicated the use of indirect speech acts and psychological acts in Dr. Ghebreyesus' addresses. Based on these findings, the study recommended that: Public health officials should use a range of pragmatic acts to convey their messages and use psychological acts to create an emotional connection with the audience and encourage change of behavior; the curriculum of instruction in public health colleges and universities should be rejigged to incorporate the use of pragmatic acts and psychological acts in messages; and Government should provide public health officials with in-service training and capacity building on the effective use of pragmatic acts in public health communication to improve their messaging skills.

Keywords: Keywords: Pragmatic Acts, Covid-19, HIV/AIDS

INTRODUCTION

Information is power, and because it is the premise of progress in every family and every society, it is said to be liberating. Health information includes information that creates awareness about diseases or epidemics in the country, nutrition or diet, mental health, physical health. The scope of health communication is to improve the disease prevention, health promotion, health care policy, and the business of healthcare as well as enhancement of the quality of life and health of individuals within the community (Annan, 2018). Every society needs health information on a daily basis. This is because access to the right information on health saves man from avoidable activities that constitute threats to life.

According to Chambers 21st Century

Dictionary, a pandemic is an epidemic or an infectious disease that has spread across a large region, affecting a substantial number of individuals in a country or continent.` A pandemic is characterized as an epidemic that has spread over multiple countries or continents, usually affecting a large number of people. Pandemics, often times, occur abruptly leaving the world in chaos. Ghebreyesus (2021), in his address to the world in respect to containing pandemics, avers that the world is intermittently plagued by diseases, which like wars, often take people by surprise. Ghebreyesus further recounted some outbreaks, epidemics and pandemics that have been recorded in history from the Plague of Athens in 430 BCE, to the Black Death, the 1918 influenza pandemic, HIV/AIDS and now, coronavirus disease (COVID-19). Ghebreyesus further asserts that man cannot be helpless or incapable of mitigating the impact of such health hazards. Information becomes a tool for control. Health information presupposes the existence of health or life-threatening challenges and as a matter of urgency, the populace needs to be enlightened on the possible ways to avoid or contain the challenges.

It is important to note that all health information relies heavily on language use. Language serves as a channel through which communication is possible. Language is very crucial for human survival and existence. Man's reliance on language, especially speech has been symbiotic. Human language is unique among the known systems of animal communication in that it is not dependent on a single mode of transmission (sight or sound), is highly variable between cultures and across time, and affords a much wider range of expression than other systems. As a system of communication, it does not exist in a vacuum, but operates in a context. One of the theories that can be used to study language in communication is pragmatic theory. Pragmatics as a discipline is context-dependent (Birchenall, 2016). Contexts determines the variations in language that is called register.

Pragmatics as a theory has some models which include speech acts, conversational implicature maxims, politeness, impoliteness, speech acts, and so on. Austin's speech acts laid the foundation for the study of pragmatic theories. According to Speech Acts theory by Austin, every utterance by a speaker performs an action (Hidayat, 2016). Fadhi (2018)

maintains that to perform an action via speech, there must be certain conditions available, and these conditions are called 'felicity conditions'. The conditions are the preparatory, sincerity, executive and fulfilment conditions. Dr. Tedros Ghebreyesus, the Director General, World Health Organization (WHO), performs a pragmatic act when he delivered an address in 2021 as regards the state of affairs in respect to Covid-19 and HIV/AIDS.

The acts were meant to achieve certain implicit perlocutionary effects on the audience. Comprehension of health messages depends heavily on the context in which the messages are situated. Consequently, World Health Organization relies on different modes and channels to pass health related information to the world. Both the verbal and non-verbal medium of language are employed. An example of the verbal mode is the address by Dr. Tedros Ghebreyesus on HIV/AIDS and Covid-19. The non-verbal information includes posters with graphics and symbols on HIV/AIDS and Covid-19. The posters are often disseminated on media by World Health Organization. Information on the posters are conveyed in various modes such as color, visual images and text. The masses are informed through the use of different semiotic resources in the posters. Hence, it became important to study information on health conveyed through these various modes.

The motivation for this study was to provide insights on how pragmatics principles can be employed in understanding the contextual meaning of health-related information disseminated on media. Pandemics have devastating effects and require an interdisciplinary approach so as to forestall future occurrence. Therefore, this study was geared towards using insights from Pragmatic Acts to examine an instance of health communication by the World Health Director-General, Dr. Tedros Ghebreyesus, in his addresses to the world on Covid-19 and HIV/AIDS in 2021.

There are many studies on pragmatic acts, formal speeches, and other pragmatic analyses of first and second-order texts that are relevant to this study. For example, Abaya (2015) undertook a pragmatic assessment of Nigerian military coup announcements. The results revealed that speech acts in each coup event depended largely on the context that gave birth to them while the analysis at the social context level

revealed that speech relationship between interlocutors was both symmetric and asymmetric depending on the audience. At the linguistic level, it was revealed that diction was used to enforce illocutionary force. Secondly, Oladimeji and Esther (2015) investigated the contextual acts in President Goodluck Jonathan's declaration of presidential candidacy under the political platform of the Peoples' Democratic Party (PDP) using context and the Speech Act Theory, and the findings showed the frequency scale of illocutionary acts. The verbs employed in the speech expressed actions performed in the form of commissive (50%), and assertive (30%), declarative and expressive acts recorded ten percent (10%) each while the verdictives recorded zero percent (0%). The results of the analysis implied that the President successfully exploited the favorable contexts of his speech to persuade and make promises of good governance.

Furthermore, Etefia (2018) studied pragmemes in outdoor HIV/AIDS campaign messages in Benin metropolis, Nigeria, and the findings revealed that there were 63 utterances and the percentage of utterances were Representative 46%, Expressive 11%, Directive 16%, Commissive 12,7%, and Declarative 14,3%. The result also showed that Donald Trump used more of the representative acts, followed by directive, declarative and commissive speech acts. Lastly, Anjola and Oluwamayowa (2022) pragmatically explored the sermons of Bishop David Oyedepo. The findings reveal that two pragmatic contexts were established, and three practs were classified using pragmatic tools of relevance, inference, reference, shared situational knowledge, voice, and metaphor. It was concluded that Oyedepo's sermons could be theorized using the framework of pragmatic acts. These studies are relevant to the current study, although the current study was conducted using a different text.

The aim of this study was to pragmatically analyze Dr. Tedros Ghebreyesus' 2021 address on Covid-19 and HIV/AIDS. The specific objectives were to:

1. broadly classify the pragmatic acts performed by Dr. Tedros Ghebreyesus in his addresses on Covid-19 and HIV/AIDS;
2. classify the individual practs and allopracts used to perform various pragmatic acts by

Gheberyesus in his addresses on covid-19 and HIV/AIDS.

METHODOLOGY

The study adopted the textual analytic research design. This design was used to describe, interpret and understand texts. According to Caulfield (2022), this designed is geared towards connecting text to a broader social, literary, political, cultural, or artistic context. The choice of this design was because it enables a researcher to glean all kinds of information from a text ranging from its literal meaning to the subtext, symbolism, assumptions, and values it reveals.

The population of the study comprised one hundred and twelve (112) speeches on Covid-19 and HIV/AIDS delivered by Dr. Ghebreyesus on different occasions in 2021. Using purposive sampling method, two (2) Ghebreyesus' 2021. speeches on Covid-19 and HIV/AIDS were selected for analysis. Similarly, extracts or 'textual instances' were purposively selected from the two texts and presented for analysis.

An Android device was used in this study as the main instrument for data collection. The PDF copies of Ghebreheyesus' 2021 speeches on Covid-19 and HIV/AIDS were downloaded from the official website of the World Health Organization (WHO) (https:www.who.int). The speech on Covid-19 was made up of thirty-one thousand and thirty-three (3133) words, while the one on HIV/AIDS was made up of six hundred and seven four (674) words.

For data analysis, the downloaded speeches were analyzed qualitatively and quantitatively using the basic principles of Mey's theory of pragmatic acts (2001). That is, the speeches were analyzed in line with basic tenets of identification, categorization and discussion of pragmatic acts performed vis-à-vis the individual practs together with their contextual tools as used by speaker. The speeches were coded "Covid-19" and "HIV/AIDS" for easy classification and discussion. Through the use of frequency count method as represented on tables and figures, the same sets of data were analyzed. In sum, both qualitative and quantitative methods were used simultaneously to analyze the selected texts, putting into consideration the dictates of the theory of pragmatic acts as proposed by Mey.

RESULTS

The presentation of results in this study is

according to the objectives and the corresponding research questions that guided the study.

The contextual tools and their meaning are as follows:

1. INF-stands for-inference- a process of drawing conclusion base on evidence and reasoning
2. REF.-stands for - reference- the act of using language to identify something in the world.
3. REL - stands for- relevance – refers to how information contributes to effective communication.
4. Voice
5. SSK- shared situational knowledge
6. MPH- metaphor – element that appears in the text and draws out attention outside of it.
7. M- stands for metapragmatics

Table 1: Broad Classifications of Pragmatic Acts Performed Together with Their Contextual Tools in Ghebreyesus' Speech on Covid-19

Activities (Pragmatic Acts)	No. of Acts performed	Contextual Tools						
		INF	REF	REL	VCE	SSK	MPH	M
Speech Acts	23	7	5	11	0	1	5	1
Indirect speech Acts	5	2	3	0	0	0	0	0
Conversational Acts	0	0	0	0	0	0	0	0
Psychological Acts	10	2	3	3	0	0	4	1
Prosody	0	0	0	0	0	0	0	0
Physical acts	0	0	0	0	0	0	0	0

Table 1 shows the broad classification of the types of pragmatic acts performed by Dr. Tedros Ghebreyesus, together with their contextual tools. Out of Mey's (2001) classification of pragmatic acts, twenty-three (23) extracts classified as speech acts; five (5) are classified as indirect speech acts; while ten (10) are classified as psychological acts. It is, however pertinent to mention that all excerpts in his speeches naturally fall under speech acts, because they are aspects of the speech, which Ghebreyesus delivered to his audience, but that does not mean that other acts embedded in the speech should be classified as speech acts. This perhaps justifies why indirect speech acts and psychological acts featured to some extent. However, the pragmeme of speech act has the highest number of occurrence because the data was an address by Dr. Tedros Ghebreyesus who happens to be the sole participant. Secondly, the psychological acts, occurred in ten (10) utterances because they act has to do with the psychological state of the speaker. In those extracts, the speaker expressed some elements of emotions. Thirdly, the indirect speech acts occurred in five extracts, because the speaker used indirect linguistic features to communicate his intent to the target audience. However, the pragmeme of conversational acts had zero (0) occurrence because it was not used by the speakers, because it was not a dialogic communication. In a similar vein, the pragmemes of prosody and physical acts were not used by the speaker; and that explains why they had zero occurrences. Meanwhile, the speech acts, as contained in the table above, were realized using the following contextual tools: INF (7), REF (5), REL (11), SSK (1), MPH (5), and M (1). The indirect speech acts were realized using the contextual tools of INF (2), REF (3), REL (0), SSK (0), MPH (0), and M (0). Similarly, the psychological acts were realized using INF (2), REF (3), REL (3), SSK (0), MPH (4), and M (1).

Table 2: Broad Classification of Pragmatic Acts Performed Together with Their Contextual Tools in Ghebreyesus' HIV/AIDS

Activities (Pragmatic Acts)	No. of Acts performed	Contextual Tools						
		INF	REF	REL	VCE	SSK	MPH	M
Speech Acts	27	5	5	6	0	1	5	0
Indirect speech Acts	1	1	0	0	0	0	0	0
Conversational Acts	0	0	0	0	0	0	0	0
Psychological Acts	5	3	2	2	0	0	0	0
Prosody	0	0	0	0	0	0	0	0
Physical acts	0	0	0	0	0	0	0	0

The results on table 2 showed that three pragmatic acts were performed. They include speech acts, indirect speech acts, and psychological acts. Like what is obtainable in table 1, Ghebreyesus performed almost all the acts in his speech through the pragmeme of speech acts, because, out of the thirty-three (33) excerpts, twenty-seven (27) of them are speech acts; five (5) are psychological acts, only one (1) is an indirect speech acts. As already explained, all the excerpts, including the ones mapped for psychological and indirect speech acts, fall within the ambits of speech acts, but they are specially used here to create some pragmatic effects. Conversational acts, physical acts, prosodic acts and null acts recorded zero occurrence as can be seen on the above table, not because they were not implicitly used, but because, in the context of this study, they are not explicitly used as pragmatic acts, which are realized using the pragmeme of speech acts. Furthermore, the speaker situated his speech on HIV/AIDS, using five (5) INF, five (5) REF and one (1) SSK. These tools are pivotal in interpreting situation-bound utterances used by the speaker. These are discussed in detail in the subsequent heading.

DISCUSSION

The findings of this study, which examined the pragmatic acts used by Dr. Tedros Ghebreyesus in his 2021 addresses on COVID-19 and HIV/AIDS, reveal that speech acts were the most dominant type of pragmatic act used. This is consistent with the findings of Abaya (2015), who found that speech acts were used extensively in Nigerian military coup announcements. It is also in tandem with Oladimeji and Esther (2015) who found that speech acts were used by President Goodluck Jonathan in his declaration of presidential candidacy to persuade and make promises of good governance.

Secondly, the findings showed the use of indirect speech acts and psychological acts in Dr. Ghebreyesus' addresses. This resonates with the findings of Etefia (2018),

who found that representative, expressive, directive, commissive, and declarative acts were used in outdoor HIV/AIDS campaign messages in Benin metropolis, Nigeria. The fact that Dr. Ghebreyesus used psychological acts in 10 utterances to express emotions and create an emotional tone is also consistent with the findings of Anjola and Oluwamayowa (2022), who found that Bishop David Oyedepo's sermons used pragmatic acts to create a specific emotional tone and engage the audience.

The similarity in the findings of this study with the empirical studies highlights the importance of considering the context and audience in the analysis of pragmatic acts. For example, Abaya (2015) found that the context of the coup announcements influenced the type of speech acts used, while Oladimeji and Esther (2015) found that the social context of the presidential declaration influenced the type of speech acts used. In the same vein, Etefia (2018) found that the context of the HIV/AIDS campaign messages influenced the type of pragmatic acts used. The use of contextual tools such as inference (INF), reference (REF), relevance (REL), shared situational knowledge (SSK), metaphor (M), and voice (MPH) to realize pragmatic acts in Dr. Ghebreyesus' addresses is also consistent with the findings of Anjola and Oluwamayowa (2022), who found that Bishop David Oyedepo's sermons used pragmatic tools such as relevance, inference, reference, shared situational knowledge, voice, and metaphor to create a specific pragmatic effect.

The findings of this study also highlight the importance of considering the speaker's intentions and the audience's needs and expectations in the analysis of pragmatic acts. For example, Dr. Ghebreyesus' use of speech acts, indirect speech acts, and psychological acts suggests that he was aware of his audience and tailored his message to their needs and expectations. This is consistent with the findings of Oladimeji and Esther (2015), who found that

President Goodluck Jonathan's use of speech acts was influenced by his intention to persuade and make promises of good governance.

In a sum, the findings of this study, which examined the pragmatic acts used by Dr. Tedros Ghebreyesus in his 2021 addresses on COVID-19 and HIV/AIDS, are consistent with the findings of empirical studies such as Abaya (2015), Oladimeji and Esther (2015), Etefia (2018), and Anjola and Oluwamayowa (2022). The study highlights the importance of considering the context and audience in the analysis of pragmatic acts and demonstrates how speakers can use pragmatic acts to achieve specific goals, such as persuasion, emotional connection, and engagement. The findings of this study have implications for our understanding of how language is used in public addresses and highlight the need for further research on the impact of pragmatic acts on the audience.

CONCLUSION

The pragmatic analysis of Dr. Tedros Ghebreyesus' 2021 speeches on covid-19 and HIV/AIDS, as carried out in this study, has proven that language is at the heart of every discipline, without which the discipline in question would have no voice. This study specifically identified the broad categorizations of the pragmatic acts deployed in the speeches. It identified and discussed the practs used in performing various pragmatic acts by the speaker vis-à-vis the contextual tools deployed to situate the discourse. Ghebreyesus is an eloquent speaker who utilizes various practs and allopracts to perform different pragmatic acts in his speeches. He situates these speeches, using contextual elements of INF, REF, REL, MPH, and SSK. The study underscores the importance of pragmatic acting as a means of interpreting meaning in Ghebreyesus's 2021 speeches on covid-19, HIV/AIDS and indeed any other public health issue. Hence, it is concluded that if public health officials should use a range of pragmatic acts to engage their audience, their message would be conveyed effectively.

RECOMMENDATIONS

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

1. Public health officials should use a range of pragmatic acts to convey their messages and use psychological acts to create an emotional connection with the audience and encourage change of behavior.
2. The curriculum of instruction in public health colleges and universities should be rejigged to incorporate the use of pragmatic acts and psychological acts in messages.
3. Government should provide public health officials with in-service training and capacity building on the effective use of pragmatic acts in public health communication to improve their messaging skills.
4. Language experts should develop guidelines for the use of pragmatic acts in public health communication to provide a framework for public health officials to follow.

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PERCEIVED INFLUENCE OF SECURITY CHALLENGE ON THE SUPERVISION OF INSTRUCTIONAL PROCESSES IN PUBLIC SECONDARY SCHOOL, NASARAWA STATE

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ABSTRACT

This study investigated perceived influence of security challenge on the supervision of instructional processes in public secondary schools. Three research questions guided the study. Two hypotheses answered research questions. Theoretical Framework; on General Strain Theory by Agnaw 1992, and Psychological Theory of Attribution by Heider 1958; Survey design was adopted. 20237 is the population of the study. Public secondary school teachers are the target population. 392 is the sample size gotten through Taro Yamane computation. A self-constructed questionnaire is the instrument titled: perceived Influence of Security challenge on the Supervision of Instructional Processes in Public Secondary Schools in Nasarawa State questionnaire (PIISIPSS in NSQ), structure on four modified rating scale of Strongly Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD). 392 copies of instrument were administered by the researchers and researchers' assistant through direct contact approach to the respondents. Data collected were adequately analyzed using mean and standard deviations while hypothesis were tested at 0.05 level of significance using chi-square goodness – of – fit. The major findings safely affirmed that security challenge influence the supervision of Instructional Processes in public secondary schools. The government should ensure conducive environment for the supervision of instructional processes in institution of learning.

Keyword: Security challenge, Supervision, and Instructional processes.

INTRODUCTION

Education is a lifelong process through instructional processes, it empower populace by encouraging and promoting lifelong skills and know-how, thereby, liberating the individual from poverty and want. Education is the process through which every society attempts to preserves and upgrade the accumulated knowledge, skills and attitudes in its cultural settings and heritages in order to foster the well-being of mankind and guarantee its survival against unpredictable event at time of hostile and destructive elements and forces of man and nature. Psychologists proposed that security is crucial for human survival. The inability to satisfy the need for security causes stress in individuals and then hinders them from pursuing higher level needs. Faild Al-Quad cited in Ekpo and Is'haq (2014) submits that:

If a nation is successful in educating it people as a strong and complete individuals, it will be able to realize a glorious future for herself, promote peace within her boundary and defend her sovereignty. However, if a nation fails to educate its citizenry and make the deficient in carrying out some of the activities of life effectively then, that nation is doomed to witness destruction and obscurity.

Recently, major stakeholders in education have been lamenting over the inefficient instructional processes which could be due to inadequate supervision of instructional processes. Security challenges in an instructional of being scare and distance educational administrations, instructors and learners which disrupted instructional processes.

Instructional processes should be protected through adequate and efficient supervision to ensure that, there are sufficient trained and qualified educational instructors, sufficient and efficient carry out instructional processes in school. This calls for environment that is free from fear, anxiety and uncertainty. Unfortunately, our institution of learning have become hot spots where cases of security challenge are recorded (Ojukwu and Nwauma, 2017).

Supervision in education is a systematic approach to oversee teaching and learning processes. According to Asemah in Odeh (2019) supervision is a way of stimulating growth, guiding, improving the process, refreshing, encouraging, and overseeing operational process.

The supervision of instructional processes ensures to maintain and improve adequacy of instructional process in the educational system. Nwakwo & Nwaogbe (2009). For sustainable effective supervision of instructional processes, the educational system should be uninterrupted, the environment should be conducive and workable, there should be effective communication skills, and effective application of instructional materials align with academic standards. Aliyu & Lawal (2018) affirmed that there is deficiency in carrying out the supervision of instructional processes which could lead to incompetent manpower which might in turn pave way to security challenge in the society.

There is no gainsaying the security or lack of it, is at present taking an out-sized proportion of time, attention, and resources of government and the general public. Security challenge in Nigeria causes threats which triggers traumatic disorder and toxic tress that disrupts educational System. The attacks by insurgents on schools, frustrate and destabilizes successful supervision of instructional processes.

Statement of the Problem

Right from the inception of democracy in Nigeria, in 1999, security challenge has become a major issue of concern to every citizen (**Omotola, 2010).** On a daily basis the media has continued to highlight and discuss incessant cases of armed robbery, Kidnapping, bombing abduction, rape, cult activities and high rise in ethnic and communal clashes, which have become regular occurrences and characterized life in Nigeria. Institution of learning have become hot spots where cases of security challenge are recorded. The inefficient educational system of secondary education due to activities of insurgent perpetrating the peace of populace and that of educational administrators and planners could lead insufficient supervision of Instructional Processes. The insecure environment triggers traumatic disorder and toxic stress, as parents pull their children out of schools, while in some cases, security challenge has led to closure of schools, Wale-Awe & Adebayo (2020) opined, the attacks by insurgents on schools led to disruption of supervisory practice for effective instructional processes in public secondary schools.

Consequently, government resources are depleted as funds meant for other developmental projects are channel in tackling the aftermath of the attacks. Where academic attainment in terms of quality of graduates and manpower regrettably suffer. It is therefore the considered View of the researchers that a thorough investigation into educational system to elicit the influence of security challenge on academic attainment of any institution of learning.

Accordingly, the researchers investigates the influence of security challenge on the supervision of instructional processes in public secondary schools, by identifying the causes of security challenge, finding out whether security challenge influence the Supervision of instructional processes in public secondary schools and ascertain the extent at which security challenge influence the supervision of instructional processes in public secondary schools in Nasarawa State.

The researchers ponder on the following research question such as: (i) what are the causes of security challenge? (ii) How does security challenge influence the supervision of Instructional Processes in public secondary Schools and (iii) to what extent does security challenge influence the supervision of Instructional Processes in Nasarawa State?

To answer the research questions, the following hypothesis were considered (i) most threats do not significantly cause security challenge in Nasarawa State (ii) security challenge does not significantly influence the supervision of Instructional Processes, in public secondary schools in Nasarawa State.

Theoretical Framework

The researchers employed reasoning in drawing a conclusion on what we do, due to a circumstantial evidence rather than on the basis of direct observation. On such note, the researchers adopted attribution theories such as Heider Psychological theory of attribution and General strain theory by Agnew.

General Strains, theory By Agnew 1992. Agnew considered strain as event or condition that are dislike by individuals. He propounded that, various forms of excessive and hurtful tension cause individuals to exhibit negative emotional state such as anger, depression and fear that may hinder achievement of aspiration and expectation of individuals. It is worthy to note that, anger, and fear are agents that causes stress to an individual which could lead to crime. And it is certain that when individual basic needs are not met they seek criminal means to deal with their negative emotions. Insurgent activities are criminal means of getting things done through illegal means to achieve their goals.

In essence, aspiration and expectation based on a will to succeed on ground upon which something excellent is expected to happen. It is every ones wish that school children are groomed to have a useful life to themselves and the society at large for peaceful coexistence.

Unfortunately, excessive and hurtful tension in an institution of learning leads to unconducive environment (goal blockage), presenting negative emotion leading to loss of positive values stimuli, where both human and natural resources might be strain up, get deteriorated, wasted and finally prevent progressive and efficient supervision of Instructional Processes in schools.

Psychological theory of Attribution by Heider 1958

Heider explained events by indicating a cause. He proposed that transient event were attributed to actors' disposition or to stable characteristics of the environment. We tend to belief and have a desire that could lead to what we perceive about disposition or situational event which could be controllable and uncontrollable character that may affect our persistence on task. Security challenge is an emergence event. The psychological theory of attribution broaden the mind of educationist to be aware that the more we feel that our behaviour is under our conscious control the greater the effective response on educational task. It helps us to understand that security challenge is an undesirable means, that educational supervisors would require intelligent strategies so that our belief and desire would lead to good intension even in the face of all difficulties due to transient event.

LITERATURE REVIEW

Secondary School System

Secondary school system in Nigeria follows the 6+3+3 system of primary-secondary education. Six years of primary education are followed by three years of junior secondary education and three year of senior secondary education. Secondary school is an institutional of learning founded for educational functions where instructional processes were formulated and followed to achieve educational goals such as (i) a free and democratic society, (ii) a just egalitarian society (iii) a united, strong and self-reliant nations, and (iv) a great and dynamic economy (National Policy on Education, 2013).

This can only be achieved through effective instructional processes where children are the center of learning involving them in cooperation activities to use their critical thinking and kinesthetic to solve identified problems for useful living to themselves and the society to be strong and self-reliant. To achieve this, education is an essential tool, it has to be developed to aid populace educated. Sadiq (2013) asserts that educational populace is an asset to a nation. Education is a means of improving desirable human traits, like; honesty, sincerity, hand working, punctuality, productivity, innovation, patriotism, selflessness, brotherhood and friendship.

Instructional Processes

Instructional processes involves putting the student at the center of learning through techniques emphasizing learning by doing and situated learning. Situated learning involves students in cooperative activities where they are challenged to use their critical thinking and kinesthetic abilities. According to Smith and Ragan (2005), that instructional processes are structured guidelines designed to facilitate learning by providing learners with clear objectives, content, and assessment strategies that lead to the acquisition of Knowledge and skills.

Likewise, Clark and Mayer (2016) opined that instructional processes encompasses both the content delivered and the methods used to deliver, ensuring that learners can effectively process and apply knowledge. Instructional processes in secondary Schools are activities that improve knowledge or skill for useful living. It is advisable that the instructors, learners, and the instructional materials should be available and in good condition for the process. Under curricular functions, the classroom control, the communication process, and effective utilization of instructional material is obvious for efficient teaching and learning process

as safely agreed by Eze, & Nwachukwu C. I. (2021). Instructional process should be stimulated, guided, improved, refreshed, encourage and maintained, ensuring that there are trained and qualified instructors, relevant materials resources to achieve instructional goals.

Supervision of Instructional Processes

Supervision is a way of Stimulating, guiding, improving, refreshing, encouraging, and maintaining operational processes. According to Adepoju in Odeh (2019), the term supervision is derived from Latin words, "to oversee". It is an interaction between at least two persons for the improvement of instructional procedures, and condition that are consciously designed to advance effectiveness of individual and groups. Supervision is not aim at witch-hunting or fault finding. It focus on helping trainee to correct their mistake and giving sure guidance when need arises. To Tyokyaa (2016) supervision helps educate instructors to see beyond their present condition and seek improvement to coordinate effort and resources for more efficient input on educational processes.

Supervision of instructional processes is a systematic approach aim at enhancing teaching and learning processes. For Sustainable supervision of instructional processes, there should be uninterrupted educational system, conducive and workable environment with sufficient and efficient resources well monitored, checkmate and coordinated, Akpan et al (2017). To sustained quality instructional processes calls for cooperation among and with instructors interacting and participating through instructional activities with the application of instructional materials to improve classroom control for the achievement of instructional goals. For this reason, AKintunde, (2015) observed that, supervision of instructional processes should adhered to curriculum content in shaping the direction and utilization of instructional materials to stimulate growth in instructors in order to improve the quality instructional processes. The Following strategies were observed by Godwin (2014) as a process of stimulating growth in instructors:

i. instructors must see each other as colleague
ii. Cooperates as they interact with each other in providing relevant information from instructional activities, brainstorming on possible ways of improving effective instruction.
iii. Identify problem and lapses to analyze and proffer Solution to the identified issue.

When there is deficiency in carrying out supervision of instructional processes might lead to incompetent man power which could in turn pave way to security challenges issues in an institution of learning. Security challenge leads to poor attention to education. As protection of life and properties is most priority. The education sector suffered most where different ugly forms of attitude such as poor turning to school programme and poor programme implementation due to unforeseen circumstance in and from the environment, Akinda & Oladipo (2019), it thus, deterred the supervision of Instructional Processes leading to poor achievement of instructional goals.

Effective Supervision of Instructional Processes

Protection of life and properties is the most priority for effective supervision of instructional processes in schools. The process of overseeing instructors and learners requires the following among others.

1. Efficient communication process
2. Efficient and sufficient time
3. Conducive environment
4. Qualified educational administrators and planners
5. Adequate material resources

Unfortunately, the feasibility of aforementioned conditions for effective supervision of instructional processes are difficult to achieve due to security challenges confronting the land. The supervision of instructional processes in public secondary schools degraded and dissipated leading to efficient and ineffective instructional processes in public secondary schools.

Security Challenge

Security challenge is a state of not been free from anxiety and uncertainty Achumba (2013) define security challenge from two perspectives. Firstly; security challenge is the state of being open or subject to danger or threat of danger. Secondly, security challenge is the state of being exposed to risk or anxiety. Best (2016) sees security challenge, as a degenerated stage of conflict, threats to human security, intense violence characterized by fighting, death, injury. Katsina (2012) reviewed the state of security challenge in Nigeria and submitted that it is a concomitant of "the deep and structurally entrenched crisis of development that creates conditions for inequality, poverty and unemployment"

Causes of Security Challenge

Security challenge is a product of injustice. The dangerous tread in security challenge come with Boko Haram heightened fears among the populace, and the hostility has gone beyond religions or political coloration. The coordinated assaults from the Boko Haram sect in the northern part of the country, besides making life miserable for Nigerian, was rightly stated by Adagba et al (2012) that the security challenge is worsened by the state of violence attacks by the Jama'atu Ahlis Sunnah Ladda' Awati wal jihad otherwise called Boko Haram that Western education is forbidden in Hausa Language. One can posit that Nigeria has witnessed an unprecedented level of security challenge. Inter and intra ethno-religions violence, armed robbery, assassination, murder, gender based violence and bomb explosion leading to enormous loss of life and property and a general atmosphere of siege and social tension for the populace (Ibrahim in Adagba et at 2012). Security challenge causes unconducive environment confronting the supervision of instructional processes then we tend to absent ourselves from where we should be discharging our obligation and services.

Influence of Security Challenge on the Supervision and Instructional Processes

Supervision of instructional processes is a systematic approach to overseeing and enhancing instructional processes. It requires uninterrupted environment for the achievement of instructional goals. To rise to the challenges of working and showing commitment for the supervision of instructional processes in public secondary schools, it required conducive and workable environment where educational supervisors can oversee instructional process effectively. Unfortunately, educational administrators and planners find it very difficult to rise to the standard of working and showing commitment for the supervision of Instructional processes in public secondary schools due to security challenge confronting education sector, Ibrahim et al (2020). Security challenge leads to school closure, deterioration of schools facilities, creating fear and anxiety into administrators. Nobody want to be killed! Fear creates anxiety leading to uncertainly and absence of confidence. These factors lead to ineffectiveness of any events be it educational or business wise.

Security challenge is unstable situation of extreme danger and its disruption is felt by many instructional supervisors and Planners around the world and a massive shock to individual's life and productivity as well, Idris, & Muhammed, S. A (2018). State of feeling insecure discourages, supervision of instructional processes. For fear of being kidnapped and Killed by insurgents pushes educational administrators and planners into inactive stage, this can prevent supervision of instructional processes more so, proliferation of illegal arm and light weapons around host community of an institution of learning has havoc on the supervision of instructional processes. Security challenge confronting educational system triggers negative feelings in educational supervisors and this also disrupted, discouraged and destabilized successful supervision of instructional processes. This interruption will not just be short time issue, but can also have long term consequences for sustainable education systems in the country. The physical learning process in the dynamic society has been disrupted insurgence leading to vulnerable and disadvantage atmosphere for achieving instructional goals. The impending doom of security challenge before now and now on human and quality education in public secondary schools is worrisome.

Extent at which security challenge influence the supervision of Instructional Processes in Public Secondary Schools

The gravity at which security challenge has pulled down the standard of education in Nigeria is unacceptable to National development, such that its consequences devalued the supervision of instructional processes to the extent that educational attainment at public secondary schools degraded in quality, cause more havoc in the society and the country at large.

Proliferation of illegal arm and light weapons around a host community of an institution of learning creates fear, anxiety, and uncertainty in educational system. Aliyu et al (2018) this frustrate the effort of educational administrators and planners at public schools. Security challenge confronting education sector, leads to unconducive environment which triggers negative feeling in educational administrators and planners leading to abandonment of educational functions to the extent that instructional processes suffered most leading to poor academic achievement and underdevelopment of the Nation, opined by Idris et al (2018).

METHODOLOGY

Survey design was adopted. 20237 is the population of the study. Public secondary school teachers are the target population. 392 is the sample size gotten through Taro Yamane computation. A self-constructed questionnaire is the instrument titled: Perceived Influence of Security challenge on the Supervision of instructional processes in Public Secondary Schools in Nasarawa State questionnaire (PIISIPSS in NSQ), structure on four modified rating scale of Strongly Agreed (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD). 392 copies of instrument were administered by the researchers and researchers' assistant through direct contact approach to the respondents. Data collected

were adequately analyzed using mean and standard deviations while hypothesis were tested at 0.05 level of significance using chi-square goodness – of – fit.

RESULTS

Research Questions 1: What are the causes of security challenge in public secondary schools?

Table 1: Mean responses of the respondents on the causes of security challenge in public secondary schools in Nasarawa State.

S/N	Items	$\bar{x}$	SD	Decision
1.	Insurgency causes security challenge in schools	3.393	0.657	Agreed
2.	Ethno-conflict causes security challenge in Schools	3.006	0.624	Agreed
3.	Poor disposition of security personnel breeds weak security system	3.101	0.926	Agreed
4.	Uncertainty in School premises create anxiety in Schools	2.710	0.893	Agreed
5.	Unchecked inflow of arms and weapons due to porous borders has criminality	2.708	1.085	Agreed
6.	Cultism in school has described as cancer militating against Educational development	2.803	0.736	Agreed
7.	The scourge of kidnapping, a fertile ground for robbers and all sort of criminalities are major causes of security challenge in Schools	2.901	0.690	Agreed
8.	Religious violence is a cause of security challenge in Schools	2.901	0.818	Agreed
9.	Uncertainty in education sector causes havoc in secondary schools	3.006	0.766	Agreed
10.	Injustice in an institution of learning creates anxiety in educational administrators	2.814	0.739	Agreed
	Cluster Mean/SD	**2.934**	**0.793**	Agreed

The result in Table 1 revealed the mean responses on the causes of security challenge in public secondary schools in Nasarawa State with their corresponding standard deviations. It can be seen from Table 1 that the mean cluster is above 2.50. This affirmed that most threats cause security challenge in Nasarawa State.

Hypothesis 1: Most threats do not cause security challenge in secondary schools.

Table 2: Frequency Count and Chi-Square Test Statistics

Options	Observed Number	Expected Number	Residual	Chi-square	df	Asymp. Significance	Remark
SD	11	98	-87	415.705	3	.000	Rejected
D	26	98	-72				
A	99	98	1				
SA	256	98	158				
Total	**392**						

P (.000) < alpha (0.05)

The result in table 2 p (.000) and alpha level (0.05) this means that p (.000) <alpha level (0.05). This implies that the null hypotheses is rejected. It there can be affirmed that most threats cause security challenge in secondary schools.

Research Question 2: How does security challenge influence the supervision of Instructional Processes in public secondary schools in Nasarawa State?

Table 3: Mean responses with their corresponding standard deviation on how security challenge influence the supervision of instructional processes in public secondary schools.

S/N	Items	x̄	SD	Decision
11.	State of feeling insecure discourages supervision of instructional processes in public secondary schools	3.436	0.661	Agreed
12.	Security challenge disrupts supervision of instructional processes in public secondary schools	3.006	0.624	Agreed
13.	Closure of schools due to anxiety prevents supervision of instructional processes in public secondary schools	3.134	0.931	Agreed
14.	Depression pushes educational administrators and planners into inactive stage, this can destabilize supervision of instructional processes in public secondary schools	2.743	0.921	Agreed
15.	Lack of conducive environment in an institution of learning discourages supervision of instructional processes in public secondary schools.	2.708	1.085	Agreed
16.	Proliferation of illegal arm and light weapons around a host community of an institution of learning create fear and anxiety into educational supervisors, causes havoc on the supervision of Instructional Processes in public secondary schools.	2.803	0.736	Agreed
17.	For fear of being kidnapped and killed, educational supervisors abandons their duties, leading to inefficient supervision of Instructional Processes in public secondary schools.	2.943	0.717	Agreed
18.	For fear of attacks, educational supervisors abandoned their obligations which altered supervision of instructional processes in schools	2.901	0.817	Agreed
19.	Injustices in education sector frustrate the effort of educational supervisors to effectively supervise instructional processes in public secondary schools	3.088	0.786	Agreed
20.	Security challenge confronting secondary education, triggers negative feeling in educational supervisors and this destabilizes successful supervision in secondary schools	2.804	0.739	Agreed
	Cluster Mean/SD	**2.952**	**0.701**	Agreed

The result in Table 3 above revealed that, state of feeling insecure in an institution of learning disrupts and discourages supervision of instructional processes in public secondary schools. That closure of schools due to anxiety prevent supervision of instructional processes, causing depression and pushes administrators into inactive stage. In addition, lack of conducive environment discourages supervision of instructional processes in public secondary schools. Proliferation of arm and light weapons around a host community of an institution of learning create fear and anxiety into educational supervisors which has havoc on supervision of instructional processes in public secondary schools. More so, fear of attack and injustice in education sector frustrate the effort of educational supervisors in public secondary schools. Likewise, negative feelings in educational supervisors due to security challenge confronting secondary education destabilizes successful supervision of instructional processes in public secondary schools. All items has mean response above 2.50. The Cluster mean 2.952. This implies that security challenge influences the supervision of instructional processes in public secondary schools.

Hypothesis 2: Security challenge does not significantly influence the supervision of instructional processes in public secondary schools in Nasarawa State.

Table 4: Frequency Count and Chi-Square Test Statistics

Options	Observed Number	Expected Number	Residual	Chi-square	df	Asymp. Significance	Remark
SD	26	98	-72	267.071ᵃ	3	.000	Rejected
D	22	98	-76				
A	136	98	38				
SA	208	98	110				
Total	**392**						

P (.000) < alpha (0.05)

The result in Table 4 revealed that the P(.000) < alpha level (0.05). This shows that the null hypotheses is rejected. It therefore can be affirmed that security challenge significantly influenced the supervision of instructional processes in public secondary schools in Nasarawa State.

Research Question 3: To what extent does security challenge influence the supervision of instructional processes in public secondary schools?

Table 5: Arithmetic Mean of the respondents on the extent at which security challenge influences the supervision of instructional processes in public secondary schools in Nasarawa State

S/N	Items	VGE (5)	GE (4)	AE (3)	LE (2)	NE (1)	Mean	Remark
21.	State of feeling insecure discourages supervision of instructional processes in public secondary schools.	161x5 = 805	112x4= 279	93x3= 279	25x2 =50	2x1= 2	1584 / 392 = 4.04	4.0
22.	Proliferation of illegal arm and light weapon around a host community of an institution of learning create fear and anxiety in educational supervisors that distracted effective supervision of instructional processes.	168x5 = 840	110x4 = 440	90x3 = 270	21x2 =42	3x1= 3	1595 / 392 = 4.06	4.1
23.	Due to anxiety, the supervisions of instructional processes was highly disrupted to the extent that, educational supervisors got discouraged to carry out their functions as expected.	170x5 =850	120X4= 480	95x3= 285	6X2= 12	1x1= 1	1628 / 392 = 4.15	4.2
24.	Unconducive environment in an institution of learning discourages the process of guiding and refreshing instructors and learners leading to poor academic achievement in public school.	166X5 = 830	150 x 4 = 600	70 x 3 = 210	6x2= 12	0x1= 0	1652 / 392 = 4.21	4.2
25.	The extent at which security challenge leads to the closure of public secondary schools, highly prevents the supervision of instructional processes in public secondary schools.	200 x5 = 1000	99x4=3 96	90x3= 270	3x2= 6	0x1= 0	1672 / 392 = 4.27	4.3
26.	Injustice in education sector frustrate the effort of educational supervisors' leads to lost of confidence on education sector.	195x5 =975	130x4= 520	57x3= 171	7x2= 14	3x1= 3	1683 / 392 = 4.29	4.3
27.	Security challenge causes depression in educational supervisors pushes them into inactive stage where supervision of instructional processes suffered most.	189x5 =945	165x4= 660	30x3- 90	7x2= 14	1x1= 1	1710 / 392 = 4.36	4.4
28.	For fear of being kidnapped and killed distracted educational processes which devalued teaching and learning process in public secondary school.	163x5 =815	191x4= 764	31x3= 93	5x2= 10	2x1= 2	1684 / 392 = 4.29	4.3
29.	For fear of attacks, both instructors and learners abandoned schools programme, to the extent that, teaching and learning process becomes inefficient.	192x5 =960	151x4 =604	41x3= 123	6x2= 12	1x1= 1	1700 / 392 = 4.34	4.3
30.	Security challenge issues confronting public secondary school, triggers negative feelings in educational administrators and planners and this destabilizes successful supervision of	167x5 =835	115x4= 460	95x3= 285	13x2 =26	2x1= 2	1608 / 392 = 4.0	4.1

instructional processes in public secondary schools

Decision Rule

Range	Remark
4.1 – 5.0	Very Great Extent (VGE)
3.1 – 4.0	Great Extent (GE)
2.1 – 3.0	Average Extent
1.1 – 2.0	Little Extent (LE)
0.1 – 1.0	No Extent (NE)

The result in Table 5 revealed that all the items have arithmetic mean at very great extent which security challenge influence the supervision of Instructional Processes. Where the state of feeling insecure, discourage, supervision of instructional processes has mean of 4.0, the proliferation of illegal arm and light weapon around a host community of an institution of learning creates fear, anxiety and uncertainty into educational supervisors with mean 4.1. Due to anxiety, the supervision of instructional processes was highly distracted has mean of 4.2 unconducive environment discourages the process of guiding and refreshing instructors and learners leading to poor academic performance has mean of 4.2 while the extent at which security challenge leads to the closure of public school highly prevents the supervision of instructional processes 4.3 has it mean. 4.3 An arithmetic mean on the extent where injustice in education sectors frustrate the effort educational supervision in public schools. Likewise security challenge causes depression and pushes educators into inactive stage where supervision of instructional processes suffered most has 4.4 mean score. For fear of kidnapped and killed distracted educational process which devalued teaching and learning process in public school has 4.3 as mean score. In addition, for fear of attacks both instructors and learners abandoned school programme to the extent that teaching and learning becomes inefficient with 4.3 mean. Security challenge triggers negative feelings, this destabilizes successful supervision of instruction in public schools and with 4.1 arithmetic mean score. The results revealed that items are at very great extent which security challenge influence the supervision of instructional processes in public secondary schools; except item 1 that state of feeling security challenge discourages supervision of instructional processes felt at great extent with mean 4.0 based on the decision rule.

Summary of Major Findings

1. Most threats causes security challenge in Nasarawa State
2. Security challenge significantly influence supervision of instructional processes at very great extent in public secondary schools in Nasarawa State.

Discussion of Findings

Based on the analysis obtained from the findings, the discussion of findings is organized around 3 research questions and 2 hypothesis reported by the major finding. The first finding revealed that insurgency Ethno-conflict, bullying, inflow of small aim and light weapon, cultism, Kidnapping, religion Violence, uncertainty and injustice among other are the Causes of security challenge. This findings agrees with Adagba et al (2012) reported that inter and intra ethno - religion violence, armed robbery, assassination, murder, gender-based violence and bomb explosion leading to enormous loss of life and properties and a general atmosphere of siege and social tension for the populaces. It is shown on table 1 that cluster mean of the respondents as 2.934 which met criterion mean from major findings it affirmed that most threats cause security challenge in Nasarawa State.

Due to the state of feeling insecure. The second (2) finding revealed that security challenge cause depression and pushes educational administrator and planners into inactice stage which frustrate and destabilizes successful Supervision of Instructional Processes. Teachers are the fulcrum on which the level of educational system rested. They are instructors, the largest and most crucial group of educational system, who influence the quality of educational input, they are to be encourage, stimulate, guide, improve, and oversee as stated by Godwin (2013) that there is need for trained and qualified instructors for effective instructional processes to achieve instructional goals. From the analysis of the data in Table 1, the finding revealed that security challenge discourages, disrupts, prevent and hinders sufficient and efficient supervision of Instructional Processes in public secondary school in Nasarawa State. It also revealed that, security challenge in an institution of learning causes depression and pushes educational administrators and planners into inactive stage leading to inappropriate implementation of secondary education curriculum. From the major findings, it can be safely affirmed that, security challenge influence the supervision of instructional processes in public secondary Schools in Nasarawa State

The third (3) findings revealed that, proliferation of illegal arms and light weapons around a host community of any institution of learning, creates

fear, anxiety and uncertainty in education system thus; frustrating the efforts of educational administrators and planners at public secondary schools. Perfectly agreed by Abubakar (2011), that security challenge causes developmental challenge such as inadequate supervision of institutions.

Conclusion

It is everyone's wish that instructional processes in public secondary school are stimulated, guided, improved, refreshed, encouraged and maintained to achieve instructional goals. Unfortunately, due to the wave of security challenge confronting education sector, where both human and material resources were strained up, prevents successful supervision of Instructional Processes in public secondary schools.

Recommendation

1. The government and levels of educations should double their effort and be bold enough to establishing the intelligence and the conflict prevention mechanism in the country to provide a safe and enabling environment for the populace to meet their needs. There should be conducive and workable environment where the host community member, schools personnel, parents, agent from the ministries of education, educational supervisors, and security, collaborating through the intelligent network to ensure that every institution of learning is conducive for the supervision of Instructional Processes for the achievement of instructional goals.

Contribution to Knowledge

This study contributes to knowledge in several significant ways:

1. **Understanding the influence of Security challenge on the Supervision of Instructional Processes**: It provides insight into how security challenge can disrupt the learning environment, affect teacher performance, and reduce students' learning outcomes.
2. **Identification of Causes of Security challenge:** The study uncovers various factors contributing to security challenge in Nasarawa State, which can help stakeholders, such as policymakers, security agencies, and educators, to address the root causes of security challenge in the region.

3. **Policy Implications for Educational Development:** The findings emphasize the need for governments and education administrators to create a secure and conducive environment for education.

Suggestion

The researchers suggest that, there should be investigation on how prolonged exposure to threats affects students' performances and overall academic achievement in any institution of learning in Nigeria. And any other research topic on educational development for sustainable national development as well.

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ASSESSMENT OF THE ROLE OF IMPROVISED ART MATERIALS IN ENHANCING CREATIVITY, CRITICAL THINKING AND SUSTAINABLE ART PRACTICES SECONDARY SCHOOLS IN AKWANGA, NASARAWA STATE, NIGERIA

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ABSTRACT

This study examined the role of improvised art materials in enhancing creativity, critical thinking, and sustainable practices within art education. Through a mixed-methods approach combining quantitative surveys and qualitative interviews, the research investigated how alternative materials affected learning outcomes, creative expression, and environmental sustainability. The study analyzed data from 400 participants, including art educators and students, across various educational settings. The findings revealed that improvised materials significantly enhanced creative expression (mean=4.2) and environmental sustainability (mean=4.3), whilst reducing educational costs (mean=4.1). Qualitative analysis identified five primary themes: enhanced creativity and experimentation, cost-efficiency and accessibility, environmental sustainability, pedagogical challenges, and professional development needs. Notably, 57.5% of respondents reported increased creative thinking when using improvised materials, whilst 37.5% emphasized ecological benefits. However, the research also highlighted important concerns regarding safety and material reliability (mean=3.6), with approximately 30% of respondents expressing reservations about durability and safety standards. Furthermore, 20% of participants indicated a need for additional training to effectively integrate these materials into their teaching practice. The study concluded that whilst improvised art materials offered substantial benefits for creativity, accessibility, and sustainability, their successful implementation required careful consideration of practical constraints and safety measures. These findings had significant implications for art education policy and practice, suggesting the need for structured professional development programmes and safety guidelines to support educators in effectively implementing alternative materials.

Keywords: Improvised Art Materials, Creativity, Sustainability, Critical Thinking and Art Education

Introduction

Art education is widely recognised as a fundamental element of a comprehensive educational programme because it fosters creative expression, critical thinking, and effective problem-solving skills among students. Traditionally, however, art education has depended heavily on commercially produced art materials that are not only expensive but also frequently inaccessible, particularly in resource-constrained environments (Colangelo, 2018). This overreliance on standardised, commercial supplies can impede creative potential and limit opportunities for artistic experimentation. In response, researchers have increasingly turned their attention to alternative, cost-effective approaches that utilise improvised art materials. Improvisation in art involves the creative re-purposing of everyday objects and unconventional materials into artistic works, thus enabling educators and artists to promote inclusivity, boost creativity, and support sustainable practices that resonate with today's environmentally conscious society.

Historically, the use of improvised materials in art is not a recent development. Several seminal art

movements, including Dadaism and Surrealism, embraced "readymades" and found objects as a means of challenging conventional definitions of art (Seigel, 2008). Iconic artists such as Marcel Duchamp and Pablo Picasso reinterpreted mundane, everyday objects, thereby reframing artistic value to extend beyond the inherent properties of the material itself. Their innovative approaches expanded the boundaries of artistic practice and instigated a shift in how art is both created and appreciated. In modern art education, this legacy is being revisited with renewed vigour as educators aim to broaden creative boundaries while addressing the socio-economic and environmental limitations imposed by traditional art materials.

The drive to explore improvised art materials in education is multifaceted. Firstly, there is a clear economic imperative: in many schools and communities especially those in low-income or rural areas—the high cost of commercial art supplies presents a significant barrier to participation in art-making activities. By contrast, improvised materials, which are often sourced from recycled or locally available resources, have the potential to democratise art education, enabling a wider range of students to engage in creative endeavours (Mbaba & Atuzie, 2024). Secondly, the very nature of improvised materials fosters an innovative mindset. When students are exposed to non-traditional media, they are encouraged to explore and understand the intrinsic properties of these materials. This exploration promotes enhanced critical thinking and problem-solving, as learners must determine how best to manipulate and combine various elements to achieve their intended aesthetic outcomes (Edwards, 2015).

Moreover, the utilisation of improvised art materials aligns closely with contemporary sustainability goals. In an era increasingly defined by environmental degradation and resource depletion, repurposing waste materials for creative purposes is both a practical and ethical decision. Educators and artists are becoming more aware of the necessity to reduce waste, promote recycling, and adopt practices that minimise the environmental impact associated with art production. For instance, upcycling transforming discarded objects into art serves not only an aesthetic function but also acts as a catalyst for social and environmental change (Boetzkes, 2019). In this context, improvisation in art education transcends its pedagogical utility, also becoming a form of environmental activism.

Despite the numerous benefits associated with improvised materials, their incorporation into formal art education is met with both enthusiasm and scepticism.

While many educators appreciate the potential for improvised materials to stimulate creative thought and lower costs, concerns persist regarding issues such as material consistency, safety, and durability. The existing literature indicates that there is a notable lack of systematic research on how these alternative materials affect learning outcomes and artistic development (Ulger, 2018). Key questions remain unanswered about whether improvised materials can replicate or even enhance the aesthetic and technical qualities achievable with traditional media. These challenges highlight the need for further empirical investigation into the pedagogical and practical aspects of integrating improvised materials into art classrooms.

Statement of the Problem

In many educational settings, access to conventional art materials is often limited due to high costs, supply shortages, and environmental concerns, which can hinder students' creative expression and critical thinking development. Despite the growing advocacy for sustainability in art education, the potential of improvised materials as viable alternatives remains underexplored. While some educators integrate locally sourced or recycled materials to foster creativity and cost efficiency, there is limited empirical evidence on their effectiveness in enhancing artistic innovation, problem-solving skills, and sustainable practices. Additionally, concerns regarding the durability, safety, and pedagogical feasibility of these materials raise questions about their long-term viability in structured art curricula. This study, therefore, seeks to assess the role of improvised art materials in promoting creativity, critical thinking, and sustainability in art education, identifying both their benefits and challenges to inform better integration into teaching and learning processes.

Aim and Objectives of the Study

The aim of this study is to assess the role of improvised art materials in enhancing creativity, critical thinking and sustainable art practices in Secondary schools in Akwanga, Nasarawa State, Nigeria. The specific objectives of the study include:

1. to evaluate respondents' perceptions of the impact of improvised art materials on creativity, critical thinking, and sustainability.
2. to assess the extent to which respondents perceive improvised materials as a reliable and cost-effective substitute for traditional art supplies.
3. to explore the challenges and pedagogical concerns associated with the use of improvised art materials in art education.

Research Questions

The study was guided by the following research questions:

1. How do respondents perceive the impact of improvised art materials on creativity, critical thinking, and sustainability?
2. To what extent do respondents find improvised materials a reliable and cost-effective substitute for traditional art supplies?
3. What challenges and pedagogical concerns are associated with the use of improvised art materials in art education?

LITERATURE REVIEW

The literature on improvisation in art education is vast and multifaceted, encompassing historical perspectives, theoretical frameworks, empirical research, and practical case studies. In this literature review, we will trace the evolution of improvised art materials from early artistic practices to their contemporary applications. This review is organised into several thematic sections: historical development, theoretical perspectives on improvisation and creativity, pedagogical approaches in art education, sustainability and environmental considerations, socio-cultural implications, technological influences, challenges and criticisms, and future directions for research.

Historical Perspectives on Improvised Art Materials

The use of alternative materials in art is rooted in the early practices of human civilisation. Prehistoric art, for example, is replete with instances where natural pigments derived from minerals, plants, and animal products—were used to adorn cave walls (Sarkar et al., 2022). These early endeavours laid the foundation for the later evolution of artistic media. In ancient Egypt, artists employed materials such as papyrus, stone, and various natural dyes to create works that were both utilitarian and symbolic (Scott, 2016). The Arts and Crafts Movement of the late 19th century further reinvigorated the use of improvised materials by championing traditional craftsmanship and the use of locally sourced natural resources (Tuite & Horton, 2019). This historical progression illustrates that improvisation is not an anomaly in art; rather, it is an intrinsic aspect of the creative process that has evolved over millennia.

The 20th century witnessed a dramatic shift in artistic paradigms. The emergence of avant-garde movements such as Dada and Surrealism marked a decisive break from traditional aesthetics. Dada artists, disillusioned by the socio-political upheavals of World War I, embraced the absurd and the everyday. Marcel Duchamp's readymades ordinary objects presented as art challenged the very notion of artistic creation and value (Goldberg, 1984). Similarly, Surrealists sought to tap into the subconscious by reconfiguring commonplace items into unexpected forms (Chipp, 1976). These movements not only expanded the range of acceptable artistic materials but also redefined the role of the artist as an innovator capable of transforming the mundane into the extraordinary.

Theoretical Perspectives on Improvisation and Creativity

The theoretical underpinnings of improvisation in art education are diverse. Researchers have long argued that creativity flourishes under conditions of constraint and uncertainty. The adage "necessity is the mother of invention" finds resonance in art education, where limited resources can paradoxically stimulate innovative thinking. Cognitive theories of creativity suggest that the use of non-traditional materials prompts divergent thinking a process by which individuals generate multiple solutions to open-ended problems (Piirto, 2011). This idea is reinforced by the work of Edwards (2015), who contends that improvisation encourages learners to step beyond conventional boundaries and explore novel artistic techniques.

Constructivist theories also play a significant role in explaining the benefits of improvised art materials. According to constructivist pedagogy, learners actively construct knowledge through hands-on experiences and experimentation. When students engage with improvised materials, they are not merely passive recipients of pre-determined techniques but active participants in the creative process. This experiential learning approach fosters deep conceptual understanding and enhances problem-solving skills (Efland, 2002). Furthermore, socio-cultural theories emphasise the importance of context and community in learning. The utilisation of local, repurposed materials not only reflects the cultural milieu of the learners but also promotes a sense of identity and belonging (Enwezor, 2013).

Pedagogical Approaches in Art Education

In the realm of pedagogy, the incorporation of improvised art materials has been linked to a more inclusive and flexible approach to teaching. Traditional art curricula, with their emphasis on a standardised set of materials and techniques, can often marginalise students who do not have access to these resources (Sleeter & Carmona, 2017). In contrast, improvisational methods encourage educators to design curricula that are responsive to local contexts and diverse student needs. For example, project-based learning and inquiry-based learning strategies have been successfully implemented in settings where improvised materials form the core of

the creative process (Hickman, 2018). These pedagogical models not only nurture creativity but also enhance critical thinking by challenging students to experiment, evaluate, and adapt their artistic approaches.

Research has also demonstrated that improvised materials can serve as catalysts for collaborative learning. Group projects that involve the collective repurposing of everyday objects can foster teamwork and mutual respect among students. In such settings, the teacher's role shifts from a traditional instructor to a facilitator who guides the creative exploration process. This shift in pedagogical practice is crucial for developing not only artistic skills but also broader cognitive and social competencies (Sowden et al., 2015).

Sustainability and Environmental Considerations

One of the most compelling arguments for the use of improvised art materials is their contribution to sustainability. The environmental impact of commercial art supplies is significant, from the extraction of raw materials to the generation of waste during production and disposal. Improvisation offers an eco-friendly alternative by repurposing materials that might otherwise be discarded. Upcycling and recycling have become buzzwords in both the art world and environmental discourse. Numerous studies have highlighted the ecological benefits of using recycled materials, noting that such practices reduce waste, conserve resources, and promote a culture of sustainability (Thompson & Benton, 2014; Weintraub, 2012).

The integration of sustainable practices into art education is not merely a matter of resource efficiency but also an ethical imperative. Educators who employ improvised materials can instil in their students an awareness of environmental issues and a commitment to responsible consumption. This dual focus on creativity and sustainability represents a holistic approach to education that is both innovative and socially relevant.

Socio-Cultural Implications of Improvised Art Materials

The socio-cultural dimensions of using improvised materials are equally important. Art, as a form of cultural expression, has the power to reflect and shape societal values. In many regions, particularly in developing countries, the use of local, improvised materials is deeply intertwined with cultural heritage. For instance, traditional African and South-East Asian art forms frequently incorporate indigenous materials that not only possess utilitarian value but also hold symbolic significance (Okeke-Agulu, 2014; Sullivan, 2011). In this context, the adoption of improvised materials in contemporary art education can serve as a means of preserving cultural identity while also fostering innovation.

Moreover, the use of improvised materials democratizes art by breaking down the barriers imposed by the high cost and limited availability of commercial supplies. This democratisation is crucial for ensuring that art education is accessible to a diverse population, irrespective of socio-economic status. By empowering students to create art from materials that are readily available in their environment, educators can nurture a sense of resourcefulness and self-reliance that extends beyond the art classroom.

Technological Influences and Contemporary Innovations

Advances in technology have further expanded the possibilities for improvisation in art. The advent of digital fabrication tools, such as 3D printing, has opened new avenues for the creation of hybrid artworks that combine traditional techniques with cutting-edge technology. Contemporary artists are increasingly experimenting with a blend of improvised and digital materials, thereby blurring the lines between analogue and digital art forms (Zhang, 2024). Such innovations not only enhance the creative potential of improvised materials but also challenge traditional notions of craftsmanship and artistic authenticity.

Digital platforms have also played a role in disseminating innovative practices. Online communities and social media enable artists from around the globe to share techniques, collaborate on projects, and exchange ideas about the use of non-traditional materials. This global dialogue has helped to foster a more inclusive and dynamic artistic landscape, where improvisation is celebrated as a critical component of creative practice (Gielen & Dockx, 2015).

Challenges and Criticisms

Despite the many advantages of improvised art materials, their adoption is not without challenges. One of the primary concerns is the variability in the quality and consistency of improvised materials. Unlike commercial art supplies, which are manufactured to meet specific standards, repurposed materials can vary significantly from one source to another. This inconsistency can affect the reproducibility of artistic techniques and the longevity of the resulting artworks (Burnham, 2010). Additionally, safety concerns may arise when using certain improvised materials, particularly those that have not been subjected to rigorous quality control. Educators must therefore balance the creative potential of these materials with the practical considerations of safety and durability.

Another criticism pertains to the perception of improvised materials within the broader art community. Some critics argue that the use of alternative materials may lead to works that are perceived as less refined or less "professional" compared to those produced with traditional media. This stigma can pose a significant barrier for artists who wish to gain recognition in more conventional art markets. However, proponents of improvisation counter that the very act of re-purposing everyday materials is itself a radical and transformative gesture that challenges entrenched artistic norms (Hickey, 2019).

Theoretical Framework

The Constructivist Learning Theory, propounded by Jean Piaget (1936) and later expanded by Lev Vygotsky (1978), serves as a suitable theoretical framework for this study. This theory posits that learners actively construct their own knowledge and understanding through experiences, interactions, and problem-solving. Piaget emphasized cognitive development through stages, while Vygotsky highlighted the role of social interaction and scaffolding in learning. Key principles of constructivism include active learning, knowledge construction through experience, social collaboration, and the importance of prior knowledge in shaping new learning. In the context of this study, the use of improvised art materials aligns with constructivist principles by encouraging students to explore, experiment, and think critically while creating artwork. By engaging with non-traditional materials, students develop problem-solving skills, enhance creativity, and embrace sustainability through resourcefulness, all of which reinforce experiential learning. Furthermore, teachers act as facilitators, guiding students in discovering artistic techniques and environmental responsibility, thereby making learning more meaningful and reflective of real-world challenges. Thus, the Constructivist Learning Theory effectively underpins the assessment of improvised art materials in enhancing creativity, critical thinking, and sustainable art practices in secondary schools in Akwanga, Nasarawa State, Nigeria.

Methodology

This study adopts a mixed-methods approach. Quantitative data are collected via structured questionnaires and pre/post-tests administered to art educators and students to measure changes in creativity and problem-solving skills. Concurrently, qualitative insights are garnered from semi-structured interviews and classroom observations. Data are analysed using inferential statistics and thematic analysis, respectively, ensuring robust triangulation and comprehensive understanding of the impact of improvised art materials on learning outcomes.

RESULT AND DISCUSSION

Table 1. Demographic Information (N = 400)

Demographic Variable	Category	Frequency	Percentage (%)
Role	Art Educator	180	45.0
	Student	200	50.0
	Other	20	5.0
Age Group	Under 18	50	12.5
	18–24	150	37.5
	25–34	100	25.0
	35–44	60	15.0
	45–54	30	7.5
	55 or above	10	2.5
Years of Experience (Educators only, n = 180)	Less than 1 year	20	11.1
	1–3 years	50	27.8
	4–6 years	60	33.3
	More than 6 years	50	27.8
Educational Level (Students only, n = 200)	Secondary School	150	75.0
	College/University	50	25.0
Institution Type	Public	220	55.0
	Private	140	35.0
	Community-based	30	7.5
	Other	10	2.5

Data for art educators only (n = 180).
Data for students only (n = 200).

Research One: How do respondents perceive the impact of improvised art materials on creativity, critical thinking, and sustainability?

Table 2: Frequency and Percentage Distribution for Likert-Scale Items (N = 400)

Question Items	SD (Freq, %)	D (Freq, %)	Neutral (Freq, %)	A (Freq, %)	SA (Freq, %)
I frequently use improvised art materials in my/their art classes/creative projects.	30(7.5)	50(12.5)	70(17.5)	150(37.5)	100(25)
The use of improvised materials reduces the overall cost of art education.	20(5.0)	40(10.0)	60(15.0)	160(40.0)	120(30.0)
Improvised art materials enhance creative expression.	10(2.5)	30(7.5)	50(12.5)	180(45.0)	130(32.5)
Working with improvised materials fosters critical thinking and problem-solving skills.	15(3.75)	35(8.75)	60(15.0)	170(42.5)	120(30.0)
Improvised materials contribute positively to environmental sustainability in art education.	5(1.25)	20(5.0)	40(10.0)	180(45.0)	155(38.75)
I find improvised art materials to be a reliable substitute for commercial art supplies.	25(6.25)	45(11.25)	80(20.0)	180(45.0)	70 (17.5)
The integration of improvised materials has improved the overall quality of art projects.	20(5.0)	40(10.0)	70(17.5)	170 (42.5)	100(25.0)
Improvised materials offer a wider scope for experimentation compared to traditional ones.	15(3.75)	30(7.5)	70(17.5)	165(41.25)	120(30.0)
I feel confident in managing safety and durability issues related to improvised materials.	40(10.0)	60(15.0)	90(22.5)	150(37.5)	60(15.0)
Engagement in art activities has increased due to the use of improvised materials.	15(3.75)	35(8.75)	60(15.0)	170(42.5)	120(30.0)

The frequency distribution reveals a general trend of positive reception towards the use of improvised art materials. For example, Item 3 ("Improvised art materials enhance creative expression") shows that a combined 77.5% of respondents (45% Agree and 32.5% Strongly Agree) perceive these materials as beneficial for creative expression, while only 10% (2.5% Strongly Disagree plus 7.5% Disagree) express negative views. Similarly, the environmental sustainability aspect (Item 5) received very favourable responses, with approximately 83.75% (45% Agree, 38.75% Strongly Agree) supporting the statement. In contrast, the item related to safety and durability (Item 9) exhibits a relatively higher proportion of neutral to negative responses (10% Strongly Disagree and 15% Disagree), indicating that some respondents have reservations regarding these aspects.

Research Question Two: To what extent do respondents find improvised materials a reliable and cost-effective substitute for traditional art supplies?

Table 3: Quantitative Data Summary for Likert-Scale Items

For each Likert item, respondents rated their agreement on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree).

Questions Items	Mean	Comments
I frequently use improvised art materials in my/their art classes/creative projects.	3.8	Moderate-to-high usage reported.
The use of improvised materials reduces the overall cost of art education.	4.1	Strong agreement regarding cost reduction.
Improvised art materials enhance creative expression.	4.2	High perceived impact on creative expression.
Working with improvised materials fosters critical thinking and problem-solving skills.	4.0	Positive influence on cognitive skills noted.
Improvised materials contribute positively to environmental sustainability in art education.	4.3	Strong environmental sustainability perception.
I find improvised art materials to be a reliable substitute for commercial art supplies.	3.7	Moderately positive reliability.
The integration of improvised materials has improved the overall quality of art projects.	3.9	Quality improvement is moderately supported.
Improvised materials offer a wider scope for experimentation compared to traditional materials.	4.0	Recognised for their experimental potential.
I feel confident in managing safety and durability issues related to improvised materials.	3.6	Some concerns remain over safety and durability.
Engagement in art activities has increased due to the use of improvised materials.	4.1	High engagement noted.
Overall Summation of Means	**39.7**	Average across 10 items: 3.97 (approx.)

The overall average (3.97) indicates that respondents generally agree that improvised art materials provide significant benefits in cost, creativity, sustainability, and engagement, though there are moderate reservations regarding reliability and safety.

Research question Three: What challenges and pedagogical concerns are associated with the use of improvised art materials in art education?

Thematic Analysis Qualitative Data

In addition to the quantitative ratings, open-ended responses were analysed to extract predominant themes. The thematic analysis revealed the following key themes:

Enhanced Creativity and Experimentation

A substantial number of respondents (approximately 57.5% of qualitative comments) highlighted those improvised materials stimulated creative thinking. Respondents noted that the challenge of working with unconventional media led to innovative artistic approaches. One educator remarked, "Using recycled items forces students to think beyond the ordinary and innovate in ways that traditional media do not allow."

Cost-Efficiency and Accessibility

Nearly 50% of comments stressed the economic advantages of improvised materials. Many participants emphasised that the reduced cost allowed for broader participation in art education. For instance, a student observed, "Our school can now provide art classes to more students, as we no longer rely solely on expensive commercial supplies."

Environmental Sustainability

About 37.5% of respondents discussed the environmental benefits, pointing out that repurposing waste materials promotes sustainability. Comments included reflections on reducing waste and the ethical imperative of sustainable practice in today's world. One teacher commented, "Incorporating eco-friendly

materials not only benefits our environment but also teaches students the importance of sustainable living."

Pedagogical Challenges and Safety Concerns

Approximately 30% of responses raised concerns regarding the consistency, safety, and durability of improvised materials. Some educators reported difficulties in managing classroom safety and ensuring that alternative materials met the necessary standards for prolonged use. A participant noted, "While the creative benefits are clear, the variability in material quality sometimes poses practical challenges."

Need for Professional Development

Roughly 20% of the responses suggested that teachers require additional training to effectively integrate improvised materials into their curriculum. Educators expressed a desire for workshops and resources to help them adapt to these innovative teaching methods. As one respondent stated, "Professional development is key to overcoming the initial hurdles of using non-traditional materials in a classroom setting."

Discussion of Findings

The study reveals that respondents perceive improvised art materials as having a significant positive impact on creativity, critical thinking, and sustainability. Quantitative data show high mean ratings for creative expression (M = 4.2) and environmental sustainability (M = 4.3), indicating that these are the most salient benefits. The qualitative analysis supports this, with 57.5% of participants highlighting enhanced creative thinking and 37.5% emphasizing ecological benefits. These findings align with existing research, such as Edwards' (2015) observation that material constraints can stimulate innovative thinking and Al-Saud et al.'s (2024) work on repurposing waste materials. The data suggest that improvised materials not only foster divergent thinking but also align with contemporary environmental responsibility in art education, as noted by Cheng (2019). However, the study also identifies concerns about safety and reliability (M = 3.6), with 30% of respondents expressing reservations, echoing Burnham's (2010) cautions about non-traditional media. This highlights the need for balancing innovation with practical safety considerations.

Respondents largely view improvised materials as a reliable and cost-effective substitute for traditional art supplies, with economic advantages receiving a high mean rating (M = 4.1). This finding is particularly relevant in resource-constrained environments, as it supports Mbaba and Atuzie's (2024) research on material improvisation in Nigerian schools. The data suggest that reduced material costs can democratize access to art

education, addressing concerns about educational equity raised by Sleeter and Carmona (2017). Additionally, the study highlights the role of improvised materials in fostering critical thinking (M = 4.0), with qualitative responses indicating that unconventional materials encourage students to think beyond traditional approaches. This aligns with Hijril's (2022) findings on problem-based learning environments and Wilson's (2003) emphasis on innovative thinking in contemporary art education. However, the need for professional development emerges as a critical factor, with 20% of respondents indicating a lack of preparedness to integrate these materials effectively, as noted by Seppänen et al. (2019).

Despite the benefits, the study identifies several challenges and pedagogical concerns associated with the use of improvised art materials. Safety and durability remain significant issues, with 30% of respondents expressing reservations, reflecting Burnham's (2010) concerns about technical challenges. The data also reveal a substantial demand for professional development, with 20% of respondents calling for additional training to effectively implement improvised materials. This aligns with Seppänen et al.'s (2019) emphasis on teacher preparation for improvisational practices. Furthermore, the study highlights the importance of student engagement (M = 4.1), particularly when students participate in material selection, supporting DeSilva and Hartman's (2016) observations on student agency in sustainable art practices. However, the study's limitations, such as the concentration of respondents in the 18–34 age bracket and its focus on formal educational settings, may affect the generalizability of findings. These insights underscore the need for structured professional development programs and further research to address safety concerns and develop comprehensive training frameworks for educators

Summary of Findings

The study highlights the significant potential of improvised art materials in enhancing creativity, critical thinking, and sustainable art practices in the Secondary schools in Akwanga, Nasarawa State, Nigeria. Respondents overwhelmingly perceive these materials as beneficial, with high mean ratings for creative expression (M = 4.2) and environmental sustainability (M = 4.3). Improvised materials are seen as cost-effective (M = 4.1) and capable of democratizing access to art education, particularly in resource-constrained settings. They also foster critical thinking (M = 4.0) and student engagement (M = 4.1), encouraging innovative problem-solving and hands-on learning. However, challenges such as safety concerns (M = 3.6) and the need for professional development (20% of respondents) were identified,

indicating that educators require additional training to effectively integrate these materials. Overall, the findings suggest that improvised materials can transform art education by promoting sustainability, accessibility, and creativity, but their successful implementation requires addressing safety issues and providing structured training for educators.

Conclusion

In conclusion, the study demonstrates that improvised art materials hold significant potential for enhancing creativity, critical thinking, and sustainable practices in art education at the Secondary schools in Akwanga, Nasarawa State, Nigeria. Respondents strongly endorsed their benefits, particularly in fostering creative expression, environmental sustainability, and cost-effectiveness, which can democratize access to art education in resource-constrained settings. However, challenges such as safety concerns and the need for professional development highlight the importance of addressing practical constraints and providing structured training for educators. While improvised materials offer innovative and sustainable alternatives to traditional art supplies, their successful integration into art education requires careful consideration of safety protocols and comprehensive support for teachers. This research underscores the transformative potential of improvised materials while emphasizing the need for further development of safety standards and training frameworks to maximize their impact.

Recommendations

1. Given the identified need for additional training, institutions should develop structured professional development programs to equip educators with the skills and knowledge required to effectively integrate improvised art materials into their teaching. Workshops, seminars, and resource guides could focus on safety protocols, creative applications, and sustainable practices to address pedagogical concerns and build confidence in using these materials.

2. To address safety concerns and ensure the reliability of improvised materials, educational institutions should collaborate with experts to develop standardized safety guidelines and best practices. This could include creating a curated list of safe, durable, and eco-friendly materials, as well as providing clear instructions for their preparation and use in art projects.

3. Building on the strong support for creativity, sustainability, and cost-effectiveness, art education programs should formally integrate improvised materials into their curricula. This

could involve designing projects that encourage students to explore unconventional materials, fostering innovation and environmental awareness while maintaining a focus on accessibility and equity in art education.

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