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## LIST OF CONTRIBUTORS

AJOKPANIOVO Michael	Department of Educational Guidance and Counselling, University of Ilorin, Kwara State, Nigeria
ANYANWU Francis	Department of Educational Guidance and Counselling, University of Ilorin, Kwara State, Nigeria
IBITOYE Oladayo Azeez	Department of Educational Foundations and Counselling, Achievers University, Owo, Nigeria
DUROSARO Irene Abiodun	Department of Educational Guidance and Counselling, University of Ilorin, Kwara State, Nigeria
ADEGOKE Alfred Akinbo	Department of Educational Guidance and Counselling, University of Ilorin, Kwara State, Nigeria
AWUJA Samuel Ademu	Department of Educational Foundations, University of Delta, Agbor, Delta State, Nigeria.
AKHOGBAI Emmanuel Monday	Arokho Secondary School, Arokho, Owan East LGA, Edo State.
IMOBIGHE M.U.	Department of Vocational Education, Delta State University, Abraka.
JAMES Idopise Okon	Department of Sociological Foundations of Education, University of Uyo.
NYORERE Ogho Ifeanyi	Department of Educational Foundations, University of Benin, Edo State
OMOLEHIN, J. O.	Department of Mathematics Federal University Lokoja, Kogi State, Nigeria
OLUWAFEMI, O. J.	Department of Mathematics Federal University Lokoja, Kogi State, Nigeria
MOMOH, S.O.	Department of Mathematics Federal University Lokoja, Kogi State, Nigeria
KEHINDE, R.	Department of Mathematics Federal University Lokoja, Kogi State, Nigeria
GYEGWE, J. M.	Department of Mathematics Federal University Lokoja, Kogi State, Nigeria
OLUTOLA Adekunle Thomas	Department of Educational Psychology and Counselling, Federal University Dutsin-Ma, Katsina State, Nigeria.
OSIEBE Hadiza Mamman	Department of Educational Psychology and Counselling, Federal University Dutsin-Ma, Katsina State, Nigeria.
OLATOYE Rafiu Ademola	Department of Educational Foundations, Federal University Lokoja, Kogi State, Nigeria.
OLADELE Jumoke I.	Department of Social Sciences Education, University of Ilorin, Kwara State, Nigeria.
ALABI Tosin Michael	Department of Social Sciences Education, University of Ilorin, Kwara State, Nigeria.
ADEGOKE Abass Korede	Department of Social Sciences Education, University of Ilorin, Kwara State, Nigeria.
ADESANYA Emmanuel Olorunleke	Department of Science Education, University of

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YUNISA Abdulrahman	Department of Arts and Social Education, Federal University of Kashere, Gombe State.
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LADAN Sirajo Alhaji	Department of Education Foundations Usmanu Danfodiyo University, Sokoto, Sokoto State, Nigeria.
NASARAWA Jamila Abubakar	Department of Educational Foundations Sokoto State University, Sokoto, Sokoto State, Nigeria.
MUSA Abubakar Sadiq	Department of Educational Foundations Shehu Shagari College of Education, Sokoto, Sokoto State, Nigeria.
VINCENT Yohanna Iwah	Department of Educational Foundations, Federal University of Kashere, Gombe State, Nigeria.
AHMADU Yusuf	Department of Educational Foundations, Federal University of Kashere, Gombe State,
ALI Binta Ado	Department of Educational Psychology and Counselling, Federal University Dutsin-Ma, Katsina State, Nigeria.
APENANIBO Terkaa Jude	Department of Educational Psychology and Counselling, Federal University Dutsin-Ma, Katsina State, Nigeria.

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**INFLUENCE OF MEDIA ON IN-SCHOOL ADOLESCENTS' DELINQUENT BEHAVIOURS IN ILORIN METROPOLIS, KWARA STATE**

**AJOKPATIOVO, MichaelI, ANYANWU, Francis<sup>2</sup>**  
ajokpaniovo.m@unilorin.edu.ng, anyanwufrancis@gmail.com

**IBITOYE, Oladayo Azeez<sup>3</sup>, DUROSARO, IreneAbiodun<sup>4</sup>**  
ibitoyeoladayo87@gmail.com, ireneduro@unilorin.edu.ng

**ADEGOKE, Alfred Akinbo<sup>5</sup>**  
aadegoke@unilorin.edu.ng  
Department of Educational Guidance and Counselling,<sup>1, 2, 4, 5</sup>  
Faculty of Education, University of Ilorin  
Department of Educational Foundations and Counselling<sup>3</sup>,  
Achievers University, Owo, Nigeria

**Abstract**

*The growing prevalence of delinquent behaviours among adolescents in Nigerian secondary schools has become a significant and pressing concern, with far-reaching implications for both individual development and societal well-being. This study investigated the influence of media on in-school adolescents' delinquent behaviours in Ilorin Metropolis, Kwara State, Nigeria. A descriptive survey design was employed, with a sample of 240 adolescents selected through a simple random sampling technique. Data were collected using "Media Influence and Adolescents Delinquent Behaviours Questionnaire" with a reliability coefficient of 0.83. The findings reveal that media has a significant influence on adolescent delinquent behaviours, with no significant differences observed based on gender, age, or class level. This suggests that media impacts all adolescents equally across these demographic factors. Based on these findings, it was recommended that parents, educators, and policymakers promote media literacy among adolescents. Schools should integrate media education into the curriculum and establish policies that encourage healthy media consumption. Parents should regulate media exposure, and community organizations should create platforms for adolescents to discuss media experiences. Public awareness campaigns should address the developmental needs of adolescents, offering consistent guidance on media management.*

**Keywords:** Adolescents, Delinquent Behaviours, Influence, In-School and Media

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**Introduction**

As adolescent transition from childhood to adulthood, they encounter numerous challenges that can sometimes lead to engaging in delinquent behaviours. During this time, the desire for acceptance and approval from those around them whether it's family, peers, or close friends become a driving force. For some adolescents, the pursuit of social belonging may trigger engagement in undesirable behaviours, as they seek acceptance and navigate the multifaceted pressures inherent in the transition to adulthood. Empirical research in Nigeria indicates that peer groups significantly shape adolescents' decisions and conduct (Yusuf et al., 2021). Moreover, growing evidence underscores a concerning rise in juvenile delinquency nationwide, evoking considerable social alarm (Akyo, Adegoke & Iwuala, 2024). Delinquency can manifest in a variety of ways, including school absenteeism, gambling, tardiness, theft,

cheating, vandalism, substance abuse, and even more severe actions like cultism, street fighting, and sexual violence (Brown & Larson, 2019). One contributing factor to this rise in delinquent behaviour may be insufficient or inconsistent parenting, which in many cases is linked to the economic hardships that many families face, particularly in Africa and Nigeria. The strain of these economic pressures can impact the ability of parents to provide adequate supervision, guidance, and emotional support for their children, thereby increasing the likelihood of engaging in delinquent activities (Martinez & White, 2019).

Media, encompassing various forms of communication, has become a powerful force influencing the behaviours of in-school adolescents globally. Its role in education, entertainment, and information dissemination is undeniable, serving as a conduit for news, learning, and engagement. However, the media's influence extends beyond positive contributions; it has been widely linked to the promotion of anti-social or delinquent behaviours such as smoking, bullying, and substance abuse, particularly through social media platforms. The media, as a powerful tool of communication, has become an inseparable part of modern life, influencing individuals across all age groups. For adolescents, the media holds a particularly profound role in shaping their psychosocial development. It serves as a medium for education, entertainment, and information dissemination through various channels, such as television, radio, newspapers, magazines, billboards, and the internet. While its potential for positive influence is undeniable, its capacity for harm, especially among impressionable youths, cannot be overlooked. Adebisi and Nwachukwu (2023) emphasized that the pervasive reach of contemporary media exposes Nigerian adolescents to a wide array of content, spanning from educational and motivational messages to harmful depictions of violence, substance use, and risky sexual practices. Adebisi and Nwachukwu (2023) argue that this dual influence of media requires critical scholarly attention, as its positive contributions to learning and awareness often coexist with adverse implications for adolescents' mental, emotional, and social well-being.

The media serves as a powerful educational tool, promoting values such as cooperation, kindness, teamwork, and racial harmony. Educational videos and programs have been shown to instill positive behavioral patterns and inspire pro-social attitudes in adolescents. These tools can foster critical thinking, encourage healthy lifestyles, and even provide solutions to social issues. For example, media campaigns addressing bullying or substance abuse have successfully raised awareness and driven positive change among young audiences. However, these benefits can only be fully realized when adolescents are exposed to carefully curated and age-appropriate content. Without adequate guidance, the same medium can just as easily expose them to negative influences. On the other hand, the media's negative impact on adolescents is well-documented. Excessive television viewing and unregulated access to internet platforms have been linked to a decline in academic performance, irresponsible sexual behavior, and increased aggression. Research shows that by the time an adolescent reaches the age of 18, they may have witnessed up to 100,000 acts of violence on television alone, according to the Journal of the National Medical Association. These portrayals rarely show the grief and consequences of such acts, desensitizing young viewers to violence and fostering a distorted perception of reality. Moreover, the glamorization of antisocial behaviors such as kidnapping, murder, and rape in media content further exacerbates the problem. This alarming trend has prompted many nations to implement policies aimed at mitigating the influence of harmful media content on their youth. The challenge lies in striking a balance between harnessing the media's potential for good while minimizing its capacity for harm.

A study by Olatunde, Okon, and Adebayo (2023) highlights the growing difficulty parents face in shielding adolescents from the myriad of harmful content prevalent on social media. Their research reveals that adolescents are increasingly encountering violent, sexualized, and misleading content, which often surpasses their parents' ability to monitor or filter due to limited digital literacy and the vastness of online platforms; this trend underscores the complex nature of parental mediation in the digital age

(Olatunde et al., 2023). Research by Brown and Larson (2019) highlighted how the media, particularly in the digital age, often bombards teenagers with violent and sensational content, which can desensitize them to real-life consequences of such behaviours. The profound influence of media on the psychosocial development of adolescents cannot be overstated. Martinez and White (2019) stated that excessive time spent on the internet often leads to exposure to inappropriate websites, including pornographic and sexually explicit materials, which can detrimentally shape adolescents' values and increase the prevalence of immoral behaviours among youth. This underscores the urgent need for parental supervision, education on digital literacy, and regulatory frameworks to mitigate these risks.

Studies have continued to reveal how the media continues to promote a glamorous yet unrealistic view of fame and wealth to young audiences. According to Brown and Larson (2019), television, movies, and music videos often showcase influential individuals living in luxury, driving expensive cars, and being surrounded by opulence. Shows portraying extravagant lifestyles, such as those resembling *MTV Cribs*, present such achievements as effortless, overlooking the intense struggles, competition, and the slim odds of attaining them. Martinez and White (2019) stated that media narratives frequently prioritize material success as the ultimate goal, disregarding the importance of hard work, resilience, and ethical values. Illegal activities for material gain are often romanticized in media content. Nwokolo and Eze (2024) indicated that the depiction of glamorous criminals, such as cunning thieves, influential figures within illicit industries, and ruthless enforcers, can skew adolescents' moral frameworks toward valuing wealth and dominance regardless of ethical considerations. Their findings reveal that such skewed portrayals, often devoid of moral reckoning or insight into societal consequences, risk normalizing delinquent behaviours among youth. In response, they strongly advocate for critical media literacy interventions that empower young audiences to interrogate these narratives, understand their manipulative appeal, and resist harmful, content-driven influences.

Media plays a significant role in shaping adolescent behaviour and imparting essential lessons. It fosters values such as cooperation, kindness, teamwork, racial harmony, love, and care. Educational media, especially videos, can effectively promote pro-social behaviours among adolescents. However, alongside its benefits, media also poses significant risks. Adolescents spend a large portion of their free time engaging with various media platforms. According to Rideout and Robb (2019), teens spend an average of nearly seven hours daily consuming media, much of which includes exposure to harmful content such as violence, substance abuse, and unrealistic body images. Okon and Ibrahim (2022) observed that the internet, as the most pervasive communication medium, offers adolescents unrestricted access to diverse online platforms, many of which contain explicit and age-inappropriate material. They note that weak regulatory measures and the absence of effective parental monitoring heighten the likelihood of young people encountering harmful content, thereby increasing their vulnerability to risky behaviours. Additionally, studies by Coyne, Padilla-Walker, Holmgren and Davis (2019) highlighted that media often glamorizes negative behaviours, including drug use and violence, influencing adolescents to emulate such actions. This dual influence of media underscores the urgent need for targeted interventions, including media literacy education and stricter content regulation, to harness its positive potential while minimizing its negative impact.

Delinquent behaviour among adolescents is a growing concern globally, and one significant factor contributing to this issue is the influence of media. Media platforms, ranging from traditional channels like television and music videos to modern outlets such as social media and video games, have become deeply ingrained in the daily lives of young people. These platforms often present a mix of both positive and negative content, but the portrayal of delinquent behaviours in various forms of media has raised alarms among educators, parents, and policymakers. Media frequently depicts risky behaviours such as substance abuse, violence, and early sexual activity in a way that glamorizes or normalizes these actions. Studies

have shown that adolescents who are repeatedly exposed to such portrayals are more likely to mimic these behaviours, as the media significantly shapes their attitudes, beliefs, and actions (Smith & Jones, 2019; Williams & Liu, 2020).

For instance, Smith and Jones (2019) observed that frequent exposure to violent video games and television shows correlates with heightened aggression and desensitization to the consequences of violence among adolescents. Similarly, Williams and Liu (2020) reported that music videos often glorify drug use, wealth obtained through illegal means, and hyper-sexualized content, which adolescents may interpret as desirable or socially acceptable. Adolescents, being at a critical stage of development where they are particularly impressionable, are prone to adopting behaviours that they see in the media, especially when these behaviours are portrayed by influential figures or appear to lead to social rewards. The repetition of such themes across various forms of media creates a sense of normalcy around delinquent behaviours, making it more likely for young people to experiment with or engage in them.

Adeboye and Alabi (2024) examined the influence of media on adolescents' decision-making patterns and observed that popular media often glamorizes deviant lifestyles, including substance use, theft, and violent conduct. Their analysis showed that films, television dramas, and online content frequently portray drug dealers, internet fraudsters, or gang members as wealthy, powerful, and admired, while downplaying or excluding the harsh realities of imprisonment, addiction, or social stigma. Such skewed representations risk shaping adolescents' value systems, leading them to view delinquent behaviours as legitimate pathways to success, particularly in contexts where parental supervision or positive role models are absent. This underscores the urgent need for media literacy and structured guidance to counteract the misleading allure of glamorized delinquency.

The influence of social media has added another layer of complexity to this issue. Unlike traditional forms of media, social media platforms allow for active participation, where adolescents can create, share, and interact with content. This interactivity increases the potential for media influence, as young people are not just passive consumers but active participants in shaping and spreading cultural narratives. Research has shown that platforms like Instagram, TikTok, and YouTube often expose adolescents to unfiltered or sensationalized content that may promote risky behaviours. Influencers and celebrities who engage in or endorse such behaviours often gain millions of followers, further reinforcing the idea that these actions lead to popularity and success.

### **Statement of the Problem**

Despite the abundance of studies on media's influence on adolescent behaviour, there remains a notable gap in the literature regarding specific contexts and demographics. While global research has established the general impact of media on adolescents, fewer studies have focused on how these influences manifest in localized settings, such as among in-school adolescents in Ilorin metropolis, Nigeria. Adolescents in Ilorin, like their counterparts worldwide, are increasingly exposed to various media platforms due to the growing accessibility of smart phones, internet services, and satellite television. However, the cultural, social, and economic dynamics of the region may create unique patterns in how media shapes their behaviours, necessitating a focused investigation.

For instance, Nigeria's socio-economic challenges, such as high unemployment rates and limited access to quality education, may exacerbate the influence of media on adolescents. In an environment where legitimate pathways to success often seem inaccessible, the glamorized depictions of wealth and power in media may have a stronger appeal. Adolescents may be more likely to emulate behaviours seen in media as they seek alternative means of achieving financial stability or social recognition. Moreover, the lack of comprehensive media literacy programs in schools further compounds the issue, as many young people

are unable to critically analyze the content they consume or differentiate between realistic portrayals and sensationalized fiction.

Existing studies in Nigeria have explored related topics, such as the impact of social media on academic performance or the influence of violent movies on aggression, but few have specifically examined the role of media in shaping delinquent behaviours among in-school adolescents in Ilorin metropolis. This lack of focused research leaves a critical gap in understanding the unique ways media influences adolescents in this context. Without this knowledge, it becomes challenging to develop targeted interventions that address the specific needs and challenges faced by adolescents in the region.

The present study seeks to fill this gap by investigating how media consumption influences delinquent behaviours among in-school adolescents in Ilorin metropolis. By focusing on this specific demographic and location, the study aims to provide insights into the extent and nature of media influence, as well as the factors that may moderate this relationship, such as gender, age, and class level. The findings from this research will contribute to the existing body of knowledge by highlighting the unique cultural and contextual factors that shape media's impact on adolescents in Ilorin. Additionally, the study will inform the development of evidence-based strategies for mitigating the negative effects of media while maximizing its potential as a tool for education and positive social change.

The media's influence on adolescent behaviour is a well-established phenomenon, there is a pressing need to explore this issue within localized contexts to fully understand its implications. The current study represents an important step in addressing this gap, focusing on in-school adolescents in Ilorin metropolis and their interactions with media.

### **Research Question**

This research question was raised to guide the conduct of the study:

1. What is the level of media influence on in-school adolescents' delinquent behaviours in Ilorin Metropolis?

### **Research Hypotheses**

The following research hypotheses were formulated and tested in this study:

- Ho<sup>1</sup>:** There is no significant difference in the influence of media on in-school adolescents' delinquent behaviours in Ilorin metropolis based on gender.
- Ho<sup>2</sup>:** There is no significant difference in the influence of media on in-school adolescents' delinquent behaviours in Ilorin metropolis based on age.
- Ho<sup>3</sup>:** There is no significant difference in the influence of media on in-school adolescents' delinquent behaviours in Ilorin metropolis based on class level.

### **Methodology**

The research design adopted for this study is a descriptive survey design. Descriptive survey research is usually used as a pre-cursor to quantitative research design. The population for this research comprised all the secondary school students in Kwara State. The target population is selected secondary school schools in Ilorin Metropolis. The sample size for the study was 240 secondary school students selected from 6 public secondary schools in Ilorin metropolis, Kwara State. 40 secondary school students were selected from each of the 6 public secondary schools making a total of 240 respondents. Simple random sampling technique was used for the selection. The main instrument that was used for data collection was a structured questionnaire developed by the researchers titled "Media Influence and Adolescents Delinquent Behaviours Questionnaire (MIADBQ)". The instrument for data collection was presented to experts. All comments identified by these experts were well effected by the researchers in order for the instrument to be valid for the study. The reliability of the instrument was ascertained by the test-re-test method to ensure that it measures what it was designed to measure with consistency and accuracy. A coefficient of 0.83 was

derived. t-test and Analysis of Variance was used to test all the three hypotheses at 0.05 level of significance.

## Results

**Research Question One:** What is the level of media influence on in-school adolescents' delinquent behaviours in Ilorin metropolis?

**Table 1:** Mean, and Rank Order of Media Influence on Respondents' Delinquent Behaviours

Item No	Statement of Items	Mean Score	Rank
3	Watching violent films could make me to exhibit violent behavior	3.14	1 <sup>st</sup>
9	I sometimes get aroused to have sex when I watch pornographic films	3.13	2 <sup>nd</sup>
2	Watching and listening to rap music could make me feel I can take whatever action I want to take not minding the consequences	3.13	2 <sup>nd</sup>
6	Attachment to video watching influences my social interaction with people	3.09	4 <sup>th</sup>
1	Whenever I listen to some aggressive hip-hop music singers, I feel aggressive	3.08	5 <sup>th</sup>
12	Listening to beer promotion jingles on radio increases my urge to drink alcohol at my school age	3.06	6 <sup>th</sup>
10	I was first attracted to smoking when I saw an actor smoking on television	3.05	7 <sup>th</sup>
5	I can emulate the looks and behaviour of different media personalities who acted aggressively	3.04	8 <sup>th</sup>
11	Reading romantic magazines increases my urge for sexual intercourse	3.00	9 <sup>th</sup>
7	I don't like people who do not like watching war films like me	2.94	10 <sup>th</sup>
8	I enjoy watching movies than reading my books at home	2.92	11 <sup>th</sup>
4	I can do anything just to be popular like those I watch on videos	2.91	12 <sup>th</sup>
15	I do make attempts to hurt others after watching similar character in the movie	2.90	13 <sup>th</sup>
13	I disregard my parents instructions while playing some video games	2.88	14 <sup>th</sup>
14	I become sexually attracted to others each time I watch romantic films	2.83	15 <sup>th</sup>

Table 1 shows the responses of in-school adolescents with respect to the media influence on their delinquent behaviour. The finding shows that Item 3 (Watching violent films could make me to exhibit violent behaviour) was ranked 1<sup>st</sup> with a mean score of 3.14. Item 9 (I sometimes get aroused to have sex when I watch pornographic films) and 2 (Watching and listening to rap music could make me feel I can take whatever action I want to take not minding the consequences) were ranked 2<sup>nd</sup> with same mean score of 3.13. All the fifteen items have mean scores that are above 2.50 which implies that the media has high influence on delinquent behaviours among in-school adolescents.

**Hypotheses Testing**

Three null hypotheses were generated and as well tested for this study. The hypotheses were tested using t-test and ANOVA statistical method at 0.05 level of significance.

**Hypothesis One:** There is no significant difference in the influence of media on in-school adolescents delinquent behaviours in Ilorin metropolis, Kwara State based on gender

**Table 2:** t-test Showing Influence of Media on In-School Adolescents Delinquent Behaviours in Ilorin Metropolis, Kwara State Based on Gender

Gender	N	Mean	SD	df	Cal. t-value	p-value
Male	122	49.35	4.59	238	1.31	0.10
Female	118	46.27	4.38			

Table 2 shows a calculated t-value of 1.31 and a p-value of 0.10. The p-value calculated of 0.10 is higher than the alpha level at 0.05 then the hypothesis is accepted. Hence, there is no significant difference in the influence of media on in-school adolescents delinquent behaviours in Ilorin metropolis, Kwara State based on gender.

**Hypothesis Two:** There is no significant difference in the influence of media on in-school adolescents delinquent behaviours in Ilorin metropolis, Kwara State based on age

**Table 3:** Analysis of Variance (ANOVA) Showing Influence of Media on In-School Adolescents Delinquent Behaviours in Ilorin Metropolis, Kwara State Based on Age

Source	Sum of Squares	df	Mean Square	F-ratio	p-value
Between Groups	174.332	2	87.16	2.41	0.03
Within Groups	8555.248	237	36.09		
Total	8729.580	239			

Table 3 shows that the calculated f-ratio of 2.41 and a p-value of 0.03. Since the calculated p-value of 0.03 is less than the alpha p-value at 0.05, the hypothesis is accepted. This implies that there is no significant difference in the influence of media on in-school adolescents delinquent behaviours in Ilorin metropolis, Kwara State based on age.

**Hypothesis Three:** There is no significant difference in the influence of media on in-school adolescents delinquent behaviours in Ilorin metropolis, Kwara State based on class level

**Table 4:** t-test Showing Influence of Media on In-School Adolescents Delinquent Behaviours in Ilorin Metropolis, Kwara State Based on Class Level

Class Level	N	Mean	SD	Df	Cal. T-value	p-value
J.S.S. 1 to 3	109	47.22	4.30	238	1.24	0.08
S.S.S. 1 to 3	131	45.95	4.17			

Table 4 shows a calculated t-value of 1.24 and a p-value of 0.08. The p-value calculated is higher than the alpha level at 0.05 then the hypothesis is accepted. Hence, there is no significant difference in the influence of media on in-school adolescents delinquent behaviours in Ilorin metropolis, Kwara State based on class level.

### Discussion of Findings

The discussion of findings provides an interpretative analysis of the results obtained in relation to the research questions and hypotheses. It situates the outcomes of the present study within existing empirical literature, thereby highlighting areas of convergence and divergence. This section also underscores the implications of the findings for adolescents, parents, educators, and policymakers in addressing the challenges posed by media influence on adolescent behaviour.

Research question one revealed that the level of media influence on in-school adolescents' delinquent behaviours in Ilorin Metropolis, Kwara State, is high. This finding aligns with the work of Brown and Larson (2019), who established that media significantly influences adolescents' behaviours, especially when exposed to unregulated content. Okoye and Adekeye (2022) observed that continuous exposure to violent and antisocial media content predisposes adolescents to perceive delinquent behaviours as socially acceptable. Their study revealed that repeated encounters with such portrayals gradually desensitize young viewers, fostering attitudes that normalize aggression, dishonesty, and other risk-taking tendencies. They argue that this trend underscores the urgent need for strengthening media literacy initiatives alongside active parental supervision, both of which are critical in reducing the adverse influence of harmful media on adolescent behavioural outcomes.

Hypothesis one revealed that there is no significant difference in the influence of media on in-school adolescents' delinquent behaviours based on gender. This suggests that male and female adolescents are equally susceptible to the influence of media, whether it involves exposure to violent video games, music with delinquent themes, or social media content glorifying antisocial behaviours. The uniformity in how media affects both genders may stem from the shared experiences of modern adolescents, who have access to similar media platforms and consume similar types of content. These findings challenge traditional assumptions that males might be more inclined toward delinquent behaviour due to aggressive media portrayals, showing instead that media's reach and influence transcend gender boundaries. This result aligns with the study by Martinez and White (2019), which demonstrated that male and female adolescents are equally vulnerable to media's impact. Their research emphasized that media content targeting adolescents often includes themes and visuals that resonate universally, regardless of gender. For example, both boys and girls are exposed to music videos and movies that glamorize risky behaviours like underage drinking, substance abuse, and defiance of authority. Such media representations are designed to captivate and engage young audiences broadly, making both genders susceptible to adopting delinquent behaviours depicted in the media. Ogwezzy-Ndisika, Amakoh, and Adesile (2023) observed that both male and female adolescents exhibit similar psychological responses to delinquent themes portrayed in media,

regardless of gender. Their study suggests that the emotional and cognitive triggers activated by such content are primarily a function of the media's substance and presentation, not the viewer's gender. Consequently, they advocate for media literacy and intervention programs to adopt a gender-neutral approach, equipping all adolescents with critical analysis skills rather than tailoring strategies based on gendered assumptions. Such inclusive educational strategies, they argue, are essential for effectively curbing media-driven delinquent behaviours among youth.

Hypothesis two revealed that there is no significant difference in the influence of media on delinquent behaviours among in-school adolescents based on age. This finding highlights the consistent impact of media on adolescents across various age groups. Regardless of whether an adolescent is in early, middle, or late adolescence, the level of susceptibility to media's influence on delinquent behaviours remains similar. This suggests that the messages adolescents are exposed to through television, social media, music videos, and online platforms resonate with them equally, irrespective of their developmental stage. The implication is that the pervasive and immersive nature of media content exerts a uniform influence, shaping behaviours and attitudes across different age brackets. This result aligns with the findings of Ojiakor-Umenze, Etodike, Uchechukwu, and Alex (2024) contended that the impact of social media and peer pressure on adolescent disengagement from moral standards does not considerably vary with age. Their findings indicate that adolescents across different ages manifest comparable levels of moral disengagement when exposed to provocative social media content and peer influences. They propose that emotional and cognitive triggers, activated by such exposures, remain largely consistent across age cohorts, implying that it is the inherent character of the media content and peer dynamics, rather than chronological age, that primarily shape behavioral outcomes. Brown and Larson (2019) also emphasized that media influences adolescents relatively uniform across developmental stages. Their research underscored that age does not significantly alter how adolescents respond to media stimuli, as media content's cognitive and emotional processing appears consistent across different ages. This reinforces the idea that interventions targeting media influence should not be age-specific but inclusive of all adolescent groups. By adopting a universal approach, educators, parents, and policymakers can more effectively address the overarching impact of media on adolescent delinquent behaviours, ensuring that all adolescents, regardless of age, are equipped with the skills and knowledge to navigate media content critically.

Hypothesis three revealed that there is no significant difference in the influence of media on delinquent behaviours among in-school adolescents based on their class level. This finding highlights the universal nature of media's impact, showing that it affects students across different academic grades in a similar way. Whether adolescents are in junior or senior classes, their vulnerability to media influence appears to be the same. This suggests that media's impact is not dependent on a student's academic standing but rather on their exposure and interaction with media content. Adolescents in all grades are equally susceptible to the messages and themes they consume through various media platforms, indicating that class level is not a determining factor in shaping media-related behaviours. This result is consistent with the findings of Meldrum and Clark (2019), who noted that media has a pervasive influence on adolescents' behaviours, regardless of their educational level. Their study emphasized that digital platforms, television, and other forms of entertainment media are universally accessible to students across all grades, resulting in a similar level of exposure and behavioural outcomes. This uniformity suggests that the developmental stage and the content of the media, rather than the student's academic grade, play a larger role in determining how media shapes their actions and attitudes. Ede and Chukwuma (2023) reported that adolescents' susceptibility to media influence is not significantly moderated by their class level in school. Their research indicated that both junior and senior secondary school students demonstrate

comparable emotional and cognitive reactions to media portrayals of violence, substance use, and other risky behaviours. They emphasized that such responses are largely linked to developmental vulnerabilities and psychosocial needs rather than grade level. Consequently, they recommended the adoption of comprehensive, school-wide media literacy initiatives that cut across academic levels, equipping all students with the skills to critically evaluate media content and cultivate healthier consumption patterns. This inclusive approach, they stated, is essential for mitigating the adverse behavioural outcomes associated with excessive or harmful media exposure among Nigerian adolescents.

### **Conclusion**

The study revealed that media has a high level of influence on delinquent behaviours among in-school adolescents in Ilorin metropolis, Kwara State, highlighting the significant role media plays in shaping adolescent behaviour. The findings further showed no significant difference in media influence based on gender, indicating that both male and female adolescents are equally affected. Similarly, there was no significant difference in the influence of media on delinquent behaviours based on age, suggesting that the impact of media cuts across various adolescent age groups. Additionally, the study found no significant difference in media influence based on class level, implying that students across different educational levels are similarly influenced by media. These findings emphasize the importance of implementing targeted interventions that address the overarching high level of media influence on adolescents, while recognizing that the impact is consistent across gender, age, and class level.

### **Recommendations**

Based on the findings of this study, it is recommended that parents, educators, and policymakers should promote media literacy among adolescents. Schools should integrate media education into the curriculum to help students critically analyze and understand media content. Parents should also monitor and regulate the type of media their children consume to minimize exposure to harmful or delinquent content. Schools and community organizations should create inclusive platforms for adolescents to discuss their media experiences and learn coping mechanisms. Public awareness campaigns and educational programs should be designed to address the developmental needs of adolescents across different age ranges, ensuring that all receive consistent guidance and support in managing media exposure. Since media influences adolescents similarly across class levels, school-based interventions should be implemented at all educational stages. Schools should establish policies that promote healthy media consumption for all students, regardless of their academic standing.

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**STUDENT HEALTH EDUCATORS' ATTITUDE TOWARDS CURRICULUM DISSEMINATION AND  
MODELING ROLE OF COOPERATING SCHOOL TEACHERS  
IN DELTA STATE, NIGERIA**

**AWUJA Samuel Ademu Ph. D**  
samuel.ademu@unidel.edu.ng  
Department of Educational Foundations,  
Faculty of Education,  
University of Delta, Agbor,  
Delta State, Nigeria.

**Abstract**

*This study investigated student health educators' attitudes toward curriculum dissemination skills during teaching practice and examined the influence of cooperating school teachers' teaching styles in Delta State universities. Specifically, the study explored gender-based differences in attitudes and approaches to curriculum dissemination. A descriptive survey design was adopted, with a sample of 80 student health educators (33 males and 47 females) and 25 cooperating school teachers, selected through stratified random sampling. Data were collected using a validated and reliable structured questionnaire (Cronbach's Alpha = 0.84) and analyzed using descriptive statistics and independent samples t-tests. Findings revealed a statistically significant difference between male and female student health educators' attitudes toward curriculum dissemination, with males scoring higher ( $t(74.84)=2.054, p=0.043$ ). Similarly, a significant difference was found in dissemination approaches in relation to cooperating teachers' teaching styles, again favoring male student educators ( $t=2.12, p=0.038$ ). These results highlight gender disparities in curriculum dissemination skills and underscore the critical role of cooperating teachers' mentorship in shaping pre-service educators' teaching practices. The study concludes that tailored mentorship, particularly for female student health educators, is essential for building confidence and strengthening dissemination skills. It recommends structured training for cooperating school teachers to enhance their mentoring effectiveness and promote equitable professional growth among student health educators.*

**Keywords:** Student-health-educator, Curriculum-dissemination-skills, Role of Cooperating-school-teacher.

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**Introduction**

The role of student health educators in effectively disseminating curriculum content is significant for the advancement of health education, particularly in upper basic education institutions. Student health educators who are typically pre-service teachers are responsible for conveying essential health information and practices to their peers and future students. A significant aspect of their professional development is their ability to acquire and refine curriculum dissemination skills which are necessary in delivering health education effectively. This involves not only understanding the curriculum but also engaging and motivating students to adopt healthier behaviours. In this context, the influence of cooperating school teachers who act as role models during student teaching internships becomes a crucial factor in shaping the attitudes and competencies of student health educators (Waston, Smith & Brown, 2020).

Cooperating teachers are capable of influencing the development of teaching skills and attitudes in student teachers, particularly in health education (Gao, Parker & Rose, 2021). Health teachers provide mentorship;

guidance and real-world classroom experiences that help student educators hone their curriculum delivery skills. Their behaviours, attitudes and teaching styles serve as templates for student teachers to emulate thereby shaping how effectively future educators can implement health curricula. Furthermore, positive role modeling by cooperating teachers has been associated with increased confidence, better classroom management and a greater sense of preparedness among student teachers (Watson, Smith & Brown, 2020). However, there is limited research on the specific effects of these role models in the context of health education curriculum dissemination in universities within Delta State, Nigeria.

Field experiences such as teaching practice are pivotal in preparing student health educators for their roles as facilitators of health education. Teaching practice offers pre-service teachers the opportunity to apply theoretical knowledge in real-world settings engage in classroom management and develop essential teaching skills (Bates, 2018). These experiences are critical in shaping the competencies of student health educators, particularly their abilities to disseminate health-related curricula effectively. According to Kaufman and Ireland (2020), field experiences allow student teachers to practice teaching in a structured environment where they can experiment with pedagogical approaches receive feedback and adjust the techniques to meet diverse learners' needs. This period of teaching practice is also an opportunity for student health educators to understand the nuances of health education curriculum delivery such as adapting lessons for different age groups and addressing sensitive topics like sexual health, nutrition and mental health (Jonas, Meclam & Brown, 2021; Jackson, Singh & Rhodes, 2021).

Moreover, teaching practice provides a context where student health educators can develop their professional identity. Studies by Watson, Smith & Brown (2020) have shown that field experiences significantly impact pre-service teachers' confidence and their perception of their role as educators. In health education, where topics often intersect with students' personal values and societal norms, teaching practice allows student educators to confront real-life challenges and ethical dilemmas. For example, they may need to balance evidence-based health advice with cultural sensitivities. Watson and Bell (2019) argue that teaching practice is not just about learning to teach but also about shaping the professional ethos of student health educators. This experiential learning is important for preparing them to face the complexities of modern health education curriculum execution in diverse school environments (Morris, Jensen & Smith, 2021).

Cooperating teachers play a crucial role in the professional development of student health educators by mentoring, supervising and modeling effective teaching practices (Miller, Graham & Allen, 2020; Johnson, James & Williams, 2019). They influence attitudes, teaching styles and classroom management while providing real-time feedback and support. In health education, cooperating teachers demonstrate strategies for addressing sensitive topics like sexual health and drug use (Gao, Parker & Ross, 2021). Their guidance helps student teachers balance curriculum demands with emotional dynamics (Jones, McClain & Browns, 2021). By fostering confidence, encouraging reflective practice and offering constructive feedback, they support critical thinking and long-term professional growth (Smith & Morgan, 2017; Gonzalez, Soto & Ruiz, 2020; Brown, McDonald & Taylor, 2019).

Mentorship is a key aspect of the influence that cooperating teachers have on student health educators during their field experience. Effective mentoring goes beyond mere supervision and it involves a collaborative relationship where the mentor helps the student teacher navigate the challenges of teaching and supports their professional growth (Smith & Morgan, 2020). It is worthy to note that student teachers who experience high-quality mentorship are more likely to develop a strong teaching identity and feel more prepared for their future careers. In health education, mentorship is particularly crucial because student teachers must learn how to address complex health issues in a manner that is both informative and sensitive to the needs of diverse learners.

Cooperating teachers who act as role models provide student health educators with examples of how to handle classroom situations and curriculum dissemination effectively. Learning is a social process and student teachers learn through observing and interacting with experienced educators (Miller, Graham & Allen, 2020). This theory underscores the importance of role modeling in teacher education as student health educators often adopt the behaviours, attitudes and teaching styles of their mentors. Effective role modeling in health education includes demonstrating how to facilitate discussions on difficult health topics, maintain a non-judgmental stance and encourage student participation in health-promoting behaviours (Jackson, Singh & Rhodes, 2020).

Mentorship challenges often arise in cooperating teacher-student teacher relationships during teaching practice. Mismatches in teaching philosophies or communication styles can lead to tension such as when a cooperating teacher favours traditional methods while a student teacher prefers innovative, student-centered techniques (Smith & Rogers, 2018; Brown, McDonald & Taylor, 2019). Such conflicts may hinder student teachers' ability to experiment and grow professionally. Additionally, variability in the quality of mentorship can result in uneven learning experiences. Some cooperating teachers provide frequent feedback while others offer little guidance, leaving student teachers ill-prepared for curriculum dissemination and classroom management (Cooper, Garcia & Jenkins, 2020). Addressing these issues requires standardized training for cooperating teachers to enhance their mentorship capabilities.

Improving mentorship involves structured programs with clear guidelines, regular meetings and reflective practices to help student teachers critically assess their progress in the acquisition of skills of curriculum dissemination. (Jones, McClain & Brown, 2021). Training programs for cooperating teachers should emphasize open communication, constructive feedback and reflective teaching. Technology integration, such as virtual observation and feedback platforms, can provide timely mentorship and facilitate peer learning among student teachers (Jones & Adams, 2019). Furthermore, research on the unique challenges faced by student health educators in different contexts is necessary to tailor mentorship programs effectively (Lewis, Munro & Nash, 2020). By addressing these challenges, institutions can enhance teacher preparation programs, contributing to the development of skilled health educators capable of promoting healthier behaviours and outcomes in schools. Curriculum dissemination involves effectively delivering content, engaging students and adapting methods to diverse learning needs. For health educators, this includes fostering critical thinking and addressing health-related topics influencing student behaviors (Darling-Hammond 2017). Teaching practice provides opportunities to transition from theory to practice with mentorship aiding skill development in classroom management and content delivery (Miller, Graham & Allen, 2020). However, challenges like adjusting to varied learning environments and time constraints remain unabated (Bates, 2018). Effective mentorship, including modeling strategies and feedback enhances these skills, underscoring the need for structured programs to ensure professional readiness (Gonzalez, Soto & Ruiz, 2020).

### **Statement of the Problem**

Student health educators in Delta State Owned Universities face challenges in translating theoretical knowledge into practical teaching skills during field experiences. This gap is largely due to the inconsistent quality of mentorship provided by cooperating school teachers with some offering effective guidance while others lack the training or engagement necessary to support student health teachers. This disparity in mentorship undermines the preparedness and confidence of student health educators in delivering curriculum content. As a result, this study seeks to investigate the attitudes of student health educators toward curriculum dissemination and the influence of cooperating teachers with the goal of improving teacher preparation programs.

### **Purpose of the Study**

The main purpose of this study is investigate student health educators' attitude towards curriculum dissemination and modeling role of cooperating school teachers in Delta State, Nigeria. Specifically, the study:

- i. explores the attitudes of student health educators towards curriculum dissemination skills
- ii. assess the influence of cooperating school teachers in shaping these attitudes during teaching practice in Delta State.

### **Research Questions**

In order to investigate student health educators' attitude towards curriculum dissemination and modeling role of cooperating school teachers, the following research questions were raised to guide the study.

- i. Is there a significant difference between male and female student health educators' attitudes toward curriculum dissemination skills during teaching practice?
- ii. Is there a significant difference between male and female student health educators' curriculum dissemination approaches in relation to cooperating teachers' teaching styles?

### **Research Hypotheses**

The following hypotheses were formulated and tested at 0.05 level of significance.

- Ho<sup>1</sup>:** There is no significant difference between male and female student health educators' attitudes toward curriculum dissemination skills during teaching practice.
- Ho<sup>2</sup>:** There is no significant difference between male and female student health educators' curriculum dissemination approaches in relation to cooperating teachers' teaching styles.

### **Methodology**

The study adopted a descriptive survey design, employing a quantitative approach to provide a comprehensive understanding of student health educators' attitudes and the influence of cooperating teachers as role models. The population of the study comprised 137 student health educators currently undergoing teaching practice in Delta State-owned universities and 95 cooperating school teachers who were mentoring these student health educators. From this population, a sample of 80 student health educators was randomly selected from the 137, while 25 cooperating school teachers were randomly chosen from the 95, giving a total sample of 105 participants. The sampling was carried out across eight cooperating schools to ensure adequate representation of the diverse experiences within Delta State-owned universities (DELSOU). A stratified random sampling technique was employed to enhance fairness in the selection of participants. The instrument for data collection was a structured questionnaire developed by the researcher, titled "Student Health Educators' Curriculum Dissemination Skills and Influence of Mentorship Questionnaire (SHE-CDSIMQ)." The questionnaire was designed to efficiently gather information from both student health educators and cooperating school teachers, providing quantitative data that could be analyzed for patterns and differences. To establish reliability, the instrument was subjected to internal consistency testing using Cronbach's Alpha, which yielded a coefficient of 0.84, indicating good reliability. For validity, a panel of four experts in health education, curriculum studies, and measurement and evaluation reviewed the items. Necessary corrections were made to ensure that all items were relevant, clear, and comprehensive. Construct validity was also assessed to confirm that the questionnaire items aligned with the expected theoretical constructs. Quantitative data collected through the questionnaire were analyzed using descriptive statistics

(means, frequencies, and standard deviations) and inferential statistics (independent samples t-test) to test the research hypotheses.

### Results

To examine whether attitudes toward curriculum dissemination skills differed between male and female student health educators, an independent samples t-test was conducted. The analysis compared the mean scores of both groups to determine any statistically significant difference.

**Table 1: Independent Samples t-test of the Significant Difference between Male and Female Student Health Educators' Attitudes toward Curriculum Dissemination Skills during Teaching Practice in Delta State**

Group	N	Mean	SD	t	Df	p-value	Decision
Male	33	3.80	0.60	2.054	78	0.043	Rejected
Female	47	3.50	0.70				

Table 1 reveals that the mean difference between male and female student health educators' attitudes toward curriculum dissemination skills is 0.30, with males scoring higher. The calculated t-value is 2.054 at approximately 74.84 degrees of freedom, with a p-value of 0.043. Since the p-value of 0.043 is less than the 0.05 level of significance,  $H_0^1$  is rejected. This indicates that there is a statistically significant difference between the attitudes of male and female student health educators toward curriculum dissemination skills during teaching practice in Delta State. The 95% confidence interval [0.009, 0.591] and the effect size (Hedges'  $g \approx 0.450$ ) suggest a small-to-moderate difference favoring male student health educators.

To investigate whether curriculum dissemination approaches differed between male and female student health educators in relation to cooperating school teachers' teaching styles, an independent samples t-test was carried out. The analysis assessed group mean differences to identify any significant variation.

**Table 2: t-test results of significant difference between the impact of teaching styles of cooperating school teachers and student health educators' approaches in curriculum dissemination skills acquisition during teaching practice in Delta State.**

Group	N	Mean	SD	t	df	p-value	Mean Difference	Decision
Male	33	3.90	0.60	2.12	98	0.038	0.30	$H_0^2$ Rejected
Female	47	3.60	0.70					

Table 2 above presents data for t-test; independent variable (male students): mean = 3.9, Std Dev = 0.6, n = 33 and female students: Mean = 3.6, Std Dev = 0.7, n = 47. t-value = 2.12 while p-value: 0.038. Therefore,  $H_0^2$  which states that "there is no significant difference between the impact of teaching styles of cooperating school teachers and student health educators' approaches to curriculum dissemination skills during teaching practice in Delta State" is hereby rejected since the P-value of 0.038 is less than 0.05. The mean difference between the two variables (male and female) is 0.3, indicating that males score higher in their approaches to curriculum dissemination than females. This implies that there is a statistically

significant difference between the impact of cooperating school teachers' teaching styles on male and female student health educators' approaches to curriculum dissemination.

### **Discussion of Findings**

The results presented in Table 1 revealed that male student health educators had significantly higher attitudes toward curriculum dissemination skills compared to their female counterparts. With a mean difference of 0.30, the independent samples t-test result ( $t(74.84) = 2.054, p=0.043$ ) confirmed the statistical significance of this difference. This suggests that male student health educators demonstrated stronger confidence and more positive perceptions of curriculum dissemination during teaching practice. Such differences may be linked to gender-related variations in self-efficacy and teaching confidence, as emphasized by Darling-Hammond, Flook, Cook-Harvey, Barron and Osher (2017). The small-to-moderate effect size further indicates that although the difference is not large, it is practically meaningful and highlights the higher confidence of male educators in managing teaching challenges effectively.

Similarly, the results from Table 2 showed a significant difference between male and female student health educators' curriculum dissemination approaches in relation to cooperating teachers' teaching styles. Male student educators ( $M=3.9, SD=0.6$ ) scored higher than their female counterparts ( $M=3.6, SD=0.7$ ), with the t-test result ( $t=2.12, p=0.038$ ) confirming statistical significance. This finding demonstrates that cooperating teachers' teaching styles had a notable influence on the dissemination approaches of student educators, with male students benefitting more from such mentorship. These results are consistent with Johnson, James, and Williams (2019), who emphasized that cooperating teachers serve as role models whose teaching practices strongly shape the instructional strategies of pre-service teachers.

Taken together, these findings underscore the central role of mentorship and role modeling in the development of curriculum dissemination skills during teaching practice. Male student educators appeared to benefit more from the influence of cooperating teachers, suggesting that mentoring strategies may need to be adjusted to provide additional encouragement and feedback to female student educators. This aligns with the position of Smith and Morgan (2017), who argue that differentiated mentorship approaches can help bridge gaps in confidence and skill acquisition among pre-service teachers.

Overall, the study highlights gender disparities in both attitudes and curriculum dissemination approaches, with male student health educators consistently scoring higher. At the same time, the findings confirm the significant influence of cooperating school teachers' teaching styles in shaping the dissemination practices of student health educators. The implication is that while teaching practice offers a valuable platform for professional growth, deliberate and targeted support mechanisms are required to ensure that both male and female student health educators acquire strong and confident curriculum dissemination skills.

### **Conclusion**

This study established that significant gender-based differences exist in student health educators' attitudes and approaches to curriculum dissemination during teaching practice. Male educators consistently demonstrated more positive attitudes and stronger dissemination approaches compared to their female counterparts. Additionally, the teaching styles of cooperating school teachers were found to play a pivotal role in shaping student health educators' curriculum dissemination skills, with a stronger impact on males. These findings underscore the importance of mentorship and role modeling in teacher preparation and highlight the need for tailored mentoring approaches that address gender disparities. Strengthening mentorship programs, particularly to support female student educators. It is, therefore, essential for enhancing equity and effectiveness in curriculum dissemination training across teacher education programs.

### **Recommendations**

1. Cooperating school teachers should provide personalized and tailored feedback plus encouragement to female student health educators during teaching practice. This will help boost their confidence, enhance their curriculum dissemination approaches and reduce the observed gender disparity.
2. Teacher preparation programs should organize structured training for cooperating school teachers. Such training will strengthen their capacity to guide student health educators effectively, ensuring equitable professional growth for both male and female pre-service teachers.

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**METHOD OF TEACHING AND LEARNING: CRITICAL THINKING IN SOCIAL STUDIES  
EDUCATION IN OWAN EAST LOCAL GOVERNMENT AREA OF EDO STATE**

**AKHOGBAI Emmanuel Monday Ph.D<sup>1</sup>, IMOBIGHE, M.U. Ph.D<sup>2</sup>**

eskedo2017@gmail.com, imobighemu@delsu.edu.ng, imobighemable@gmail.com

Arokho Secondary School, Arokho<sup>1</sup>

Owan East LGA, Edo State.

Department of Vocational Education<sup>2</sup>,

Delta State University, Abraka, Delta State

**Abstract**

*This study investigates the effectiveness of various teaching methods in promoting critical thinking skills among Junior Secondary School 2 (JSS 2) Social Studies students in Owan East Local Government Area of Edo State, Nigeria. Using a mixed-methods approach, the research examines not only the instructional strategies used by teachers but also evaluates how resource availability, classroom size, and school type (public vs. private) influence students' critical thinking development. Data were collected through questionnaires, interviews, classroom observations, and focus group discussions, covering both public and private secondary schools. Findings reveal that student-centered teaching methods such as group discussions, debates, and problem-solving activities significantly enhance critical thinking. However, their implementation is limited in public schools due to overcrowded classrooms, insufficient resources, and inadequate teacher training. The study highlights the urgent need for curriculum reform, investment in educational infrastructure, and sustained teacher professional development. It concludes that fostering critical thinking in Social Studies requires systemic support and instructional transformation, particularly in under-resourced school settings.*

**Keywords:** Critical thinking, Social Studies education, Teaching methods, Public and Private schools, Nigeria.

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**Introduction**

Critical thinking has been defined by various scholars as the ability to engage in reflective and independent thinking, analyzing information, evaluating evidence, and making reasoned judgments. Critical thinking involves cognitive skills such as analysis, synthesis, problem-solving, and evaluation, which are essential for academic success and real-life decision-making (Brookfield, 2012).

In the 21st century, educators emphasize the development of critical thinking skills to prepare students for complex societal challenges. Critical thinking enables students to question assumptions, consider multiple perspectives, and develop informed opinions on social issues. These skills are particularly vital in Social Studies, which deals with history, governance, and social relationships.

Scholars such as Paul and Elder (2002) describe critical thinkers as individuals who possess intellectual humility, intellectual integrity, fair-mindedness, and a willingness to question their own beliefs. These traits allow students to navigate through conflicting information and form balanced viewpoints (Paul & Elder, 2008).

The background section provides a broad overview of the topic, highlighting the significance of the research in the context of Social Studies education. It should touch on the following points:

Education is a fundamental tool for fostering critical thinking, which is essential for personal and societal growth. In today's world, critical thinking skills are increasingly necessary for solving complex social, economic, and political problems. This is particularly relevant in Social Studies education, where students are expected to analyze historical events, understand social dynamics, and develop informed perspectives on current issues (Lipman, 2003).

Social Studies in Nigeria aims to help students understand their environment, develop civic responsibilities, and appreciate cultural diversity. In the Junior Secondary School (JSS) curriculum, Social Studies is considered an essential subject for developing informed and responsible citizens. At the JSS 2 level, students are beginning to engage with more complex topics that require critical analysis and problem-solving skills (Owoeye & Yara, 2011).

- **Owan East Local Government Area, Edo State:**

Owan East LGA is a region in Edo State, Nigeria, where education is viewed as a vehicle for socio-economic development. However, like many areas in Nigeria, schools face challenges such as lack of resources, insufficient teacher training, and outdated teaching methods. These challenges can hinder the development of critical thinking skills, particularly in subjects like Social Studies that demand active engagement from students.

- **Critical Thinking in the 21st Century:**

Critical thinking involves analyzing, evaluating, and synthesizing information to make informed decisions. In Social Studies education, students are encouraged to think critically about historical events, social systems, and civic responsibilities. Developing these skills prepares students for active participation in their communities and equips them to tackle social challenges.

Critical thinking has been defined by various scholars as the ability to engage in reflective and independent thinking, analyzing information, evaluating evidence, and making reasoned judgments. Critical thinking involves cognitive skills such as analysis, synthesis, problem-solving, and evaluation, which are essential for academic success and real-life decision-making.

- ❖ **Importance of Critical Thinking in Education:**

In the 21st century, educators emphasize the development of critical thinking skills to prepare students for complex societal challenges. Critical thinking enables students to question assumptions, consider multiple perspectives, and develop informed opinions on social issues. These skills are particularly vital in Social Studies, which deals with history, governance, and social relationships.

- ❖ **Characteristics of Critical Thinkers:**

Scholars such as Paul and Elder (2002) describe critical thinkers as individuals who possess intellectual humility, intellectual integrity, fair-mindedness, and a willingness to question their own beliefs. These traits allow students to navigate through conflicting information and form balanced viewpoints (Paul & Elder, 2008).

### **Role of Social Studies in Promoting Critical Thinking**

- **Social Studies and Critical Thinking Development:**

Social Studies education exposes students to societal structures, cultural diversity, historical events, and global issues. The curriculum encourages students to explore these topics critically, analyze multiple sources of information, and formulate their own interpretations. Social Studies teachers can utilize debates, case studies, and discussions to help students develop these skills (Adeyemi, 2012).

- **Content Areas that Encourage Critical Thinking in Social Studies:**  
Topics such as governance, citizenship, human rights, and economic systems inherently require critical thinking. For example, students might be asked to compare different political systems, evaluate the effectiveness of government policies, or analyze historical conflicts. By engaging with these topics, students practice the cognitive skills necessary for critical thinking.
- **Link between Social Studies and Real-World Problem-Solving:**  
Social Studies prepares students to engage with real-world social issues, encouraging them to think critically about current events and societal problems. This relevance to real-life situations makes the subject an ideal platform for developing critical thinking skills that can be applied beyond the classroom.

### **Methods and Techniques of Teaching Critical Thinking in Social Studies**

- **Inquiry-Based Learning:**  
Inquiry-based learning involves encouraging students to ask questions, conduct research, and explore topics in-depth. This method is particularly effective in Social Studies, where students can investigate historical events, societal changes, and cultural practices. Inquiry-based learning fosters curiosity and independent thinking, allowing students to take ownership of their learning process.
- **Problem-Solving Approaches:**  
Problem-solving is a key method for teaching critical thinking. In Social Studies, students can be presented with complex social problems (e.g., poverty, conflict, governance issues) and asked to develop solutions. This approach engages students in critical analysis, evaluation of potential solutions, and reflection on the outcomes of their decisions.
- **Group Discussions and Debates:**  
Group discussions and debates provide students with opportunities to articulate their viewpoints, consider alternative perspectives, and engage in reasoned argumentation. These techniques promote active learning and help students develop critical thinking by challenging their assumptions and refining their ideas based on feedback from peers.
- **Case Studies and Scenario-Based Learning:**  
Case studies and scenarios are effective for teaching critical thinking, as they require students to analyze real-world situations, consider multiple perspectives, and make reasoned decisions. In Social Studies, teachers can use historical events, current affairs, or social dilemmas as case studies to encourage critical analysis and decision-making.
- **Role-Playing and Simulations:**  
Role-playing and simulations involve students taking on different roles in historical or contemporary scenarios. This method encourages empathy, perspective-taking, and critical thinking, as students must consider different viewpoints and make decisions based on their roles. In Social Studies, simulations of government processes, mock elections, or historical reenactments can be powerful tools for promoting critical engagement (Ennis, 2011).

### **Challenges in Teaching Critical Thinking in Nigerian Schools**

#### **•Teacher Training and Professional Development:**

One of the main challenges in promoting critical thinking is the lack of teacher training. Many teachers in Nigeria, especially in rural areas such as Owan East, may not be adequately trained in modern teaching methods that prioritize critical thinking. Teacher-centered, lecture-based

approaches are still common, which limits opportunities for students to engage critically with the material.

•**Curriculum Constraints:**

The Nigerian educational system is often driven by a curriculum that emphasizes rote learning and memorization, particularly in preparation for standardized exams. This examination-oriented focus can limit the ability of teachers to implement critical thinking activities, as they feel pressured to cover a large volume of content in a short period of time.

•**Overcrowded Classrooms and Lack of Resources:**

In many public schools in Nigeria, overcrowded classrooms and insufficient teaching resources make it difficult to implement interactive teaching methods that foster critical thinking. Teachers may struggle to manage large groups of students, making it harder to engage them in meaningful discussions or problem-solving activities.

•**Student Motivation and Readiness:**

Students may also face challenges in developing critical thinking skills, particularly if they are accustomed to traditional, passive learning methods. Encouraging students to think critically requires motivation, confidence, and a willingness to challenge their own beliefs - qualities that may not be fully developed in all students, especially in under-resourced schools (Ennis, 2011).

### **Statement of the Problem**

This section outlines the specific issue that the research addresses. In this case, the study focuses on the teaching methods used in Social Studies classes and how effectively they promote critical thinking among JSS 2 students. The traditional approach to teaching Social Studies in Nigerian schools often involves rote learning, where students memorize facts rather than engage in critical discussions. This method limits students' ability to think independently and critically analyze information. There is a growing concern that students are not developing the necessary critical thinking skills to navigate modern society.

Many Social Studies teachers in Owan East, and Nigeria in general, lack adequate training in modern pedagogical methods that foster critical thinking. Additionally, overcrowded classrooms, limited resources, and an examination-oriented education system further impede the adoption of interactive teaching methods. As a result, there is a gap between the desired educational outcomes (critical thinking development) and the current classroom practices.

### **Purpose of the Study**

The primary aim of this study is to investigate the teaching methods employed by Social Studies teachers in Junior Secondary School 2 (JSS 2) that promote critical thinking skills among students in Owan East Local Government Area of Edo State, Nigeria. Specifically, the study seeks to:

- i. examine the types of teaching strategies commonly used in Social Studies classrooms;
- ii. evaluate the effectiveness of these methods in enhancing critical thinking skills;
- iii. compare the extent to which public and private schools foster critical thinking; and
- iv. identify the challenges that impede the implementation of student-centered, critical-thinking-based teaching methods.

### **Research Questions**

To guide the study, the following research questions were raised:

- i. What teaching methods are currently used by Social Studies teachers in JSS 2 classes in Owan East Local Government Area?
- ii. How effective are these teaching methods in promoting critical thinking skills among students?
- iii. Are there significant differences between public and private secondary schools in their capacity to foster critical thinking skills among JSS 2 students?
- iv. What are the major challenges teachers faces in implementing teaching strategies aimed at developing students' critical thinking?

### **Research Hypotheses**

The study was guided by the following hypotheses:

- Ho<sup>1</sup>:** There is no significant positive relationship between the use of student-centered teaching methods and the development of critical thinking skills among JSS. 2 Social Studies students.
- Ho<sup>2</sup>:** There is no statistically significant difference in critical thinking skill development between students in public and private secondary schools in Owan East Local Government Area.
- Ho<sup>3</sup>:** Inadequate resources and overcrowded classrooms significantly do not hinder the implementation of student-centered instructional strategies that promote critical thinking in Social Studies.

### **Methodology**

The research design is the overall strategy that the researcher uses to integrate the different components of the study in a coherent and logical way.

This research adopts a case study design, which is suitable for an in-depth investigation of teaching methods and critical thinking in a specific educational setting. A case study allows the researcher to explore the dynamics of the classroom, teaching strategies, and student outcomes in detail. In this case, the focus is on Junior Secondary School 2 (JSS 2) students in Social Studies classes within Owan East Local Government Area of Edo State. The research uses a mixed-methods approach, combining both qualitative and quantitative data collection techniques. This approach is chosen to gain a comprehensive understanding of the phenomenon:

Qualitative methods (interviews, classroom observations) help to capture the experiences and perspectives of teachers and students regarding the teaching and learning of critical thinking.

Quantitative methods (surveys, questionnaires) provide numerical data that can be statistically analyzed to measure the effectiveness of different teaching methods.

The population of this study consists of JSS 2 students and Social Studies teachers in public and private secondary schools in Owan East Local Government Area of Edo State. The study focuses on JSS 2 because students at this level are beginning to engage with more complex topics in Social Studies, making it an ideal stage to investigate critical thinking development.

A representative sample of schools were selected from the total population. The sample size included:

- Approximately 6–8 schools from Owan East LGA, including a mix of both public and private institutions.
- 50–100 JSS 2 students from the selected schools participated in surveys and focus group discussions.
- 8–10 Social Studies teachers from these schools participated in interviews and classroom observations.

The selected sample size is intended to provide sufficient data for both qualitative and quantitative analysis, ensuring diversity in terms of school type and socio-economic background. This will help to generalize findings across the Local Government Area.

The sampling technique refers to the method used to select participants from the population. In this study, purposive sampling and random sampling are employed.

Purposive sampling was used to select Social Studies teachers with at least three years of teaching experience, as they are likely to have developed some strategies for teaching critical thinking. Teachers who demonstrated knowledge of diverse teaching methods were prioritized to gain deeper insights into instructional techniques.

Simple random sampling was used to select JSS 2 students in each school. This ensures that every student has an equal chance of being included, reducing selection bias. The random selection process helped ensure that the sample is representative of the student population in Owan East LGA.

For Students, a structured questionnaire was administered to JSS 2 students to assess their perceptions of Social Studies lessons and how these lessons have influenced their critical thinking skills. The questionnaire included both close-ended questions (using Likert scales) and open-ended questions to gather both quantitative and qualitative data.

Sections of the Questionnaire Demographic Information: Age, gender, type of school (public or private).

- Engagement in Class Activities: How often do they engage in class discussions, problem-solving, group work, etc.?
- Perceived Development of Critical Thinking Skills: How confident do they feel in analyzing social issues, debating ideas, and forming independent opinions?
- Student Feedback on Teaching Methods: What teaching methods do they find most helpful for developing critical thinking?

For Teachers, Semi-structured interview was conducted with Social Studies teachers to gain a deeper understanding of the teaching methods they use to foster critical thinking. Semi-structured interview allows for flexibility in the questioning process, enabling the researcher to explore specific issues in more depth based on the responses of the participants.

1. Key Interview Topics:

1. Teaching experience and professional background.
2. Understanding of critical thinking and its importance in Social Studies.
3. Strategies used to encourage critical thinking in the classroom.
4. Challenges faced in teaching critical thinking (e.g., large class sizes, lack of resources).
5. Recommendations for improving the teaching of critical thinking.

For Observing Teaching Methods in Action: Classroom observations were conducted to see how Social Studies lessons were delivered and to observe the interaction between teachers and students. This method provided firsthand evidence of the teaching techniques used, the classroom environment, and student participation.

○ **Observation Checklist:**

An observation checklist was used to record specific behaviors and instructional methods, such as:

- The use of group work, discussions, debates, or problem-solving activities.
- Student engagement and participation.
- Teachers' encouragement of critical thinking (e.g., asking open-ended questions, promoting inquiry).
- Classroom dynamics (e.g., student-teacher interaction, peer interaction).

Focus Group Discussions, for Students:

Focus group discussions with groups of 8–10 students from each selected school provided qualitative insights into how they perceive their learning experience. The focus group allowed students to share

their thoughts on the effectiveness of teaching methods, how they engage in critical thinking activities, and any challenges they face.

The data analysis section explains how the collected data will be processed and interpreted.

- For Questionnaires (Students):

The quantitative data from student questionnaires were analyzed using descriptive statistics (e.g., percentages, mean scores, frequency distribution) to summarize students' responses regarding their engagement in critical thinking activities and the effectiveness of teaching methods. Inferential statistics, such as t-tests or chi-square tests, may be used to determine if there are significant differences between groups (e.g., public vs. private schools, gender differences in critical thinking development).

- Software:

Statistical software like SPSS (Statistical Package for Social Sciences) was used to carry out the statistical analysis, ensuring accurate and efficient processing of the data.

Qualitative Data Analysis

- For Interviews and Focus Groups (Teachers and Students):

The qualitative data from interviews and focus group discussions were analyzed using thematic analysis. This involves identifying recurring themes, patterns, and insights from the qualitative responses. The thematic analysis helped to uncover common experiences, challenges, and strategies related to teaching critical thinking in Social Studies.

- Coding Process:

The data were coded by identifying specific categories and assigning labels to key ideas, such as “teaching challenges,” “student engagement,” and “critical thinking skills development.” These codes will then be grouped into broader themes for analysis.

Triangulation

To ensure the validity and reliability of the findings, the study will use triangulation by combining data from multiple sources (questionnaires, interviews, observations). This method increased the credibility of the research by cross-verifying information from different data collection methods.

## Classroom Observation Results

### Results

The study's findings supported all three hypotheses, revealing the following key results:

1. **Significant Impact of Student-Centered Methods:** Data showed that student-centered teaching methods—such as discussions, debates, and group work—were significantly associated with improved critical thinking skills among JSS 2 students. Students exposed to these interactive methods demonstrated higher levels of analytical thinking and problem-solving abilities compared to those taught through lecture-based methods.
2. **Differences between Public and Private Schools:** Private schools were observed to adopt more student-centered methods, benefiting from smaller class sizes, better resources, and more flexible curriculum structures. Consequently, students in private schools exhibited stronger critical thinking skills compared to their counterparts in public schools.
3. **Resource Limitations in Public Schools:** The study confirmed that resource constraints and overcrowded classrooms in public schools hindered the use of interactive teaching methods. These limitations led to a reliance on traditional lecture-based methods, which were less effective in promoting critical thinking skills.

Overall, the results emphasize the need for systemic changes in Nigeria's education sector to promote effective critical thinking development, particularly in under-resourced public schools.

**Hypothesis One:** There is no significant difference in critical thinking skills between students in public and private schools due to varying teaching methods and resources.

**Table 1: Independent Samples t-Test Comparing Critical Thinking Scores between Public and Private Schools**

Group	N	Mean	Standard Dev.	t-value	p-value	Significance Level ( $\alpha$ )
Public Schools	100	58.30	8.92	-4.72	0.001	0.05
Private Schools	100	68.55	7.13			

The results in Table 1 indicate a statistically significant difference in critical thinking scores between public and private school students, with private school students scoring higher on average. The t-test ( $t = -4.72$ ,  $p = 0.001$ ) demonstrates that private schools have a significant advantage in fostering critical thinking, likely due to their ability to employ more interactive teaching methods and better resources. The above results indicated that the null hypothesis which stated that there is no significant difference in critical thinking skills between students in public and private schools due to varying teaching methods and resources is rejected. Thus, there is a significant difference in critical thinking skills between students in public and private schools due to varying teaching methods and resources.

**Hypothesis Two** There is no statistically significant difference in critical thinking skill development between students in public and private secondary schools in Owan East Local Government Area.

**Table 2: t-test analysis showing the difference in critical thinking skill development between students in public and private secondary schools.**

Type of School	N	Mean	SD	df	Cal. t-value	p-value	Significance Level ( $\alpha$ )
Public	100	58.30	6.36	198	6.83	0.002	0.05
Private	100	68.55	3.68				

The t-test statistics results (cal.  $t$ -value = 6.83,  $p = 0.002$ ) reveal a significant impact of classroom size on critical thinking scores, indicating that smaller classroom sizes in private schools allow for more effective use of interactive teaching methods.

**Hierarchical Regression Analysis: Predicting Critical Thinking Scores**

This hierarchical regression demonstrates the influence of different predictor variables (teaching methods, resource availability, and classroom size) on students' critical thinking scores, with variables entered in stages to examine the contribution of each.

**Table 3: Hierarchical Regression Analysis Predicting Critical Thinking Scores**

Model	Predictor Variables	R <sup>2</sup>	ΔR <sup>2</sup>	F-value	p-value	Coefficients (β)	Significance Level (α)
1	Classroom Size	0.34	0.34	15.23	0.001	-0.58	0.05
2	Classroom Size, Resource Level	0.52	0.18	10.17	0.001	-0.50, 0.45	0.05
3	Classroom Size, Resource Level, Teaching Method	0.68	0.16	9.04	0.001	-0.42, 0.38, 0.54	0.05

- **Model 1** includes only *Classroom Size* as a predictor, which explains 34% of the variance in critical thinking scores ( $R^2 = 0.34$ ,  $F = 15.23$ ,  $p = 0.001$ ), showing a significant negative effect ( $\beta = -0.58$ ), indicating that larger classroom sizes are associated with lower critical thinking scores.
- **Model 2** adds *Resource Level*, which significantly increases the explained variance to 52% ( $\Delta R^2 = 0.18$ ). Both predictors remain significant, with resources positively contributing to critical thinking development ( $\beta = 0.45$ ).
- **Model 3** adds *Teaching Method* and explains 68% of the variance in critical thinking ( $\Delta R^2 = 0.16$ ), showing that teaching method has the strongest positive effect on critical thinking scores ( $\beta = 0.54$ ), indicating that student-centered methods are most effective in fostering critical thinking.

**Factor Analysis: Exploring Underlying Factors in Teaching Methods and Resources**

Factor analysis can help identify clusters of related items (factors) that contribute to critical thinking skills. This can determine which specific resources or teaching techniques are most influential.

**Table 4: Factor Analysis of Teaching Methods and Resources Affecting Critical Thinking**

Factor	Items	Factor Loadings
1	Student-Centered Methods	0.82
	Group Discussions	0.79
	Problem-Solving Activities	0.75
2	Classroom Resources	0.88
	Teaching Aids	0.85
	Library Access	0.78
3	Teacher Training	0.82
	Professional Development	0.80
	Pedagogical Workshops	0.77

Three key factors were identified:

- 1 **Factor 1** (Student-Centered Methods) explains a high proportion of variance, with strong loadings on interactive and student-engaging activities such as group discussions and problem-solving.
- 2 **Factor 2** (Classroom Resources) shows significant loadings on physical resources like teaching aids and library access, indicating their role in enabling critical thinking.

3 **Factor 3** (Teacher Training) underscores the importance of professional development and pedagogical workshops in preparing teachers to promote critical thinking.

**Interaction Analysis: Exploring Interaction Terms between Teaching Methods and Resource Levels**

An interaction analysis can reveal whether the effectiveness of teaching methods depends on the level of resources available.

**Table 5: Interaction Effects between Teaching Method and Resource Levels on Critical Thinking Scores**

Predictor Variables	$\beta$	Standard Error	t-value	p-value
Teaching Method (TM)	0.52	0.07	7.43	0.001
Resource Level (RL)	0.48	0.05	9.12	0.001
TM $\times$ RL Interaction	0.28	0.04	6.17	0.001

The interaction term (TM  $\times$  RL) is statistically significant ( $t = 6.17, p = 0.001$ ), suggesting that the positive impact of student-centered teaching methods on critical thinking scores is enhanced in classrooms with higher resource levels. This implies that resource availability amplifies the effectiveness of interactive teaching methods.

This section summarizes the findings from classroom observations, which focused on how teachers implemented critical thinking activities and how students responded.

a. **Use of Interactive Teaching Methods:**

Classroom observations revealed differences in the teaching methods used in public versus private schools. In private schools, teachers more frequently used interactive methods, such as:

- a. **Group Discussions:** In most private school classrooms, students were observed working in small groups, discussing topics like Nigerian governance and human rights. Teachers facilitated these discussions by asking open-ended questions and encouraging students to share diverse viewpoints.
- b. **Debates and Role-Playing:** Some private school teachers incorporated role-playing exercises and debates into their lessons. For example, one teacher had students debate whether democracy or authoritarianism was better for developing nations, which led to a lively exchange of ideas.
- c. **Case Studies:** Private school teachers also used case studies, such as analyzing real-life governance issues, to engage students in problem-solving and critical thinking.
- b. **Teacher-Centered Instruction in Public Schools:** In contrast, public school classrooms were more teacher-centered, with lectures dominating most lessons. While some teachers asked questions to engage students, these were typically closed-ended, focusing on factual recall rather than critical thinking. However, a few teachers in public schools did attempt to incorporate group work, though this was often difficult due to the large class sizes.
- c. **Student Engagement and Participation:** Students in private schools were generally more engaged in classroom discussions and showed greater enthusiasm for participating in debates and group work. In public schools, student engagement was more variable, with many students passively listening to lectures. This was particularly noticeable in

overcrowded classrooms, where student participation was limited due to space and resource constraints.

- d. **Challenges Identified in Empirical Studies:** Several studies have also highlighted the challenges faced by teachers in implementing critical thinking strategies, including inadequate teacher training, lack of resources, and an overemphasis on rote learning. Research by Okafor (2016) suggests that professional development programs focused on critical thinking pedagogy are essential for improving student outcomes in Social Studies.

## Discussion of Findings

### Empirical Studies on Critical Thinking in Social Studies Education

This section reviews relevant empirical studies that have examined the teaching of critical thinking in Social Studies education, particularly in Nigeria or similar contexts.

Research has shown that inquiry-based learning methods significantly enhance students' critical thinking abilities in Social Studies. For example, a study by Adeyemi (2012) found that students who engaged in inquiry-based learning were more likely to analyze social issues critically and provide well-reasoned arguments.

Comparative studies have explored the effectiveness of different teaching techniques, such as problem-solving, debates, and case studies. For instance, a study by Ezeudu et al. (2018) in Nigerian secondary schools found that students who participated in debates and group discussions developed stronger critical thinking skills compared to those in lecture-based classes.

### Relationship between Teaching Methods and the Development of Critical Thinking Skills

This subsection interprets how the various teaching methods used in Social Studies classrooms influence the development of critical thinking among JSS 2 students.

#### ❖ Private Schools vs. Public Schools:

The findings suggest a significant difference between public and private schools in the promotion of critical thinking. Private school teachers consistently used student-centered methods such as discussions, debates, group work, and case studies, which encouraged higher levels of critical engagement among students. These methods align with the constructivist theory of learning, which emphasizes active student participation in knowledge construction.

In contrast, public schools were more reliant on traditional, teacher-centered methods like lectures, which do not foster the same level of student interaction or independent thinking. This reliance on lectures reflects the behaviorist model, which focuses more on rote learning and memorization rather than on developing higher-order thinking skills.

#### ○ Critical Thinking Development:

The research shows that critical thinking skills develop more effectively when students are actively involved in the learning process. In private schools, where students are more engaged in debates and problem-solving, they demonstrated greater confidence in analyzing social issues and forming independent opinions. This finding is consistent with studies by Paul and Elder (2008) and Brookfield (2012), which highlight the importance of active learning in promoting critical thinking.

#### ○ Public School Challenges:

In public schools, the lack of interactive teaching methods limited students' opportunities to practice and refine critical thinking skills. This suggests that despite the inclusion of critical thinking as an objective in the curriculum, the actual teaching methods employed

in these schools were insufficient to achieve this goal. These findings mirror previous research in Nigerian education contexts, where overcrowded classrooms and lack of resources were found to impede the development of critical thinking (Obanya, 2010).

#### Effectiveness of Group Discussions, Debates, and Problem-Solving in Enhancing Critical Thinking

This subsection discusses the specific teaching methods identified in the findings as being most effective in promoting critical thinking.

##### (i) Group Discussions:

Group discussions were found to be highly effective in fostering critical thinking because they encourage students to articulate their thoughts, listen to alternative perspectives, and refine their ideas through dialogue. This method aligns with Vygotsky's social development theory, which posits that social interaction plays a fundamental role in cognitive development. In private schools, teachers used group discussions regularly, leading to higher student engagement and critical reflection. In contrast, public school students had fewer opportunities for such discussions, which hindered their ability to develop these skills.

##### 1. Example from Findings:

One private school teacher reported that by encouraging students to discuss topics such as governance and democracy, they became more adept at thinking critically about real-world issues. This supports research by Lipman (2003), who emphasized that dialogue and discussion are key to the development of critical thinking.

##### (ii) Debates:

Debates were another effective tool for promoting critical thinking, as they require students to take a stance, defend it with evidence, and respond to counterarguments. Debates stimulate students' analytical and evaluative skills, which are central to critical thinking. In the observed private school classes, debates on topics such as human rights and democracy allowed students to engage deeply with Social Studies content, developing skills like reasoning and argumentation.

##### 1. Public School Limitations:

However, in public schools, the use of debates was rare due to logistical challenges such as large class sizes. As a result, students missed out on opportunities to practice constructing arguments or considering different viewpoints. This finding is consistent with Ennis's (2011) framework for teaching critical thinking, which stresses the need for structured activities that require students to engage in higher-order thinking processes like analysis and evaluation.

##### (iii) Problem-Solving:

Problem-solving activities also played a crucial role in enhancing critical thinking, particularly in private schools where teachers designed tasks that required students to analyze social issues and propose solutions. Problem-solving fosters inductive reasoning, as students gather information, analyze patterns, and make conclusions based on evidence. This method aligns with Bloom's taxonomy, which places problem-solving in the upper levels of cognitive development (analysis, synthesis, evaluation).

##### 1. Challenges in Public Schools:

In public schools, problem-solving was less frequently implemented due to time constraints and curriculum pressure. This finding suggests that while problem-solving is

recognized as an important method for developing critical thinking, teachers in public schools may lack the resources or time to incorporate it into their lessons effectively.

### The Role of the Teacher in Facilitating Critical Thinking

This subsection analyzes the role of teachers in fostering an environment conducive to critical thinking.

- **Teacher as a Facilitator:**

In private schools, teachers often acted as facilitators, guiding students through the learning process rather than simply imparting information. By using techniques such as open-ended questioning and encouraging inquiry, teachers helped students take ownership of their learning, which is central to developing critical thinking skills. This approach is consistent with Dewey's (1933) concept of reflective thinking, where teachers create opportunities for students to reflect on their own ideas and the ideas of others (Dewey, 1933).

- **Teacher-Centered vs. Student-Centered Approaches:**

In public schools, however, the dominant teaching method was teacher-centered, with students passively receiving information. This approach limits opportunities for students to engage in critical thinking, as they are not required to analyze, evaluate, or synthesize information. The study's findings suggest that public school teachers need more support and training to adopt student-centered approaches that promote critical thinking.

- **Teacher Professional Development:**

The study revealed that teachers who had attended professional development workshops were more likely to use strategies that promoted critical thinking. This finding emphasizes the importance of ongoing professional development in equipping teachers with the skills to facilitate critical thinking. It echoes (Fullan's 2007) assertion that teacher training is crucial for educational reform, particularly in developing countries where resources and training opportunities may be limited.

### Challenges faced in Promoting Critical Thinking in Social Studies Education

This subsection examines the obstacles that teachers and schools encounter in trying to promote critical thinking.

- **Overcrowded Classrooms:**

One of the major challenges identified in the findings was overcrowded classrooms, especially in public schools. With class sizes exceeding 50 students in some cases, it was difficult for teachers to implement interactive teaching methods like group work or debates. Large class sizes also reduced the amount of individual attention that teachers could give to students, further limiting opportunities for personalized critical thinking instruction. These findings align with research by (Adeyemi, 2012), which highlighted the negative impact of overcrowded classrooms on the quality of teaching in Nigerian schools.

- **Lack of Resources:**

Another significant challenge was the lack of resources, particularly in public schools. Teachers reported that they did not have access to enough textbooks or teaching aids to support critical thinking activities. The absence of sufficient teaching materials made it difficult to engage students in more complex, inquiry-based tasks that require access to diverse sources of information. This finding is consistent with studies on resource disparities in Nigerian education, which have shown that underfunded schools struggle to provide the necessary tools for effective teaching and learning (Owoeye & Yara, 2011).

- **Curriculum Constraints:**

Teachers in both public and private schools expressed concerns about the curriculum's emphasis on content coverage for standardized exams, which leaves little room for critical thinking activities. The pressure to cover a vast amount of material in a limited time frame forces teachers to prioritize rote learning over deeper cognitive skills like analysis and evaluation. This challenge reflects the broader issue in many educational systems, where exam-oriented curricula limit opportunities for students to engage in higher-order thinking.

### **Implications for Policy and Practice**

Implications of the findings for educational policy and classroom practice including the following:

- **Curriculum Reform:**

The study's findings suggest that the curriculum for Social Studies needs to be revised to place greater emphasis on critical thinking. Currently, the focus on content memorization for exams restricts opportunities for inquiry-based learning. Curriculum reform should prioritize activities that foster critical thinking, such as problem-solving, debates, and group discussions. This shift aligns with global trends in education, where there is increasing recognition of the need to teach 21st-century skills, including critical thinking, problem-solving, and creativity (World Economic Forum, 2016).

- **Teacher Training and Development:**

The findings highlight the importance of professional development for teachers, particularly in public schools. To effectively teach critical thinking, teachers need to be trained in student-centered methods and inquiry-based approaches. Governments and educational institutions should invest in regular workshops and training programs to build teachers' capacity in these areas. This recommendation is supported by (Guskey's 2002) model of teacher professional development, which emphasizes ongoing, context-specific training as a key factor in improving teaching practices.

- **Investment in Educational Resources:**

For public schools to catch up with private schools in terms of promoting critical thinking, there is a need for greater investment in educational resources. This includes providing adequate textbooks, teaching aids, and classroom materials that support inquiry-based learning. The study suggests that without these resources, it will be difficult to implement the types of interactive teaching methods that are most effective in developing critical thinking.

- **Adopting Interactive Teaching Methods:**

One of the key implications of the study is the need for teachers to adopt more interactive, inquiry-based teaching methods that engage students in critical thinking. This requires a shift from traditional lecture-based teaching to methods that encourage student participation, such as group discussions, debates, and problem-solving activities. Teachers need to be trained in these methods to effectively implement them in the classroom.

- **Addressing Resource Gaps in Public Schools:**

The study underscores the urgent need for policymakers to address resource gaps in public schools. Investment in textbooks, teaching aids, and classroom materials is necessary to create an environment where critical thinking can flourish. Additionally, reducing class sizes in public

schools would allow teachers to implement more interactive teaching strategies and give students the individual attention they need to develop critical thinking skills.

- Curriculum Reform:

The current Social Studies curriculum in Nigeria, which is heavily focused on content memorization for standardized exams, needs to be reformed to allow for more critical thinking activities. Curriculum developers should include more open-ended questions, case studies, and real-life problem-solving scenarios that encourage students to analyze, evaluate, and synthesize information. This reform would align the curriculum with the demands of 21st-century education, where critical thinking is increasingly recognized as a key skill.

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**SCHOOL VALUES AND ACADEMIC GOALS ATTAINMENT OF SECONDARY SCHOOLS IN UYO LOCAL GOVERNMENT AREA, AKWA IBOM STATE**

**JAMES Idopise Okon Ph.D<sup>1</sup> & NYORERE Ogho Ifeanyi<sup>2</sup>Ph.D**

idopisejames500@gmail.com, ogho.nyorere@uniben.edu

Department of Sociological Foundations of Education<sup>1</sup>,  
University of Uyo.

Department of Educational Foundations<sup>2</sup>,  
University of Benin, Edo State

**Abstract**

*This study determined the relationship between school values and academic goals attainment of secondary schools in Uyo Local Government Area. Based on this, two research questions were raised and two hypotheses formulated and tested at .05 level of significance. A correlational research design was adopted. The population comprised 6,628 senior secondary 2 students in the fifteen public secondary schools in Uyo Local Government Area. A systematic random sampling technique was used to select 7 public secondary schools out of 15. Thereafter, fifty-four (54) students were sampled from each of the sampled schools which gave a total of 378 sampled respondents. The researchers designed instrument titled School Values and Academic Goals Attainment of Students Questionnaire (SVAGASQ) was used for data collection. The method of reliability used was internal consistency reliability technique, with reliability coefficients of .75 for school values and .82 for items measuring academic goals attainment of students respectively. Pearson Product Moment Correlation statistics was used to test hypothesis. The study findings revealed a significant relationship between academic hard-work, obedience to school rules and academic goals attainment of secondary schools. The study concluded that academic hard-work and students' obedience to school rules are crucial for the attainment of academic goals. It was recommended among others that students should consistently behave in accordance with school rules and regulations so that the schools can positively attain the set academic goals.*

**Keywords:** Academic Goals, Goals Attainment of Secondary Schools, School Values

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**Introduction**

School values are the moral principles that guide the conduct, thought and behaviour of students and teachers. These values are intended to support personal, social and academic goals attainment of the school. The central function of schools is to equip students with knowledge and skills for their successes in life. The achievement of this function is determined by the extent to which school values are rightly promoted on the students by the schools. School values are very significant because it can help students to understand the rights and wrongs activities in the school environment and can shape the mindset and behaviour among the students for the future.

According to Drew (2023), stated that school values promotes the attainment of students' wellbeing, sense of belongingness, emotional and cognitive development, opportunity to navigate challenges and build strong interpersonal relationships. Drew (2023) added that school values such as honesty, cooperation, hard work, integrity, passion for academic excellence, personal responsibility, commitment, respect, self-determination, resilience, acceptance among others are very significant factors facilitating positive goals

attainment in academic activities. This is because a student learning is fostered in an environment that promotes success and concerned with the welfare of students. Students tend to develop a positive attitude towards learning as they are encouraged to see themselves as being competent and responsible. It is the students' happiness, development and acceptance of themselves as people of worth, together with the acquisition of understanding and skills that will make them work positively towards academic goals attainment.

School values are the lists of positive characteristics that students are expected to accept as desirable behavioural development academic goals attainment. School values identify something intrinsically valuable or desirable for students and adults which can be reflected in one's behaviour. Such values, as noted by Boerema (2012) clarify educational and behavioural objectives which the students are expected to observe. When students' behaviour exemplifies the defined values, the students can be recognized and will inspire them towards positive goals attainment.

Goals are anything a student aspires to achieve. Student goals attainments are identified students' needs and reflect acceptable growth during the course or school year for all students. Academic goals for secondary school students may include punctuality to classes, persistent reading of lesson materials, class concentration, and prompt submission of assignments among others. As noted by Reece, Jenna and Natalie (2015), academic attainment goals of students are classified into two major goals, which are mastery and performance goals. Mastery goals focus on mastering new skills, trying to gain increased knowledge and understanding and as well as improving competent in academic work. Students who are mastery-oriented focus on effort, use appropriate learning strategies, make choices that are challenging and develop positive attitude towards learning. On the other hand, performance-oriented are interested in demonstrating their competence by doing better than other in examination. In order for students to successfully attain their academic goals, Allen *et al.* (2017) noted that the observance of school values by students play vital role in their academic success. The authors added that school values like academic hard-work, honesty, responsibility, obedience to school rules among others can enhance students' attainment of academic goals.

Academic hard-work as an aspect of school values that may influence students' academic goals attainment. According to Catayoc (2021), hard-work is a process of engaging a lot of effort and zeal to perform a particular task. In the learning process, students work hard in school so that they learn requisite knowledge, skills and develop right attitude towards learning for positive goals attainment. As stated by Maxwell and Evelyn (2015), hard-work builds confidence and self-esteem in learners. A hard-working student is determined to persevere, give his best and take advantage of assignment that will make the realizable of achievement goals possible. By embracing such disciplined behavior and high standard, students are likely to achieve mastery in learning and better performance.

Success in any field of human endeavour is determined by members cultivating the spirit of hard-work. To be hardworking demands that an individual need to put extra effort in the performance of a particular task, so as to gain positive achievement. In the school setting, Greene and Saxe (2012) maintained that students should be able to study harder together with self-determination in order to succeed academically. This required the effort of teachers in encouraging students to take their academic task seriously. Teachers could instill the spirit of hard-work in learners by acting as role model to the children. Teachers could also achieve this through teaching students' values, monitoring and assisting students on learning activities that are coordinated with the students' class-work and personal study and reading of learning materials (Guido, 2022).

Sulaiman *et al.* (2024) conducted research on the role of hard-work on academic success among university students in Malaysia. One of the findings revealed that academic hard-work is a strong predictor of students' academic success. Muhammed *et al.* (2021) also researched on the impact of academic goal

setting on students' hard work and motivation for learning in University of Ilorin. One of the findings revealed that students academic hard-work significantly enhances their achievement of academic goals. Obedience to school rules is one of the school values which may likely serve as a predictor of students' academic goals attainment. Students are expected to respect school rules and regulations by obeying the orders of the school administrator as well as the teachers. Obedience to rules or instructions issued by the school principal as well as teachers is very vital in students' attainment of academic goals (Fekado, 2019). According to Firman et al. (2025), school rules and regulations are among the strategies designed to instill good conduct of students with their classmates, teachers as well as learning activities. The author added that students who disobey the instruction and guidance of the teacher as well as the established rules by school administrators are most likely to be disengaged from school activities, hence, making the attainment of pre-determined goals impossible.

Ango and Kyari (2018) conducted a study on the relationship between obedience and attitude of undergraduate students towards entrepreneurship education in Kaduna State University. The result showed a significant influence of obedience to school rules on attainment of educational goals in entrepreneurship. Al-Alwan (2014), conducted a study on modeling the relations among involvement, school engagement and academic goals attainment of high school students in Kano State, Nigeria. One of the study findings revealed that students' obedience to teachers' instructions is significantly correlated with their attainment of academic goals.

## **Theoretical Review**

### **Goal Content Theory by Kasser and Ryan (1996)**

This study is anchored on the goal content theory that was developed by Kasser and Ryan in 1996. Goal content theory (GCT) theory integrates self-determination and relationship motivation theory with values research to suggest that basic psychological needs also drive or underlies value systems in specific ways. That is intrinsic values/aspirations emerge from the basic psychological needs of autonomy, competence, and relatedness and, in turn, the pursuit and attainment of intrinsic values works to satisfy these needs. Intrinsic aspirations include close relationships, personal growth, and community contributions. In contrast, extrinsic aspirations are geared toward obtaining external validation and proof of self-worth for effective realization of academic goals.

According to Kasser and Ryan (1996), the basic psychological need for relatedness dives the initial desire to seek out and maintain close and meaningful relationships. Ultimately, optimal close relationships between the students and the teachers are ones in which each party supports the autonomy, competence, and relatedness needs of the other. This is because all human beings possess the fundamental need to feel cared for; people aim to cultivate relationships with those who value them and who are sensitive to their needs and wants. People also want to feel authentic in relationships and to know that their relationship partner understands and values their core self.

The relevant of this theory is that it clearly explained the importance of obedience to rules and instruction of the teachers on their academic goals attainment. It is observed from this theory that the more students cooperate and relate well with their instructors; the more they will work towards the realization of academic goals. This is because when students experience greater cooperate with their teachers during the instructional process, they stand a better chance of experiencing positive self-identity and intrinsic motivation, feel interested and engaged in learning activities to facilitate the realization of academic goals.

### **Statement of the Problem**

School values are the principles that guide students' thinking behaviour or actions. School values are principles that help students understand right actions from wrong actions which can also help to shape the mindsets and behaviour of students. Students are expected to abide by school values exposed to them by teachers and the school administrators so that they can successfully achieve better in mastery and performance goals. However, in Uyo Local Government Area, the opposite seems to be the case, as some school adolescents usually engage in social vices such as cultism, indecent, dressing, rape, drug abuse, and examination malpractice, truancy among others, instead of engaging in academic activities that promotes the attainment of academic goals. In the course of gathering materials for this article, it was realized that no research has been conducted on school values in connection with academic goals attainment. Also, no research known to the researcher has been conducted on this topic in the present study area. Therefore, it was based on these observable gaps that the researcher sought to investigate the relationship between school values and academic goals attainment of secondary school students in Uyo Local Government Area of Akwa Ibom State.

### **Purpose of the Study**

The main purpose of the study is to investigate the relationship between school values and academic goals attainment of secondary schools in Uyo Local Government Area of Akwa Ibom State. Specifically, this study sought to determine the:

- i. relationship between hard-work and academic goals attainment of secondary schools in Uyo Local Government Area.
- ii. relationship between obedience to school rules and academic goals attainment of secondary schools in Uyo Local Government Area

### **Research Questions**

The following research questions were raised to guide the study:

- i. Is there significant relationship between hard-work and academic goals attainment of secondary schools in Uyo Local Government Area.
- ii. Is there significant relationship between obedience to school rules and academic goals attainment of secondary schools in Uyo Local Government Area.

### **Research Hypotheses**

The following research hypotheses were formulated and tested:

**Ho<sup>1</sup>:** There is no significant relationship between hard-work and academic goals attainment of secondary schools in Uyo Local Government Area.

**Ho<sup>2</sup>:** There is no significant relationship between obedience to school rules and academic goals attainment of secondary schools in Uyo Local Government Area.

### **Methodology**

The correlational research design was adopted for the study. This design was used whenever the researcher wanted to find out the magnitude and direction of relationship that exists between the dependent and independent variables (Udoh and Joseph, 2005). Therefore, this design was considered suitable for this study because it enabled the researcher to measure the interrelationship between school values and academic goals attainment of secondary schools in Uyo Local Government Area.

The population of this study consisted of 6,628 senior secondary Two (SS2) students in the fifteen (15) public secondary schools in Uyo Local Government Area, Akwa Ibom State. A sample size of 378 senior secondary two (SS2) students used for this study was determined using Taro Yamane sampling formulae. A systematic random sampling technique was used to select 7 public secondary schools out of 15. A systematic random sampling is a method that requires the selection of items at regular intervals from the array of the populace. On this basis, the 15 public secondary schools were arranged numerically from 1 to 15; thereafter, even-numbered schools were selected for the study. Thereafter, fifty-four students were selected from each of the sampled schools for instrument administration, which gave a total of 378 sampled respondents.

The researcher developed questionnaire titled: School Values and Academic Goals Attainment Questionnaire (SVAGAQ) was used for data collection. The items were framed in line with the research questions and hypotheses. The instrument had two sections, A and B. Section (A) contained 15 items, that is, 5 items each on school values while section (B) contained 8 items measuring academic goals attainment. The SVAGAQ was measured in a four-point rating scale of Strongly Disagree (SD) = 1, Disagree (D) = 2, Agree (A) = 3, and Strongly Agree (SA) = 4. The respondents were requested to give their own opinions or views to the instrument using the symbol (√).

To ensure the face and content validity of the instrument, three copies of the questionnaire instrument were given to lecturers for validation. Two of the lecturers were from the Department of Psychological Foundations of Education (Measurement and Evaluation Unit) while the remaining one was from Sociological Foundations of Education, all in the University of Uyo to assess the suitability of the items in the instrument. The inputs and corrections made by the experts were used to form the final copy for administration.

To establish the reliability of the questionnaire, internal consistency reliability technique was used. Here, the instrument was administered on 40 SS2 students in a different Local Government Area outside Uyo LGA. The data were subjected to Cronbach Alpha statistics. This yielded the overall reliability co-efficient of .75 for school values and .82 for items measuring academic goals attainment respectively. Therefore, the questionnaire was deemed reliable for use in the study.

The questionnaire was administered with the help of two research assistance. Data obtained were tested using Pearson Product Moment Correlation (PPMC) statistics, at .05 level of significance.

## Results

### Testing of Hypotheses

**Hypothesis 1:** There is no significant relationship between hard-work and academic goals attainment of secondary schools in Uyo Local Government Area.

**Table 1: Pearson Product Moment Correlation analysis between hard-work and academic goals attainment of secondary schools**

Variables	N	DF	r-cal.	p-value	Decision
Hard-work	378	376	.731*	0.000	Sig.
Academic Goals Attainment					

Significant:  $P < .05$ ;

Table 1 shows that the calculated p-value of 0.000 is less than 0.05 significant levels at 376 degrees of freedom. Hence, the null hypothesis is therefore rejected, while the alternate hypothesis is retained. This

implies that there is a significant relationship between hard-work and academic goals attainment of secondary school students in Uyo Local Government Area.

**Hypothesis 2:** There is no significant relationship between obedience to school rules and academic goals attainment of secondary schools in Uyo Local Government Area

**Table 2: Pearson Product Moment Correlation analysis between obedience to school rules and academic goals attainment of secondary schools**

Variables	N	DF	r-cal	p-value	Decision
Obedience to School Rules	378	376	.922*	0.000	Sig.
Academic Goals Attainment					

Significant:  $P < .05$ .

Table 2 shows that the calculated p-value of 0.000 is less than 0.05 significant levels at 376 degrees of freedom. Hence, the null hypothesis is therefore rejected, while the alternate hypothesis is retained. This implies that there is a significant relationship between obedience to school rules and academic goals attainment of secondary school students in Uyo Local Government Area.

### **Discussion of Findings**

Results from the first finding revealed a significant relationship between hard-work and academic goals attainment of secondary schools in Uyo Local Government Area. This could be true because hard-work is a crucial foundation for achieving academic goals, as it develops essential skills, fosters discipline, and allows individuals to overcome challenges, leading to better academic performance and overall school success. This finding corroborates Sulaiman et al. (2024) that revealed that academic hard-work is a strong predictor of students' academic success. This finding also agrees with the finding of Muhammed et al. (2021) that students academic hard-work significantly enhances their achievement of academic goals. Thus, it is observed from this finding that students who consistently put in their effort in academic activities are more likely to achieve better grades and academic outcomes.

Results from the second finding revealed a very high positive and significant relationship between obedience to school rules and academic goals attainment of secondary schools in Uyo Local Government Area. This seems to be true because obedience to school rules generally fosters a conducive learning environment, which can positively impact academic goals attainment by promoting discipline, order, and focus, ultimately leading to improved academic performance. This finding is in line with that of Ango and Kyari (2018), which revealed a significant influence of obedience to school rules on attainment of educational goals in entrepreneurship. This finding is also in tandem with that of Al-Alwan (2014), which showed that students' obedience to teachers' instructions is significantly correlated with their attainment of academic goals. Hence, it is observed from this finding that obedience to school rules create a positive learning environment where everyone feel safe and supported which in turn promotes better learning outcomes. Conversely, Hellen (2020) revealed that students' adherence to school rules and regulations depends on the nature of attitude they have towards the rules. The author further revealed that formulation of rules and regulations without seeking students opinion may lead to conflict and violence, which eventually could render such rules ineffective.

## **Conclusion**

Based on the findings of the study, it is therefore, concluded that, academic hard-work and obedience to school rules are fundamental school values relevant for students' academic goals attainment.

## **Recommendations**

The following recommendations were drawn from the findings:

1. Schools should set clear academic goals and encourage students to put in consistent effort and dedication in academic work, as such effort would result in positive academic goals attainment.
2. Students should consistently behave in accordance with school rules and instructions of the teachers in all aspects of learning so that they can positively attain their set academic goals.

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COMBINATORICS HYBRID FORMULATION OF GRADIENT METHOD FOR NONLINEAR OPTIMIZATION PROBLEMS

OMOLEHIN, J. O., OLUWAFEMI, O. J., MOMOH, S.O.,  
 KEHINDE, R., GYEGWE, J. M.

joseph.omolehin@fulokoja.edu.ng, myseyi123@gmail.com,  
 sheidu.momoh@fulokoja.edu.ng, Jessica.gyegwe@fulokoja.edu.ng  
 Department of Mathematics  
 Faculty of Science  
 Federal University Lokoja

**Abstract**

Conjugate gradient method (CGM) is a widely used method for solving nonlinear optimization problems. Various authors have proposed different classical algorithms based on the formulation of the parameter  $\beta$ . Here, we propose a new hybrid conjugate gradient method by incorporating the convex combination of the algorithm due to Bamigbola et al ( $\beta^{BAN}$ ) and FletcherReeves ( $\beta^{FR}$ ). The new method is proven to be descent and Convergent.

**Keywords:** Hybrid, Convergence, CGM

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**Introduction**

Solving large-scale unconstrained optimization problems arises in many fields such as machine learning and engineering design. Nonlinear conjugate gradient (CG) methods are widely used due to their low memory requirements and strong convergence properties.

Given a general unconstrained optimization problem  $\min f(x), x \in R^n$  ..... (1)

There exists many solution techniques in literature for solution of (1). notable among these techniques is the conjugate gradient method (CGM). This is due to low memory requirement and strong local and global convergence properties Fletcher, R. (1970).

Originally designed for solving system of linear equations Hestenes, M.R. &Stiefel, E. (1952), the CGM is an iterative scheme which starts with an initial guess  $x_0 \in R^n$  and generates a sequence of approximate solutions  $\{x_k\} \in R^n$  as follows:

From an initial guess  $x_0$ , using these quence

$$x_{k+1} = x_k + \alpha_k d_k, k = 0, 1, 2, 3, \dots \dots \dots (2)$$

Where  $\alpha_k > 0$  is the step size determined by the line search along the direction  $d_k$  given by  $d_0 = -g_0$

$$d_{k+1} = -g_{k+1} + \beta_k d_k, k = 0, 1, 2, 3, \dots \dots (3)$$

Where  $\beta_k$  is the CG parameter and  $g_k = \nabla f(x)$ . The strong Wolfe condition Wolfe, P. (1969) is the most popular inexact line search criteria used in the conjugate gradient method and is given by

$$f(x + \alpha_k d_k) \leq f(x) + \rho \alpha_k g_k^T d_k \quad (4) \quad |g_{k+1}^T d_k| \leq -\sigma g_k^T d_k \quad (5)$$

With  $d_k$  being the descent direction, i.e.  $g_k^T d_k < 0$  and  $0 < \rho < \sigma < 1$

Various formulation of the parameter  $\beta$  leads to various conjugate gradient methods Andrei, N. (2011).

Some of the well-known formulas in literature are:

$$HS \quad g^T$$

$$\beta_k = \frac{g_k^T y_k}{\|g_k\|^2}, \beta_k^{FR} = \frac{g_k^T y_k}{\|g_k\|^2}, \beta_k^{BAN} = \frac{g_k^T y_k}{\|g_k\|^2} \quad (6)$$

$$\beta_k^{FR} = \frac{g_k^T y_k}{\|g_k\|^2}, \beta_k^{DX} = \frac{g_k^T y_k}{\|g_k\|^2}, \beta_k^{DY} = \frac{g_k^T y_k}{\|g_k\|^2} \quad (7)$$

Where  $y_k = g_{k+1} - g_k$ . The CG parameter above can be broadly grouped into two sets based on the term in the numerator viz:

Algorithms with  $g_k^T y_k$  in the numerator and those with  $\|g_{k+1}\|^2$  in their numerator Andrei, N., et al. (2020). It was observed, by numerical experiments, that the once with  $g_k^T y_k$  in their numerator has poor convergence theory but with strong computational capabilities while those with  $\|g_{k+1}\|^2$  in their numerator have strong convergence theory but poor computational capability, Ibrahim, A. H (2022). Our contributions include derivation of the hybrid algorithm, proof of descent property, global convergence analysis, and numerical experiments showing superior performance.

### New Hybrid Conjugate Gradient Algorithm.

This research proposes an algorithm that generates iterates

$$x_{k+1} = x_k + \alpha_k d_k, k = 0, 1, 2, 3, \dots \dots \dots \text{ Along the direction } d_k \text{ given by}$$

$$d_0 = -g_0$$

$$d_{k+1} = -g_{k+1} + \beta_k d_k, k = 0, 1, 2, 3, \dots \dots$$

Where  $\beta_k$  is the convex combination of Fletcher Reeves and Bamigbola et al methods. Research has equally shown that CGM algorithms with  $\|g_{k+1}\|^2$  in the numerator have strong convergence while those with  $g_k^T y_k$  in their numerator has good computational capabilities with poor convergence. Classical CGM are often faced with challenges related to convergence speed and getting trapped in local minima Andrei, N., et al. (2020), To address these challenges, hybrid approaches integrating multiple optimization techniques have gained prominence. Among these, the Nonlinear Conjugate Gradient (NCG) method has shown promise due to its ability to navigate complex optimization landscapes efficiently Abdelhamid, M., Bechouat, T., & Chaib, Y. (2025). By combining the strengths of different classical algorithms, hybrid NCG methods offer enhanced convergence properties and improved robustness.

Here we propose a new hybrid  $\beta_k^{NEW}$  Which is a convex combination of the method due to Fletcher Reeves  $\beta_k^{FR}$  Fletcher, R. 1970 and the method due to Bamigbola et al  $\beta_k^{BAN}$ . As follows let  $\beta_k^{NEW} = \theta \beta_k^{FR} + (1 - \theta) \beta_k^{BAN}$  (8) Where  $\theta \in \mathbb{R}$  is a scalar to be determined.

$$\text{From } d_{k+1} = -g_{k+1} + \beta_k^{NEW} d_k(s_k) \quad (9)$$

$$\text{Using the pure conjugacy condition, i.e. } y_k^T d_{k+1} = 0 \quad (10)$$

By pre-multiplying (9) by  $y_k$  from the right we have

$$y_k^T d_{k+1} = -y_k^T g_{k+1} + y_k^T \beta_k^{NEW} d_k(s_k) = 0$$

Using (8) and (9), the above equation becomes

$$y_k^T d_{k+1} = -y_k^T g_{k+1} + [\theta \frac{g_k^T y_k}{\|g_k\|^2} + (1 - \theta) \frac{g_k^T y_k}{\|g_{k+1}\|^2}] y_k^T d_k(s_k) \quad (11)$$

By expansion and simplification (11) can be expressed as

$$\theta \left( \frac{g_k^T y_k}{\|g_k\|^2} \frac{g_k^T y_k}{\|g_k\|^2} - \frac{\|g_k\|^2}{\|g_{k+1}\|^2} \right) y_k^T d_k(s_k) = \frac{g_k^T y_k}{\|g_k\|^2} \frac{g_k^T y_k}{\|g_k\|^2} y_k^T d_k(s_k) - \frac{\|g_k\|^2}{\|g_{k+1}\|^2} y_k^T d_k(s_k)$$

By taking L.C.M

$$\theta \left( \frac{g_k^T y_k}{\|g_k\|^2} \frac{g_k^T y_k}{\|g_k\|^2} - \frac{\|g_k\|^2}{\|g_{k+1}\|^2} \right) y_k^T d_k(s_k) = \frac{g_k^T y_k}{\|g_k\|^2} \frac{g_k^T y_k}{\|g_k\|^2} y_k^T d_k(s_k) - \frac{\|g_k\|^2}{\|g_{k+1}\|^2} y_k^T d_k(s_k)$$

making  $\theta$  the subject of the equation gives

$$(g_k^T + 1)y_k) (\|g_k\|^2) - (\|g_{k+1}\|^2)(y_k^T s_k)$$

$$\theta = \frac{(\|g_k\|^2)(g_k^T + 1)y_k - (g_k^T y_k)(\|g_{k+1}\|^2)}{(\|g_k\|^2)(g_k^T + 1)y_k - (g_k^T y_k)(\|g_{k+1}\|^2)} \quad (12) \text{ where } \theta \text{ is restricted by } 0 \leq \theta \leq 1, \text{ for } 0 < \theta < 1 \text{ or } \theta > 1 \text{ we set } \theta = 1$$

Next we consider the algorithm that is associated with our proposed method.

Step 1.

Initialization: set  $x_n \in R^n$  and compute  $f(x_0) = g_0$ , Also we set  $d_0 = -g_0$  and  $\alpha_0 = 1$

\_\_\_\_\_ and  $k = 1$

$\|g_0\|$

Step 2:

Test for continuity of the algorithm: if  $\|g_k\| \leq 10^{-6}$ , then stop

Step 3

Line search: Compute

$\alpha_k$  satisfying the line search criterion (6) and (7) and update the variables

$$x_{k+1} = x_k + \alpha_k d_k \text{ and compute } f(x_{k+1}), g(x_{k+1}) = g_{k+1}, s_k = x_{k+1} - x_k \text{ and } y_k = g_{k+1} - g_k$$

Parameter Computation if the denominator of (12) is zero then set  $\theta = 0$  otherwise compute  $\theta$  as given in (12) Step 5

Conjugate gradient parameter computation,  $\beta_k^{NEW}$  compute  $\beta_k^{NEW}$  as given in (8) Step 6

Computation of direction compute  $d_{k+1} = -g_{k+1} + \beta_k^{NEW}(s_k)$

Step 7

Set  $k = k+1$  and go to step 2

### 3.0 The sufficient Descent Property

The sufficient descent property is an important property for any iterative scheme to be globally convergent. Hence we need to prove that the search direction satisfies the sufficient descent condition. Theorem 1

If  $0 < \theta < 1$ , then the direction  $d_{k+1}$  given by (9) satisfies the sufficient descent condition i.e.  $d_{k+1}^T g_{k+1} \leq -c \|g_{k+1}\|^2, c > 0$

Proof

By induction:

If  $k=1$ , then

$$d_1^T g_1 \leq -c \|g_1\|^2, c > 0 \quad (13) \text{ Assume it is true for } k$$

i.e let  $g_k^T d_k \leq -c \|g_{k+1}\|^2$

To prove for  $k+1$ , we have

$$d_{k+1}^T g_{k+1} = -\|g_{k+1}\|^2 + [\theta \beta_k^{NEW} + (1 - \theta) \beta_k^{NEW}] (s_k^T g_{k+1}) \quad (14)$$

$$g_{k+1}^T y_{k+1} + (1 - \theta) \|g_{k+1}\|^2 (s_k^T g_{k+1}) \quad (15)$$

$$d_{k+1}^T g_{k+1} = -\|g_{k+1}\|^2 [-\theta g_k^T y_k + \theta \|g_k\|^2]$$

After expansion and simplification the above equation becomes

$$d_{k+1}^T g_{k+1} = -\left[ -1 - \theta \frac{\|y_k\| \|s_k\|}{\|y_k\| \|s_k\|} - s_k^T g_k \right] \|g_{k+1}\|^2 + \theta \|g_k\|^2 \|g_{k+1}\|^2$$

According to Wolfe's condition (1.4) and (1.5) we have

$$d_{k+1}^T g_{k+1} \leq \frac{\theta \|y_k\| \|s_k\|}{\|y_k\| \|s_k\|} \alpha_k d_k^T g_k \leq \frac{\theta \|y_k\| \|s_k\|}{\|y_k\| \|s_k\|} \|g_k\| \|g_{k+1}\| \quad (16)$$

$$\frac{\theta \|y_k\| \|s_k\|}{\|y_k\| \|s_k\|} \alpha_k d_k^T g_k \leq \frac{\theta \|y_k\| \|s_k\|}{\|y_k\| \|s_k\|} \|g_k\| \|g_{k+1}\| \quad (17)$$

By descent property, the denominator of the second term is negative hence making the second term positive which makes the quantity in the square bracket positive.

$$i.e. d_{k+1}^T g_{k+1} \leq -c \|g_{k+1}\|^2 \quad (18)$$

which completes the proof.

#### 4.0 Convergence Analysis

In this section we consider the convergence behavior of our proposed method thus

Consider the iterative method defined by (3), (6) and (7) where  $d_k$  satisfying the sufficient descent conditions and  $\alpha_k$  satisfied the Wolfe Condition. We assume the objective function satisfies the following conditions:

Assumption

1.  $f$  is bounded below in  $\mathbb{R}^n$  and is continuously differentiable in a neighborhood  $\mathbb{N}$  of the level set  $\mathcal{L} = \{x \in \mathbb{R}^n : f(x) \leq f(x_1)\}$  (19)
2. the gradient  $\nabla f(x)$  is Lipschitz continuous in  $\mathbb{N}$ , that is there exists a constant  $L > 0$  such that  $\|\nabla f(x) - \nabla f(y)\| \leq L \|x - y\|$ , for any  $x, y \in \mathbb{N}$  (20)

under the above assumptions we give a the state a lemma which was proved by Zoutendijk, G. (1970) and Wolfe, P. (1969)

**Lemma:** Suppose that  $x_1$  is the starting point for which the assumption holds, any method in the form (2) and where  $d_k$  satisfying the sufficient descent conditions and  $\alpha_k$  satisfied the Wolfe Condition. Then we have that

$$\text{Either } \lim_{k \rightarrow \infty} \inf \|g_k\|, \text{ or } \lim_{k \rightarrow \infty} \|d_k\| \geq 1 \quad (21)$$

**Proof:**

Assume on the contrary, that is the method is not convergent i.e there exists a real number  $c > 0$  such that  $\|g_k\| \geq c \forall k$  from (8) we get

$$d_k^{NEW} = -g_{k+1} + \{\theta \beta_k^{BAN} + (1 - \theta) \beta_k^{FR}\} s_k \quad (22)$$

$$= -g_{k+1} + \theta \beta_k^{BAN} s_k + (1 - \theta) \beta_k^{FR} s_k$$

rearranging we have

$$d_k^{NEW} = -\theta g_{k+1} + \theta \beta_k^{BAN} s_k + (1 - \theta) g_{k+1} + (1 - \theta) \beta_k^{FR} s_k \quad (23)$$

$$d_k^{NEW} = \theta \beta_k^{BAN} s_k + (1 - \theta) \beta_k^{FR} s_k$$

$$\therefore \|d_k^{NEW}\| \leq \|\beta_k^{BAN}\| + \|\beta_k^{FR}\| \quad (24)$$

Furthermore,

$$\| \beta^{kBAN} \| = (g_k^T y_k) \leq \|g_k\| \|y_k\| \leq \|Lg_k + s_1\| \|L\| \omega \quad (25) \text{ similarly,}$$

$$\| \beta^{kFR} \| = \|g_k\| \|y_k\| \leq \|g_k\| \|Lg_k + s_1\| \|L\| \omega \quad (26)$$

From (24), (25) and (26) we have that

$$\|dk_{NEW+1}\| \leq LD\bar{\omega} + \omega\varphi \quad (27)$$

$$\|dk_k\| \leq \omega\varphi \quad (28)$$

$$\Rightarrow \frac{\|g_{k+1}\|^4}{\omega\varphi} \leq \omega^4 \|d_k\|^2 \geq (LD - \omega)^2 \quad (29)$$

$$\sum_{k=0}^{\infty} \|g_{k+1}\|^4 = \infty \quad (30)$$

Which gives a contradiction to the assumption. Hence the proof.

#### 4.0 Numerical Results

This section focuses on the numerical implementation of our proposed methods  $\beta^{OJO}$  as compared numerically with its classical method  $\beta^{FR}$  [9] and  $\beta^{BAN}$  [10] based on some

indicators. Numerical tests were coded with a Dell intel® core(TM)-i53340M CPU @ 2.70 GHz with 8GB of RAM. The efficiency of an algorithm is studied using standard functions with standard starting points  $x_0$ . The total number of functions evaluations required to find the minimum  $x^*$  is usually taken as a measure of the efficiency of the algorithm. Some classical test functions [10] are listed below.

##### 4.1 Extended Rosenbrock Function

Table 1 shows computational results of the extended Rosenbrock function, a widely used nonconvex test problem. All three methods successfully minimized the objective function, with substantial differences in efficiency.

OJO consistently achieved the best performance in terms of iteration count, CPU time, and final accuracy. Notably, the OJO algorithm required less than half the number of iterations needed by FR and BAN across all tested dimensions. Final function values achieved by all methods were close to machine precision, indicating successful convergence. However, the gradient norm attained by OJO was uniformly lower, highlighting superior solution accuracy.

Problem 1: Extended Rosenbrock Function

Table 1

N	CIP		CUP Time	F(x)	Norm
100	BAN	70	0.170	9.385220 E-14	6.29e-07
	FR	100	0.235	4.411197e-13	9.42e-07
	OJO	33	0.091	1.181410 E-15	4.94 E-07
1000	BAN	74	0.193	1.365530e-13	7.58e-07
	FR	74	0.339	2.601159e-13	9.68e-07
	OJO	34	0.092	8.489418e-15	1.52e-07
5000	BAN	78	0.414	9.934236e-14	6.47e-07
	FR	72	0.299	7.923557e-14	8.26e-07
	OJO	34	0.167	4.328567e-14	3.43e-07
10000	BAN	78	0.446	1.986806e-13	9.15e-07
	FR	103	0.742	5.503745e-14	3.84e-07
	OJO	34	0.364	8.648529e-14	4.85e-07

**4.2 TRIDIA Function**

Results in table 2 equally shows the computational capability of the hybrid algorithm (OJO) when tested on the TRIDIA function; which is diagonally dominant and convex but numerically challenging due to its structure. The result shows that both FR and BAN methods failed to produce feasible results, with outputs denoted as 'NAN' (Not a Number), indicating divergence or instability. In stark contrast, the OJO method exhibited strong robustness, converging successfully in all dimensions. The function values attained matched theoretical expectations, and the method maintained computational efficiency.

Problem 2: TRIDIA Function

N	CIP		CUP Time	F(x)	Norm
100	BAN	12	0.034	NAN	NAN
	FR	-	-	-	-
	OJO	515	1.456	6.663075e-01	9.68e-07
1000	BAN	348	1.372	NAN	NAN
	FR	-	-	-	-
	OJO	23	0.123	NAN	NAN
5000	BAN	11978	120.104	NAN	NAN
	FR	- 9	-	-	-
	OJO		0.137	NAN	NAN
10000	BAN	11134	241.805	NAN	NAN
	FR	-	-	-	-
	OJO	19	0.669	NAN	NAN

**4.3 Extended McCormick Function**

It could also be seen from table 3 that the BAN method consistently failed across all dimensions, and the FR method did not return valid results. Conversely, the OJO algorithm consistently reached acceptable local minima, evidenced by function values with large negative magnitudes and gradient norms below standard convergence tolerances. Importantly, the iteration count and CPU time remained within practical limits even at the largest problem scale.

N	CIP		CUP Time	F(x)	Norm
100	BAN	29760	75.974	NAN	NAN
	FR	-	-	-	-
	OJO	33	0.016	-7.239797e+02	7.84e-07
1000	BAN	29850	119.116	NAN	NAN
	FR	-	-	-	-
	OJO	69	0.230	-7.239797e+03	2.84e-07
5000	BAN	29740	420.548	NAN	NAN
	FR	-	-	-	-
	OJO	198	0.919	-3.619898e+04	6.79e-07
10000	BAN	29840	729.091	NAN	NAN
	FR	-	-	-	-
	OJO	69	0.166	-7.239797e+03	2.84e-07

Problem 3: Extended MCCORMCK Function

#### 4.4 Extended Cliff Function

The research equally saw all three methods converged on the Extended Cliff function, which features abrupt gradients and non-smooth behavior near the minimizer. The final function values were identical across methods, reflecting convergence to the same critical point. Nevertheless, OJO significantly outperformed both BAN and FR in computational cost and accuracy. Across all dimensions, OJO required fewer iterations and less CPU time, and attained smaller final gradient norms.

Problem 4: Extended Cliff Function

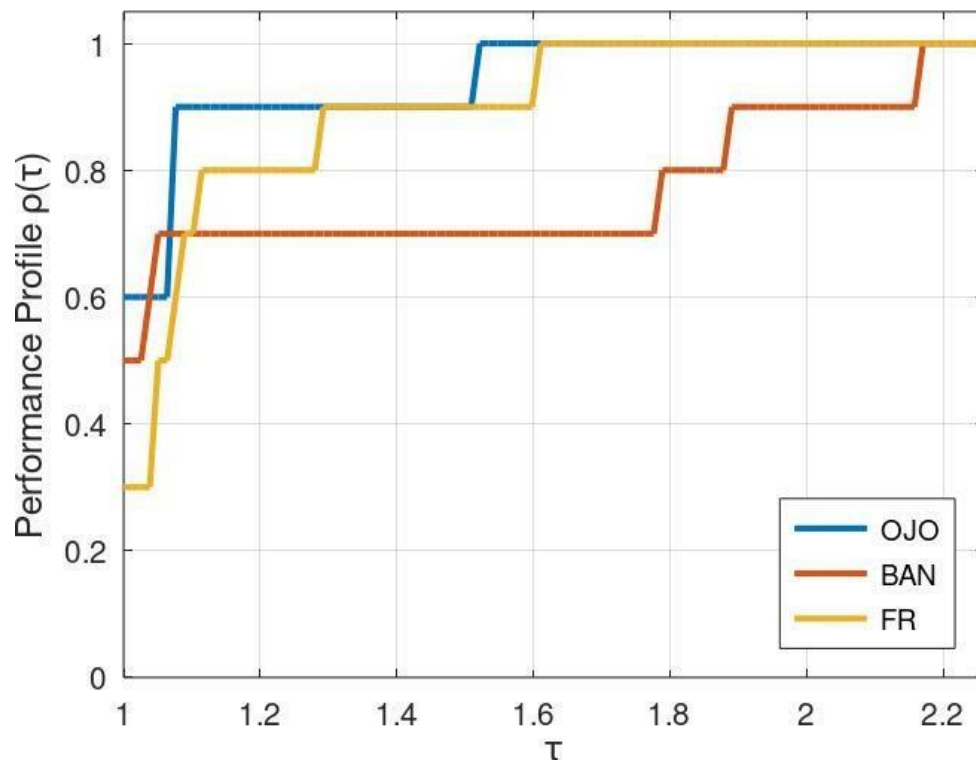
N	CIP		CUP Time	F(x)	Norm
100	BAN	1090	2.526	NAN	NAN
	FR	518	1.221	9.989331e+00	7.79e-07
	OJO	208	0.458	9.989331e+00	4.13e-07
1000	BAN	1351	3.675	9.989331e+01	5.41e-07 9.43e-07
	FR	488	1.339	9.989331e+01	4.81e-07
	OJO	216	0.577	9.989331e+01	
5000	BAN	1391	8.873	4.994665e+02	5.18e-07 7.54e-07
	FR	613	3.650	4.994665e+02	6.66e-07
	OJO	297	1.540	4.994665e+02	
10000	BAN	1410	14.918	9.989331e+02	8.19e-07 1.98e-07
	FR	316	2.864	9.989331e+02	3.74e-07
	OJO	571	4.215	9.989331e+02	

#### 4.5 Summary of Numerical Observations

The numerical evidence demonstrates the clear superiority of the proposed OJO hybrid method across all considered test problems. In problems where FR and BAN failed to converge or produced unstable results, OJO maintained consistent robustness. Even in cases where all methods succeeded, OJO required markedly fewer iterations and lower computational time. The final gradient norms and objective values confirmed the effectiveness of the method in obtaining accurate solutions.

The figure below summarizes the comparative performance profile for each method:

#### Performance Profiles for Optimization Methods



#### 5.0 Conclusion

This research confirms the advantages of hybrid CG methods. Here we combined Fletcher Reeves (1970) and Bamigbola et al. (2010) updates, the proposed the proposed OJO algorithm leverages theoretical guarantees of FR while achieving the efficiency of practical schemes. This aligns with recent studies emphasizing the value of hybrid CG methods. The strengths of OJO are its robustness, efficiency, and low overhead. Limitations include reliance on line search and restriction to unconstrained smooth problems. Future work includes extensions to constrained problems, adaptive weighting, and applications in large-scale machine learning.

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**PREDICTIVE VALIDITY OF SENIOR SECONDARY SCHOOL STUDENTS' QUALIFYING EXAMINATION SCORES IN ENGLISH LANGUAGE IN KATSINA STATE, NIGERIA**

**OLUTOLA Adekunle Thomas Ph.D.<sup>1</sup>, OSIEBE Hadiza Mamman<sup>2</sup>**  
aolutola@fudutsinma.edu.ng; hadizaosiiebe2015@gmail.com;

**OLATOYE Rafiu Ademola Ph.D.**  
olatoyedemola@yahoo.com

Department of Educational Psychology and Counselling,<sup>1&2</sup>  
Faculty of Education, Federal University Dutsin-Ma, Katsina State, Nigeria.

Department of Educational Foundations, Faculty of Education<sup>3</sup>,  
Federal University Lokoja, Kogi State, Nigeria.

**Abstract**

*The study assessed the predictive validity of predictive validity of senior secondary school students' qualifying examination scores in English Language in Dutsin-Ma Zonal Education Quality Assurance area of Katsina State, Nigeria. Two research questions guided the study, and three hypotheses were formulated and tested at a 0.05 level of significance. The study adopted a correlational research design. The population consisted of 4,796 Senior Secondary School Three (SSS3) students who took the qualifying English Language examinations in 2019 and 2020, as well as the NECO SSC English examinations in 2020 and 2021. A purposive sampling technique was used to select 524 students for the study. Data were collected using proforma. Frequencies and percentages were used to answer the research questions, while Pearson Product-Moment Correlation was used to test Hypothesis 1 and t-tests were employed to test Hypotheses 2 and 3. Findings of the study showed that there was a significant positive relationship between students' performance in the 2019 qualifying examination and the 2020 SSCE English Language examinations. Also, a significant difference was observed between male and female students' performance in the 2020 qualifying examination ( $t = 3.687$ ;  $p < 0.05$ ). The study concluded that qualifying examination scores in English Language can serve as valid predictors of students' performance in the NECO SSC English examination. It was recommended that students should take both the qualifying and SSCE examinations seriously and approach them with equal commitment.*

**Keywords:** SSCE, Performance, Predictive Validity, Qualifying Examination.

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**Introduction**

Assessment is the process of gathering information for the purpose of decision-making. It involves the collection of information about individual's knowledge, skills, attitude, judgment, interpretation and using the data for taking relevant decision about the individual, instructional process, curriculum or programme. Assessment plays a crucial role in the school system especially in teaching and learning process. Without assessment teachers cannot discover the areas of strengths and weaknesses of their students and the extent of which teaching objectives have been achieved (Olutola, 2016). It also facilitates the achievement of certain standard. This is one of the reasons why government in all levels nationwide support examinations system to assess the ability of students for the next level of education (Onuka & Junaid, 2010). Assessment in education can be internal where schools conducts examinations as yardstick for assessment and teacher carry out a routine evaluation of school learning to achieve various objectives and students get

the mark and the feedback regarding the assessment (Olutola, 2015). This internal evaluation goes by such names as teacher made test (TMT), continuous assessment (CA), school based-assessment (SBA) and local test (Olutola, 2015). External assessment on the other hand includes Junior School Certificate Examination conducted by the respective state Ministry of Education in case of state schools and National Examinations Council (NECO) in case of Federal Government Unity Junior Secondary School programme and Senior School Certificates Examinations are conducted by West African Examinations Council (WAEC) and National Examinations Council (NECO).

Qualifying examination is an examination that all students basically SSII students in their third term must write before such a student will be allow to sit for any certificate examinations such as SSCE. This examination is known as qualifying examinations and was introduce in 2015 in Katsina State by then the Governor Aminu Bello Masari. The examination (qualifying) was introduced in the state in order to encourage candidate(s) to perform better in SSCE and to keep the tradition of free education in the state. However, this study was designed to examine the relationship between students' performance in qualifying examinations and SSCE in English language in Dutsin-Ma Educational Zonal Area, (Dutsin-Ma & Kurfi Local Government Area) Kastina State, Nigeria.

Examination is a set of questions or exercises testing the knowledge or skills of an individual or group of individuals. Without examination determining student's position based on their level of ability will be difficult. Furthermore, National Examinations Council (NECO) is an examination body in Nigeria that conducts the senior secondary certificate examination and the general certificate in education in June/July and December/January respectively. It was formed in April 1999 by head of state Abdulsammi Abubakar. It was the first federal organization to offer subsidized registration to academic candidates in Nigeria. NECO was mandated to take over the responsibilities of National Board of Examination Measurement (NBEM) (Olutola, 2016). The body, examines students' performance on the school subjects such as English language, Mathematics, Physics, Chemistry, Biology, Economics, Government, Commerce, and lots more.

English language as a core subject cannot be escaped by any Nigeria student throughout the student academic journey irrespective of career the student is pursuing (Victoria & Bashiru, 2019). Therefore, English language is not just a core subject in Nigeria school's curriculum and or a prerequisite for getting admission into any tertiary institution but a vital vehicle for learning all other subjects and an official language employed as inter and intra-national language in Nigeria. (Olutola & Nini, 2020). Therefore, this study aims at determining if students' performance in English language Qualifying examination will serve as a predictor of their performance in SSCE English Language.

Several researchers have carried out studies on predictive validity of students' achievement in internal and external examinations. Awodun, Olasola, and Oyeniyi, (2013) found that the three factors (Mock result, Continuous Assessment and Gender) made significance relative contribution to Physics students' achievement in SSCE. In addition, Adesoji and Kenni, (2013) investigated continuous assessment, mock results and gender as predictors of academic performance of chemistry students in WASSCE and NECO examinations in Ekiti state. The result of their study revealed that the three factors CA scores, mock results and gender made significant relative contribution to Chemistry students' academic performance in WASSCE. None of the researchers investigated predictive validity of students' Qualifying examinations grades in English language and their NECO grades in senior secondary schools in Katsina state. These create a gap which this study tends to fill.

However, from the various factors viewed by different researchers, it is clear to understand that lack of instructional materials, lack of evaluation techniques during teaching and learning of English language, unqualified teachers teaching English language, students' poor study habit to get ready for examinations,

social media addiction by the students and mother tongue interference may also contribute to poor performance in English language.

Many researchers have been searching for lasting solution to the failure of students in English language in both internal and external examinations (Olutola, Olatoye & Owolabi, 2018) but not much of them have made attempt to correlate Qualifying examination grades in English language and NECO grades in English language in Dutsin-Ma zonal educational quality assurance. Therefore, this study was designed to find out whether qualifying examinations grades in English language is a good predictor of students' performance in English language SSCE in Dutsin-Ma zonal education quality assurance of Katsina State, Nigeria.

### **Statement of the Problem**

There is alarming growing concern regarding students' poor performance and proficiency in English language. English language, a core subject essential for further education and societal participation in Nigeria. Multiple studies have attributed poor performance in English Language to a range of systemic and pedagogical issues. These include the ineffective use of evaluation techniques during the teaching-learning process (Ibe & Ekpo, 2013), the prevalence of unqualified teachers handling English Language classes (Ukeje, Akabogu, & Ndu, 2016), and students' poor study habits and lack of preparedness for examinations (Achor, Kurumeh, & Orokpo, 2012). Other contributing factors include addiction to social media, which distracts students from academic work (Okoye & Nwafor, 2020), and mother tongue interference, which hinders the acquisition of correct English syntax and phonology (Adebayo, 2015).

Furthermore, the widespread failure in English Language examinations has sparked intense debate among stakeholders, including educators, parents, policymakers, and examination bodies. The National Examinations Council (NECO, 2011) reported that various stakeholders attribute blame to different causes, including government neglect, parental indifference, teacher inefficiency, student attitudes, and broader societal influences. This is particularly troubling considering that a credit pass in English Language is a compulsory prerequisite for admission into tertiary institutions in Nigeria (JAMB, 2020). Scholars such as Okwu and Orum (2012) have investigated the factors responsible for students' underachievement in English Language, noting that poor foundational skills, ineffective teaching strategies, and lack of motivation significantly affect outcomes. More recently, attention has shifted toward evaluating whether performance in internal qualifying examinations can serve as a predictor of success in standardized assessments such as the NECO SSCE. This approach is grounded in the concept of predictive validity, which assesses the extent to which performance on one measure forecasts performance on another.

In light of these concerns, this study seeks to examine whether students' performance in qualifying examinations can reliably predict their achievement in the NECO Senior School Certificate Examination (SSCE) in English Language.

### **Objectives of the Study**

The main objective of this study was to assess the predictive validity of senior secondary school students qualifying examinations' scores in English Language in Dutsin-Ma Zonal Education Quality Assurance of Katsina State, Nigeria.

Specifically, the study sought to find out the:

- i. nature of 2019 students' qualifying examination grades in English language in Dutsin-Ma Zonal Education Quality Assurance, Katsina state.
- ii. nature of 2020 students' qualifying examination grades in English language in Dutsin-Ma Zonal Education Quality Assurance.

- iii. relationship between students' performance in 2019 qualifying and 2020 SSCE English language examinations in Dutsin-Ma Zonal Education Quality Assurance, Katsina State.
- iv. difference in the male and female students' performance in 2019 qualifying English language examination in Dutsin-Ma Zonal Education Quality Assurance, Katsina State.
- v. difference in the male and female students' performance in 2020 SSCE English language examination in Dutsin-Ma Zonal Education Quality Assurance, Katsina State.

### **Research Questions**

The following questions were asked to guide the study;

- i. What is the nature of 2019 students' qualifying examination grades in English language in Dutsin-Ma Zonal Education Quality Assurance, Katsina state?
- ii. What is the nature of 2020 students' qualifying examination grades in English language in Dutsin-Ma Zonal Education Quality Assurance?

### **Research Hypotheses**

The following hypotheses were formulated and tested at 0.05 level of significance.

**Ho<sup>1</sup>:** There is no significant relationship between students' performance in 2019 qualifying and 2020 SSCE English language examinations in Dutsin-Ma Zonal Education Quality Assurance, Katsina State.

**Ho<sup>2</sup>:** There is no significant difference in the male and female students' performance in 2019 qualifying English language examination in Dutsin-Ma Zonal Education Quality Assurance, Katsina State.

**Ho<sup>3</sup>:** There is no significant difference in the male and female students' performance in 2020 SSCE English Language examination in Dutsin-Ma Zonal Education Quality Assurance, Katsina State.

### **Methodology**

The study employed a correlational research design to examine the relationship between students' performance in English Language qualifying examinations and their performance in the NECO Senior School Certificate Examinations (SSCE) in Dutsin-Ma Zonal Education Quality Assurance, Katsina State. The population comprised 4,796 Senior Secondary School Three (SSS3) students who sat for the English Language qualifying examinations in 2019 and 2020, and the SSCE English Language examinations in 2020 and 2021.

Purposive sampling technique was used to select six secondary schools, four from Dutsin-Ma L.G.A and two from Kurfi LGA. A total of 524 students formed the sample, consisting specifically of students who sat for the 2019 qualifying examination and the 2020 SSCE and students who sat for the 2020 qualifying examination and the 2021 NECO SSCE. No standardized test instrument was developed or adopted for data collection. Instead, the researcher utilized Marks Collection Forms (MCFs), which served as proformas to gather students' results. Two MCFs were used for data collection. MCF 1 was used to collect data of students who sat for the 2019 qualifying exam and 2020 SSCE and MCF 2 was used to collect data of students who sat for the 2020 qualifying exam and 2021 NECO SSCE.

Each form included the following columns: serial number, gender, school form, qualifying examination grade, and SSCE grade. To ensure face and content validity, the data collection forms were reviewed by

Educational Measurement and Evaluation experts. Their input ensured that the MCFs captured data relevant to the study objectives. No formal reliability test was conducted, as the study did not involve the development or adoption of a typical psychometric instrument. However, the data were considered accurate, dependable, and consistent as they were drawn from standardized examination records.

The conversion table used for Students' English language Qualifying Examination Grade is shown below.

**Table 1: Grade Weight of Students English Language Qualifying Examination**

S/N	Grade	Grade Weight
1	A	3
2	C	2
3	D	1
4	F	0

**Table 2: Grade Weight of Students SSCE English language examination**

S/N	Grade	Grade weight
1	A <sub>1</sub>	8
2	B <sub>2</sub>	7
3	B <sub>3</sub>	6
4	C <sub>4</sub>	5
5	C <sub>5</sub>	4
6	C <sub>6</sub>	3
7	D <sub>7</sub>	2
8	E <sub>8</sub>	1
9	F <sub>9</sub>	0

In administering the instruments, the researcher went to each of the selected schools with the introduction letter collected from the Department to seek the permission of the school authorities. Date was fixed for the collection of the data. Researcher personally collected the data from each of the school selected for the study, this gave the researcher opportunity to answer relevant questions that students and school authority asked the researcher.

Frequency and percentage were used to answer the two research questions in the study. Pearson Product Moment Correlation was used to analyze hypotheses one (1) while independent t-test was used to analyze hypotheses two (2) and three (3). The hypotheses were tested at 0.05 level of significance.

## Results

### Answer to Research Questions

**Research Question One:** What is the nature of 2019 students' qualifying examination grades in English language in Dutsin-Ma Zonal Education Quality Assurance, Katsina?

**Table 3: 2019 Students' Qualifying Examination Grades in English Language**

Grade	Frequency	Percentage
A	13	5.1
C	164	64.6
D	77	30.3
F	0	0
<b>Total</b>	<b>254</b>	<b>100</b>

Table 3 shows that in 2019 students' qualifying examination grades in in English language in Dutsin-Ma Zonal Education Quality Assurance, Katsina, 13 (5.1%) students sampled had A, 164 (64.6%) students sampled had C, 77 (30.3%) students sampled had D and 0 (0%) students sampled had F. Thus, majority of the students who sat for 2019 qualifying examination English language passed at grade C, 164 (64.6%).

**Research Question Two:** What is the nature of 2020 students' NECO SSCE grades in English Language in senior secondary schools in Dutsin-Ma Zonal Education Quality Assurance, Katsina State?

**Table 4: 2020 Students' SSCE Grades in English Language**

Grade	Frequency	Percentage
A1	0	0
B2	0	0
B3	0	0
C4	2	0.8
C5	73	28.7
C6	64	25.2
D7	68	26.8
E8	37	14.6
F9	10	3.9
<b>Total</b>	<b>254</b>	<b>100</b>

Table 4 shows that in 2020 students' SSCE grades in English language in Dutsin-Ma Zonal Education Quality Assurance, Katsina, and no students had A1, B2 and B3 from the sampled students. 2 (0.8%) students had C4, 73 (28.7%) students had C5, 64 (25.2%) students had C6, 68 (26.8) students had D7, 37 (14.6%) students had E8 and 10 (3.9%) students had F9; Thus, majority of the students who sat for 2020 NECO English language passed at grade C5,73 (28.7).

### Testing of Hypotheses

In this study, three (3) hypotheses were formulated and tested at 0.05 alpha level of significance. The statistical tools used by the researcher to analyze the three (3) hypotheses were Pearson Product Moment Correlation and t-test.

**Hypothesis One:** There is no significant relationship between students' performance in 2019 qualifying and 2020 NECO SSC English language examinations in Dutsin-Ma Zonal Education Quality Assurance, Katsina State.

**Table 5: Correlation Analysis of Students' Performance in 2019 Qualifying and 2020 NECOSSC English Language Examinations**

Variable	PC, Sig. of R. & N.	2019 Qualifying Examination	2020 NECOSSC Examination
<b>2019 Qualifying Examination</b>	Pearson Correlation	1	.280**
	Sig. (2-tailed)		.000
	N	254	254
<b>2020 NECO SSC Examination</b>	Pearson Correlation	.280**	1
	Sig. (2-tailed)	.000	
	N	254	254

\*\* means correlation is significant at the 0.05 alpha level (2-tailed)

Table 5 reveals r - value of 0.280\*\*, which is significant at 0.05 alpha levels, ( $r = 0.280^{**}$ ;  $P < 0.05$ ). Therefore, the null hypothesis which stated that there is no significant relationship between students' performance in 2019 qualifying and 2020 SSCE English language examinations in Dutsin-Ma Zonal Education Quality Assurance, Katsina State is rejected. This means that there is low significant relationship ( $r = 0.280^{**}$ ) between students' students' performance in 2019 qualifying examination and 2020 NECO SSC English language examination in Dutsin-Ma Zonal Education Quality Assurance, Katsina State. Thus, students' performance in 2019 qualifying English language examination is a good predictor of their performance in 2020 NECO SSC English language examination in Dutsin-Ma Zonal Education Quality Assurance, Katsina State.

**Hypothesis Two:** There is no significant difference in the male and female students' performance in 2019 qualifying English language examinations in Dutsin-Ma Zonal Education Quality Assurance, Katsina State.

**Table 6: t-test Analysis of Male and Female Students' Performance in 2019 Qualifying English Language Examination**

Variable	N	Mean	SD	Df	Cal. t-value	Sig-value	Remark
<b>Male</b>	91	1.8132	.61305	252	1.439	.151	Not Significant
<b>Female</b>	163	1.7117	.49346				

Significant: ( $P > 0.05$ )

Table 6 shows calculated t-value of 1.439 which is not significant at 0.05 alpha level ( $t = 1.439$ ;  $p > 0.05$ ). Therefore, the null hypothesis which stated that there is no significant difference in the male and female students' performance in 2019 qualifying English Language examination in Dutsin-Ma Zonal Education Quality Assurance, Katsina State is accepted.

**Hypothesis Three:** There is no significant difference in the male and female students' performance in 2020 NECO/SSC English Language examination in Dutsin-Ma Zonal Education Quality Assurance, Katsina State.

**Table 7: t-test Summary Table Showing the Difference in the Male and Female Students' Performance in 2020 NECO/SSC English Language examination**

Variable	N	Mean	SD	Df	Cal. t-value	Sig-value	Remark
Male	91	2.6923	.83921	252	.669	.504	Not Significant
Female	163	2.5890	1.33208				

Significant: ( $P > 0.05$ )

Table 7 shows calculated t-value of .669 which is not significant at 0.05 alpha level ( $t = .669$ ;  $p < 0.05$ ). Therefore, the null hypothesis which stated that there is no significant difference in the male and female students' performance in 2020 NECO/SSC English language examination in Dutsin-Ma Zonal Education Quality Assurance, Katsina State is accepted.

### Discussion of Findings

The finding in research question one revealed that majority of the students who sat for 2019 qualifying examination in English language passed at grade C, with frequency of 164 representing (64.6%). This disagree with Sardauna (2020) findings that, in 2014 only 30 per cent of sponsored candidates were able to obtained five and credit and above in WAEC 46 per cent in NECO in 2015.

The finding in research question two showed that majority of the students who sat for 2020 NECO English language passed at grade C5, with frequency of 73 representing (28.7%). Thus, no student had A1, B2 and B3 from the sample students. This implies that 2019 qualifying examination is a good predictor of students' performance in 2020 NECO/SSC English language examination in Dutsin-Ma Zonal Education Quality Assurance. Thus, this finding agreed with Amdioha & Uko (2019) that mock result significantly predicted Agricultural academic performance of candidates in WASSCE in Ekot Ekpene senatorial district of Awka, Anambra State.

The findings in hypothesis one showed that there is significant relationship between students' performance in 2019 qualifying and 2020 SSCE English language examinations in Dutsin-Ma Education Quality Assurance Zone, Katsina State. This implies that, students' performance in 2019 qualifying English language examination is a good predictor of their performance in 2020 SSCE English language examination in Dutsin-Ma Education Quality Assurance Zone, Katsina State. The finding of this study is in conformity with the findings of Madu and Eberé (2016) that the performance of students in mock examinations is an important indicator or factor that relate to the performance of a student in an external senior school certificate examination.

The findings in hypothesis two indicated that there is no significant difference in the male and female students' performance in 2019 qualifying English language examination in Dutsin-Ma Education Quality Assurance Zone, Katsina State. The findings is not in agreement with the finding of Olutola (2016) which indicated that female students performed significantly better than male students in WASSCE multiple choice Biology test. Also, female students had a higher mean (25.24) and a higher standard deviation (15.15) than the mean (19.33) and standard deviation (9.81) for the male students.

The findings in hypothesis three showed that, there is no significant difference in the male and female students' performance in 2020 SSCE English language examination in Dutsin-Ma Education Quality Assurance Zone, Katsina State. Thus, students' academic performance in Dutsin-Ma Education Quality Assurance Zone, Katsina State are not significantly different in 2020 SSCE English language examination based on gender. The findings is supported by the finding of Olutola and Nini (2020) which reported no significant difference between male and female students' academic performance in NECO English Language examinations in Jos-South, Nigeria.

## **Conclusion**

The researcher investigated the assessment of senior secondary school students' performance in qualifying examination and National Examinations Council English language examination in Dutsin-Ma Education Quality Assurance Zone Katsina State, Nigeria. The relevance of this study is to determine if there is correlation between students' performance in qualifying examinations and NECO SSC English language examinations in Dutsin-Ma Education Quality Assurance Zone, Katsina State. Also, to determine if the significant differences exist in the students' performance in qualifying examinations and SSCE English language examinations in Dutsin-Ma Education Quality Assurance Zone based on gender.

This research identifies and establishes the relationships between students' performance in qualifying and SSCE English language examinations in Dutsin-Ma Education Quality Assurance Zone, Katsina State. Besides, the impact of gender on students' performance in qualifying and SSCE English language examinations in Dutsin-Ma Education Quality Assurance Zone, Katsina State was also established. The results of the findings show that there is significant relationship between students' performance in 2019 qualifying and 2020 SSCE English language examinations in Dutsin-Ma Education Quality Assurance Zone, Katsina State and there is significant relationship between students' performance in 2020 qualifying and 2021SSCE English language examinations in Dutsin-Ma Education Quality Assurance Zone, Katsina State. Based on the findings of the study, it was concluded that students' performance in qualifying English language examination is a good predictor of students' performance in SSCE examinations. Also, the findings give a clear indication to motivate both the male and female gender to have more interest in studying English language the more since there is no significant difference in the students' performance in SSCE English language subjects based on gender.

## **Recommendations**

The following recommendations are made:

1. Qualifying examinations should undergo proper standardization processes. This will ensure a better alignment with SSCE standards, thereby improving their predictive capacity and enhancing the credibility of student performance assessments.
2. Students should take both the qualifying and SSCE examinations serious and approach them with equal commitment.
3. Teachers should encourage and support students to prepare adequately for both the qualifying and SSCE examinations.
4. School administrations should coordinate with teachers to complete the curriculum before the qualifying examinations.
5. Educational measurement and evaluation experts in State Ministry of Education should ensure that qualifying examinations are well-designed and aligned with the SSCE curriculum to enhance predictive validity.

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ASSESSMENT OF NELFUND AND SUSTAINABILITY IN A NIGERIAN UNIVERSITY

OLADELE Jumoke I. PhD<sup>1</sup>, ALABI Tosin Michael<sup>1</sup>, ADEGOKE Abass Korede<sup>1</sup>

ADESANYA Emmanuel Olorunleke PhD<sup>2</sup>

[oladele.ji@unilorin.edu.ng](mailto:oladele.ji@unilorin.edu.ng), [atmichael70@gmail.com](mailto:atmichael70@gmail.com),

[adegokeabassakorede@gmail.com](mailto:adegokeabassakorede@gmail.com), [adesanya.eo@unilorin.edu.ng](mailto:adesanya.eo@unilorin.edu.ng)

Department of Social Sciences Education, University of Ilorin<sup>1</sup>

Department of Science Education, University of Ilorin<sup>2</sup>

**Abstract**

*The primary objective of this study is to assess the sustainability of NELFund in a Nigerian university, specifically through a case study of the University of Ilorin. A descriptive survey method was adopted for this study. The population of this study consisted of undergraduates enrolled at the University of Ilorin, Ilorin, Nigeria, during the 2024/2025 academic session. The target population consisted of undergraduate students from the Faculty of Education at the University of Ilorin, Ilorin, Nigeria. A sample of 218 students was selected through simple random sampling. Data were collected using the researcher's designed questionnaire. The collected data were analysed using frequency counts, and the questions were answered using means and standard deviations. The weighted mean of 3.11 corroborates the claim that NELFund substantially mitigates financial stability for undergraduates at the University of Ilorin, the weighted mean of 3.15, substantiates NELFund's contribution to institutional stability and sustainability among undergraduates, and the weighted mean of 3.14 reinforces a favourable viewpoint that NELFund significantly enhances students' ability to remain enrolled and successfully complete their courses. It is, therefore, recommended that students be encouraged to apply for NELFund loans and seek other forms of financial assistance to fund their studies. Additionally, the criteria for NELFund selection should focus on students with a strong academic background, and the University should improve its learning infrastructure, stable academic calendar, and quality education, as students can now afford tuition fees.*

**Keywords:** Financial Stability, Sustainability, Institutional Resilience, Student Retention, Student Enrollment.

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**Introduction**

Higher education plays a pivotal role in national development by equipping students with the knowledge, skills, and competencies

necessary for economic growth and innovation. In Nigeria, universities serve as centres for research, learning, and human capital development. However, the sector faces persistent challenges related to funding, infrastructure, and sustainability. Public universities, in particular, struggle with inadequate funding, resulting in dilapidated infrastructure, low staff remuneration, and frequent industrial actions. To address these issues, various funding initiatives have been introduced, including the Nigerian Education Loan Fund (NELFund), aimed at supporting students and enhancing university sustainability.

NELFund is a government-backed initiative that provides interest-free loans to students in Nigerian universities, particularly those from financially disadvantaged backgrounds (Nigerian Student Loan,

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2025). By offering interest-free loans to qualified students, the Federal Government of Nigeria's Student Loan Initiative aims to transform access to higher education in Nigeria, removing financial obstacles and enabling Nigerians to achieve their academic goals. As such, the fund seeks to alleviate financial burdens on students while promoting accessibility and inclusiveness in higher education. NELFund aims to enhance students' academic experiences, retention rates, and overall educational outcomes by significantly reducing the financial constraints they encounter, which is, of course, a social problem that pervades all tertiary institutions in Nigeria. This is why Obunadike et al. (2024) submit that the initiative was introduced to bridge the financial gap that prevents many students from accessing higher education. This follows the rising cost of tuition, learning materials, and living expenses has placed a significant burden on students and their families, leading to high dropout rates and limited academic opportunities for those from low-income households in Nigerian tertiary institutions. NELFund, according to Salaudeen and Muhammad (2024) has created a more inclusive educational environment where students regardless of their economic background, can complete their studies without undue financial hardship.

Beyond its role in increasing access to education, NELFund also seeks to enhance students' academic experiences, retention rates, and overall educational outcomes (Salaudeen & Muhammad, 2024). Many students in Nigerian universities struggle with financial instability, which often affects their ability to focus on their studies. Some may be forced to take up part-time jobs or rely on inconsistent sources of funding, which negatively impacts their academic performance. NELFund allows beneficiaries to concentrate fully on their education, engage in extracurricular activities, and pursue research opportunities without financial distractions through purposive efforts to easing financial constraints (Akinteye, 2025). Additionally, access to reliable financial support can boost students' motivation and psychological well-being, fostering a more productive academic environment.

The success and long-term viability of NELFund, however, depend on several critical factors, including efficient management, well-structured repayment mechanisms, and sustained government commitment. NELFund has great potential to provide proper access to loans in Nigeria, but this is largely hindered by Nigeria's economic realities. Nigeria's unemployment rate was above 33%, indicating that a significant number of university graduates remain unemployed (National Bureau of Statistics, 2024-Q1). This is based on the complications of repaying student loans for students from low socioeconomic backgrounds, which may prevent them from applying. Without income to combat loan (ICL) repayment options in the UK and Australia, graduates will be trapped in a debt cycle and will be unable to fulfil their repayment obligations due to a lack of stable income. Students' loans may become financially unsustainable without a strong repayment plan, which would restrict their capacity to assist upcoming students (Gurgand et al, 2023; Hansen & Shaw, 2020). Moreover, political and economic instability may compromise the government's ability to sustainably fund the initiative, raising concerns about its long-term viability. Therefore, the effectiveness of NELFund in achieving its objectives will largely be determined by how well these challenges are addressed through strategic policy frameworks, robust administrative processes, and a clear plan for long-term financial sustainability. There has been some back-and-forth regarding this. This implies that the irregularity of payment platform network cum internet services are major contributors to the impediments of NELFund among university undergraduates. Contrarily, a closer look at the UK and US student loan systems reveals the future awaiting Nerfund. In the UK, ICL provided specific relief and helped many graduates overcome long-term debt. However, with over US\$1.8 trillion outstanding loans, the student loan crisis is reflected in the US, raising concerns about NELFund' sustainability, indicating the potential risks of the Nigerian government if not managed carefully. One could suggest that the success and long-term viability of the initiative depend on factors such as efficient management, repayment mechanisms, and government commitment to sustaining the fund over time.

The rapid increase in population in many regions of the world and its attendant pressure on the environment, particularly natural resources, as well as the connections increasingly being made between human actions and existential threats such as climate change, ozone layer depletion, and desert encroachment, led to the coinage of the term "sustainable development" in the second half of the 20th century (Abenuet al., 2024). Sustainability in higher education encompasses financial stability, institutional resilience, and the ability to provide quality education over the long term. For Nigerian universities, achieving sustainability requires diversified funding sources, sound financial policies, and strategic partnerships. The introduction of NELFund presents an opportunity to enhance the financial sustainability of universities by ensuring a steady inflow of tuition fees through student loans (Akinteye, 2025). However, concerns remain about the fund's ability to remain viable amidst economic fluctuations, political changes, and the challenge of loan recovery from beneficiaries. As one of Nigeria's leading universities, it has consistently maintained academic stability, with minimal disruptions from industrial actions. Examining how NELFund impacts students at the University of Ilorin, alongside the institution's financial sustainability, can provide valuable insights into the broader implications for higher education funding in Nigeria.

Notwithstanding its potential advantages, NELFund may have concerns about its long-term sustainability, particularly given the risks of political upheavals, economic volatility, and challenges in debt recovery (Ayoko, 2025; Obunadike et al., 2024). The Nigerian economy is prone to fluctuations, with inflation, unemployment, and government revenue shortfalls often affecting financial policies (Erediauwa & Olawoye, 2024). Without a well-structured and enforceable repayment system, the fund may struggle to replenish itself, limiting its ability to support future generations of students (Chernov, 2024). Therefore, ensuring the sustainability of NELFund requires comprehensive policy frameworks that address economic risks, create enforceable repayment structures, and promote financial responsibility among beneficiaries (Suleiman, n.d.).

NELFund plays a crucial role in shaping the sustainability of Nigerian universities by influencing financial stability, institutional resilience, and student retention (Hassan, 2021). Financial sustainability is a key determinant of a university's ability to function effectively, and NELFund contributes by ensuring consistent tuition payments through student loans. This reduces the financial burden on universities, minimises funding shortfalls, and enhances revenue planning (Amaewhule et al., 2025). However, the long-term viability of NELFund depends on its ability to sustain loan disbursement without placing excessive strain on government finances (Eze, 2023). If properly managed, the fund can reduce universities' dependence on irregular government subventions, thereby strengthening financial sustainability (Akinluyi, 2024).

Beyond financial stability, institutional sustainability is another critical aspect influenced by NELFund (Salaudeen & Muhammad, 2024). Consistent tuition revenue can help universities invest in infrastructure, improve faculty welfare, and enhance research capacity (Olutola et al., 2023). Furthermore, stable funding may contribute to reducing strike actions caused by financial disputes between staff and university management, leading to a more predictable academic calendar (Chukwudi & Idowu, 2021). Student enrollment, retention, and graduation rates are also essential indicators of university sustainability, and NELFUND directly impacts these areas by providing financial support to students who might otherwise drop out due to financial constraints (Amaewhule et al., 2025). Access to loans enables students from disadvantaged backgrounds to complete their education, resulting in improved graduation rates and greater socioeconomic mobility (Mahmoud et al., 2024).

In Nigerian universities, sustainability is often threatened by challenges such as inadequate government funding, high student enrollment without corresponding infrastructural development, and limited external funding opportunities. For Nigerian universities to achieve long-term sustainability, they must adopt

diversified funding strategies that incorporate multiple sources of revenue, including tuition fees, research grants, alumni contributions, and private sector partnerships (Echono, 2024). Financial sustainability requires sound policies that ensure efficient fund utilisation, transparency in expenditure, and proactive planning to mitigate financial crises (Amaewhule et al., 2025). The introduction of the NELFund represents a significant step in addressing the financial barriers that hinder students from paying tuition fees while also providing universities with a more predictable income stream (Eze, 2023). However, this sustainability depends on the proper management of the loan scheme, including prompt disbursement and a reliable mechanism for repayment (Salaudeen & Mohammad, 2024).

The introduction of NELFund aims to address these financial barriers by offering interest-free loans to students, thereby ensuring that they can complete their education without financial disruptions. While this initiative aims to enhance university sustainability by guaranteeing a steady inflow of tuition payments, concerns persist regarding its long-term viability, repayment mechanisms, and overall impact on higher education institutions. The effectiveness of NELFund in promoting university sustainability remains uncertain, particularly in Nigeria where economic fluctuations, policy inconsistencies, and graduate unemployment could affect its implementation. The sustainability of NELFund is directly linked to the ability of beneficiaries to repay their loans after graduation. In an environment where graduate unemployment remains high, loan defaults could pose a significant threat to the continuous funding of the scheme. Given these uncertainties, there is a need for an empirical evaluation of NELFund's impact on university sustainability, focusing on financial stability, institutional resilience, and student retention. This study seeks to fill this gap by providing evidence-based insights into whether NELFund can serve as a sustainable funding model for higher education in Nigeria.

### **Purpose of the Study**

The primary objective of this study is to evaluate NELFund and its sustainability in a Nigerian university, specifically the case of the University of Ilorin. Specifically, the study would evaluate the role of NELFund in influencing:

- i. Financial stability of the University of Ilorin undergraduates.
- ii. Institutional resilience in the University of Ilorin undergraduates.
- iii. Student enrollment in the University of Ilorin undergraduates.
- iv. Student retention in the University of Ilorin undergraduates.
- v. Graduation rates of undergraduates at the University of Ilorin.

### **Research Questions**

The following research questions are raised to guide the conduct of the study:

- i. What is the role of NELFund in influencing the financial stability of the University of Ilorin undergraduates?
- ii. What is the role of NELFund in influencing institutional resilience in the University of Ilorin undergraduates?
- iii. What is the role of NELFund in influencing Student enrollment in the University of Ilorin?
- iv. What is the role of NELFund in influencing student retention in the University of Ilorin undergraduates?
- v. What is the role of NELFund in influencing graduation rates at the University of Ilorin?

### **Methodology**

The Descriptive survey research design was adopted for this study. According to Best and Khan (2009), descriptive survey design is concerned with conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evident, or trends that are developing. The design is considered

appropriate for this study, as the work aims to collect data from a small group within the entire population, with the goal of evaluating NELFund and sustainability in Nigerian universities, specifically through a case study of the University of Ilorin. The population of this study consisted of undergraduates enrolled at the University of Ilorin, Ilorin, Nigeria, during the 2024/2025 academic session. The target population consisted of undergraduate students from the Faculty of Education at the University of Ilorin, Ilorin, Nigeria. A sample of 300 undergraduates was selected through a simple random sampling technique. The instrument used to collect data for this study was a structured questionnaire entitled “Evaluation of NELFund and Sustainability in University Education Questionnaire (ENSUEQ)”. The questionnaire was divided into three sections, A, B, C, D and E. Section A contains personal information of the respondents while Section B - E contain statements that addressed the research questions using four-point Likert scale of Strongly Disagree (SD) = 1, Disagree (D) = 2, Agree (A) = 3 and Strongly Agree (SA) = 4. The validity of the instrument was ascertained by three lecturers in the Department of Social Science Education, Faculty of Education, University of Ilorin. Cronbach's alpha test procedure was used to affirm the reliability, yielding a reliability coefficient of 0.668, which is considered reliable. Data collected in the study were analysed using both descriptive statistics (mean and standard deviation). The demographic data generated from the questionnaire was analysed using frequency and counts. Research questions 1, 2, 3, 4, and 5 would be analysed using descriptive statistics, including mean and standard deviation. The Likert scale employed in this study ranges from 1 to 4, establishing a theoretical midpoint of 2.5, calculated as (1 + 4) divided by 2. This threshold splits the scale into two equal segments, representing disagreement and agreement. Consequently, a mean rating exceeding 2.5 denotes a favourable perception or agreement, while a mean score below 2.5 signifies a negative perception or disagreement.

## Results

**Table 1: Demographic Information of the respondents (n = 218)**

	Category	Frequency	Percent
<b>Gender</b>	Female	127	58.3
	Male	91	41.7
<b>Age Range</b>	16–20 years	39	17.9
	21–25 years	143	65.6
	26–30 years	31	14.2
	Above 30 years	5	2.3
<b>Level of Study</b>	100 Level	50	22.9
	200 Level	50	22.9
	300 Level	87	39.9
	400 Level	31	14.2

Table 1 highlights the demographic distribution of the 218 participants involved in the study. The gender distribution reveals that a higher percentage of respondents were female (n = 127, 58.3%) compared to male participants (n = 91, 41.7%), indicating a female-dominated sample. The age distribution indicates that the majority of respondents (n = 143, 65.6%) were aged 21–25 years, implying that most participants are in early adulthood, a typical demographic for college students. The subsequent group consisted of respondents aged 16–20 years (n = 39, 17.9%) and 26–30 years (n = 31, 14.2%), with minimal representation of individuals above 30 years of age (n = 5, 2.3%). This group indicates a youthful demographic aligned with the university student population.

The majority of responders were in their 400 level (n = 87, 39.9%), signifying a substantial proportion of final-year students. Participants in the 200 and 300 levels were equally represented (n = 50 each, 22.9%), but those in the 500 level comprised the lowest cohort (n = 31, 14.2%). This distribution exhibits a balanced representation across various academic levels, with a minor concentration among senior

undergraduates. The demographic data indicate that the sample exhibits diversity in academic achievement, featuring a significant representation of young individuals and a higher number of female responders.

### Answering Research Questions

**Research Question One:** What is the role of NELFund in influencing financial stability of University of Ilorin Undergraduates?

**Table 2: The role of NELFund in influencing the financial stability of the University of Ilorin undergraduates**

SN	Items	Std. Deviation	Mean	Decision
i.	NELFund provides sufficient financial support to undergraduates, reducing financial hardship.	.6942	3.14	<b>Agreed</b>
ii.	NELFund loans improve students' ability to afford tuition and other academic expenses.	.6169	3.27	<b>Agreed</b>
iii.	The accessibility of NELFund loans reduces students' dependence on part-time jobs.	.8049	2.89	<b>Agreed</b>
iv.	Financial assistance from NELFund contributes to better academic performance among beneficiaries.	.7184	3.15	<b>Agreed</b>
<b>Weighted Average</b>		<b>.7086</b>	<b>3.11</b>	

Table 2 presents the findings of students' responses regarding the extent to which NELFund enhances their financial well-being at the University of Ilorin. All four items exhibit mean scores beyond the 2.5 limit, signifying a positive opinion of NELFund's contribution to improving financial stability among undergraduates. The weighted average of 3.11 substantiates the assertion that NELFund significantly alleviates financial hardship, enhances educational affordability, and improves academic achievement among undergraduates at the University of Ilorin. These results affirm the value of structured loan schemes in promoting student financial well-being and enabling equitable access to education.

**Research Question 2:** What is the role of NELFund in influencing institutional resilience in University of Ilorin Undergraduates?

**Table 3: The role of NELFund in influencing institutional resilience in University of Ilorin Undergraduates**

No	Items	Std. Dev.	Mean	Decision
i.	NELFund enhances the financial sustainability of the university by ensuring student fee payment.	.62	3.26	<b>Agreed</b>
ii.	NELFund contributes to improved university infrastructure and academic resources.	.75	2.99	<b>Agreed</b>
iii.	The availability of NELFund loans reduces dropout rates, strengthening institutional stability.	.67	3.20	<b>Agreed</b>
iv.	NELFund improves the university's ability to support students during economic challenges.	.71	3.15	<b>Agreed</b>
<b>Weighted Average</b>		<b>.69</b>	<b>3.15</b>	

Table 3 showed that all items recorded mean scores above the 2.5 benchmark, suggesting that undergraduates generally agree that NELFund plays a significant role in promoting institutional resilience. While respondents acknowledge the role of NELFund, it appears that they view its direct influence on infrastructure and resource improvement as less significant, possibly because the fund is primarily directed

toward student support rather than capital development. The weighted average across all four items was 3.15, which further confirms an overall favourable perception of NELFund’s role in institutional stability and sustainability.

**Research Question 3:** What is the role of NELFund in influencing Student enrollment in the University of Ilorin?

**Table 5: The role of NELFund in influencing Student enrollment in the University of Ilorin**

No	Items	Std. Dev.	Mean	Decision
i.	NELFund increases access to higher education by providing financial assistance to students.	.64087	3.25	<b>Agreed</b>
ii.	More students enroll in University of Ilorin due to the availability of NELFund loans.	.78258	2.88	<b>Agreed</b>
iii.	NELFund influences the decision of prospective students to apply to University of Ilorin.	.79928	2.96	<b>Agreed</b>
iv.	The presence of NELFund financial support has led to an increase in first-year enrollment rates.	.77587	2.96	<b>Agreed</b>
<b>Weighted Average</b>		<b>0.7497</b>	<b>3.01</b>	

Table 5 presents descriptive statistics on students' perceptions regarding the influence of the Nigerian Education Loan Fund (NELFund) on student enrollment at the University of Ilorin, whereby all the items passed the benchmark of 2.5, which indicates that they are in agreement with all the items, with a few of them in disagreement.

The weighted average mean score of 3.01 indicates that, overall, respondents agree that NELFund makes a positive contribution to student enrollment at the institution. This suggests that the financial support provided by the loan scheme is perceived to play a meaningful role in increasing access to higher education and attracting prospective students to the university.

**Research Question 4:** What is the role of NELFund in influencing student retention in the University of Ilorin undergraduates?

**Table 4: The Role of NELFund in Influencing Student Retention in University of Ilorin**

SN	Items	Std. Deviation	Mean	Decision
i.	NELFund support reduces the likelihood of students withdrawing due to financial reasons.	.6143	3.33	<b>Agreed</b>
ii.	NELFund beneficiaries are more likely to complete their academic programs without interruptions.	.6218	3.19	<b>Agreed</b>
iii.	The financial aid provided by NELFund helps students focus better on their studies.	.7416	3.11	<b>Agreed</b>
iv.	Students with NELFund loans tend to exhibit greater academic commitment and persistence.	.7989	2.92	<b>Agreed</b>
<b>Weighted Average</b>		<b>.6942</b>	<b>3.14</b>	

The findings in Table 4 indicate that undergraduates believe NELFund plays a crucial role in enhancing student retention at the University of Ilorin. With all mean scores above the benchmark value of 2.5 on the 4-point Likert scale, the majority of students believe that financial assistance from the NELFund reduces dropouts and promotes academic continuity. The weighted average of 3.14 supports the positive

perspective, indicating that the fund makes a considerable contribution to students' capacity to stay enrolled and complete their studies. The result emphasises the need for organised financial assistance in maintaining enrollment rates and enhancing university students' academic development.

**Research Question 5:** What is the role of NELFund in influencing graduation rates at the University of Ilorin?

**Table 6: The role of NELFund in influencing Graduation Rates in University of Ilorin**

SN	Items	Std. Deviation	Mean	Decision
i.	NELFund alleviates financial stress, enabling students to complete their degree programs.	.63455	3.17	<b>Agreed</b>
ii.	Students who receive NELFund loans are more likely to graduate on time.	.84983	2.83	<b>Agreed</b>
iii.	The financial stability provided by NELFund improves students' academic performance, leading to graduation.	.80596	2.98	<b>Agreed</b>
iv.	The availability of NELFund loans has positively influenced the overall graduation rate at the University of Ilorin.	.79232	2.94	<b>Agreed</b>
	<b>Weighted Average</b>	<b>.7707</b>	<b>2.98</b>	

As shown in Table 6, all items recorded mean scores above the benchmark of 2.5, indicating general agreement that NELFund contributes positively to improving graduation outcomes at the University of Ilorin. The overall weighted average means of 2.98 confirms that the students believed that NELFund plays a vital role in supporting graduation outcomes at the University of Ilorin. The weighted average standard deviation of 0.77 indicates moderate variability in responses but suggests general consensus.

### Discussion of Findings

The findings of this study revealed that NELFund significantly alleviates financial hardship, enhances educational affordability, and improves academic achievement among undergraduates at the University of Ilorin. This finding aligns with Obunadike et al. (2024), who stated that the initiative was introduced to bridge the financial gap that prevents many students from accessing higher education, following the rise in tuition, learning materials, and living expenses costs. This study has demonstrated the positive impact of NELFund, enhancing the financial well-being of students at the University of Ilorin. This finding also confirmed with the findings of Abass and Isiaka (2024) that NELFund has created a more inclusive educational environment where students, regardless of their economic background, can complete their studies without undue financial hardship. Many students in Nigerian universities struggle with financial instability, which often affects their ability to focus on their studies. Additionally, access to reliable financial support can boost students' motivation and psychological well-being, fostering a more productive academic environment. The result aligns with that of Eze (2023), who notes that the introduction of the Nigerian Education Loan Fund (NELFUND) represents a significant step in addressing the financial barriers that hinder students from paying tuition fees, while also providing universities with a more predictable income stream.

Other findings of this study also showed that NELFund plays a significant role in promoting institutional resilience. The availability of NELFund enables students to meet their financial obligations, thereby ensuring a steady inflow of tuition revenue to the institution. This means that the funding strategies made available to students also generate more revenue for the institution, as almost all students will be able to afford the tuition. The findings from this study align with those of Olutola et al. (2023), who found that

consistent tuition revenue can help Universities invest in infrastructure, improve faculty welfare, and enhance research capacity. Many public universities rely heavily on government subsidies, which are often insufficient to cover operational costs, resulting in infrastructural decay, overburdened lecturers, and a decline in educational quality. As a result, there is an urgent need to explore sustainable financing mechanisms that can ensure the consistent flow of funds while maintaining accessibility and affordability for students.

Furthermore, the findings of study revealed that NELFund reduces dropouts and promotes academic continuity, indicating that the fund makes a considerable contribution to students' capacity to stay enrolled and complete their studies. The result emphasises the need for organized financial help in maintaining enrollment rates and boosting university students' academic development. This funding aligns with Bello and Ibrahim (2023), who argue that NELFund plays a crucial role in shaping the sustainability of Nigerian Universities by influencing financial stability, institutional resilience, and student retention. Similarly, Olutola et al. (2023) found in their study that financial sustainability is a key determinant of the university's ability to function effectively and NELFund contributes by ensuring consistent tuition payments through student loans. The finding also aligns with that of Bello and Ibrahim (2023), who noted that stable funding may contribute to reducing strike actions caused by financial disputes between staff and university management, leading to a more predictable academic calendar.

Additional findings from the study suggest that NELFund enhances students' access to higher education and plays a role in enrollment decisions; other factors, such as course availability, university reputation, and geographic proximity, may also influence students' choices. This implies that the financial support provided by the loan scheme is perceived to play a meaningful role in increasing access to higher education and attracting prospective students to the university. This aligns with the findings of Ayeni & Adedeji (n.d.), who state that NELFund reduces financial barriers, enabling students, particularly those from low-income families, to pursue university education without fear of dropping out due to financial hardship. The increased enrollment of students from a more inclusive and equitable educational system aligns with the principles of sustainable development.

Finally, the study found that NELFund makes a positive contribution to improving graduation outcomes at the University of Ilorin. This implies that addressing financial barriers can increase the likelihood of academic completion. The findings align with those of Wildschut et al. (2020), who suggest that access to loans enables students from disadvantaged backgrounds to complete their education, resulting in improved graduation rates and greater socioeconomic mobility. This indicates that NELFund has a direct impact on students' enrollment, retention, and graduation rates by providing financial support to students who might otherwise drop out due to financial constraints. This corroborates the finding of Mahmoud et. al. (2024) that Ghanaian students' decisions to use student loans positively correlate with their graduation rates, suggesting loans enhance academic persistence.

## **Conclusion**

Based on the findings obtained from this study, the following conclusions are drawn: NELFund contributes positively to improving financial stability, alleviating hardship, enhancing education affordability, and improving academic achievement among undergraduates at the University of Ilorin. Additionally, NELFund makes significant contributions to promoting institutional resilience against challenges such as Inflation, family income disruptions, and reducing the financial stress that often leads students to withdraw from school. Furthermore, the students believe that NELFund has an important role in improving student retention, providing financial assistance, reducing dropouts and promoting academic continuity. Additionally, the financial assistance provided by NELFund enhances students' ability to

access higher education, and the financial stability offered by NELFund helps improve academic performance and supports students' progression towards graduation.

### **Recommendations**

It is, therefore recommended that students be encouraged to apply for NELFund loans and seek other forms of financial assistance to fund their studies. Moreover, the criteria for NELFund selection should focus on students with a potential academic background. It is of great benefit that university management should improve the learning infrastructure, maintain a stable academic calendar, and provide quality education, as students can now afford tuition fees. It is also necessary for the government to create incentives for lecturers to discourage them from seeking greener pastures abroad, instead, to stay in Nigerian universities and improve the quality of education with adequate funds in higher institutions.

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## IMPACT OF SCHOOL-COMMUNITY PARTNERSHIP ON EFFECTIVE SCHOOL MANAGEMENT IN NIGERIA

YUNISA Abdulrahman Ph.D<sup>1</sup>, YUNISA Bintu Ph.D<sup>2</sup>  
abdulyunisa@gmail.com, abdulyunisa1270@ukashere.edu.ng

Federal University of Kashere, Gombe State<sup>1</sup>  
Department of Arts and Social Education  
Department of Science Education<sup>2</sup>  
Federal University, Wukari Taraba State

### Abstract

*This study explores the role of school-community partnership in enhancing the effective management of secondary schools in Nigeria. In response to the growing challenges faced by Nigerian schools such as inadequate resources, poor infrastructure, and high student absenteeism. The study examines how collaboration between schools and local communities can improve administrative processes, student engagement, and overall educational outcomes. A mixed-methods design was employed, with quantitative data collected using a structured questionnaire from 120 teachers, school administrators, and community leaders, and qualitative data gathered through semi-structured interviews. The results revealed a significant positive relationship between school-community engagement and student engagement, indicating that active community involvement leads to improved student outcomes. However, the study found no significant direct link between school-community engagement and school management effectiveness. Barriers to effective collaboration were identified, including communication challenges and resource constraints, though these did not significantly hinder the impact of partnerships on student engagement. The study recommends that policymakers implement structured frameworks for school-community engagement, foster regular communication, and create training programs for teachers and community leaders to maximize the potential of school-community partnerships in Nigerian secondary schools.*

**Keywords:** School-community partnerships; school management; student engagement; educational outcomes; Nigeria.

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### Introduction

The effectiveness of school management in Nigeria faces numerous challenges, including inadequate funding, poor infrastructure, and high rates of student absenteeism and dropout (Owen & Olayemi, 2020; Ekundayo & Ajayi, 2019). These challenges are particularly pronounced in rural and underserved areas where schools often lack the resources to provide quality education. In light of these constraints, there has been growing interest in the potential of school-community partnerships as a means of improving school management and educational outcomes. In many regions of Nigeria, local communities possess valuable resources, including human capital, local knowledge, and financial support, which can significantly contribute to the success of educational institutions (Obi, 2018).

School-community partnerships are based on the premise that collaboration between schools, parents, and the broader community can create a more supportive and resourceful environment for students (Beaulieu & MacDonald, 2017). Such partnerships can include a wide range of activities, from community contributions to school infrastructure, to volunteering efforts, parent-teacher associations, and local

governance involvement in school decision-making (Okoli & Ugwu, 2020). However, despite the potential benefits, many Nigerian schools struggle to establish meaningful and sustainable collaborations with their communities (Mbah & Adegoke, 2021). The reasons for this include lack of trust, poor communication, limited awareness of the benefits of community involvement, and a top-down approach to education management that excludes local stakeholders (Adeniran, 2018).

Existing literature on school-community partnerships in Africa has highlighted the positive impact of these collaborations on various aspects of school management, including improved academic performance, better student attendance, and the enhancement of school facilities (Muller & Schiefelbein, 2017). For instance, studies in countries like Kenya and South Africa have demonstrated that schools with strong community ties tend to experience higher levels of parental involvement, which in turn improves both student outcomes and teacher satisfaction (Agu & Chidozie, 2019). In Nigeria, however, while the importance of school-community engagement is acknowledged, there is a dearth of comprehensive research specifically focused on the mechanisms, challenges, and outcomes of such partnerships in the context of secondary education (Okafor & Madu, 2020).

This study aims to bridge this gap by investigating how school-community partnerships can enhance school management practices in Nigerian secondary schools. Specifically, the research explored how collaboration between schools and local communities can address administrative challenges, improve student outcomes, and create a more conducive learning environment. The study examined the barriers that hinder effective collaboration and propose strategies for fostering more robust and mutually beneficial partnerships.

By focusing on the relationship between schools and communities, this research contributes to the growing body of knowledge on community involvement in education and highlights the need for policy reforms that empower local stakeholders to play an active role in school management. In a country as diverse and complex as Nigeria, the role of the community in supporting school management cannot be overstated, as local insights and resources are critical to the success of educational systems in areas where government support is often limited (Udo, 2019).

### **Statement of the Problem**

In Nigeria, school management faces numerous challenges, including inadequate resources, poor infrastructure, high rates of student absenteeism, and low academic performance, particularly in rural and underserved areas. These challenges are compounded by a lack of collaboration between schools and their local communities, which are often excluded from the decision-making processes and responsibilities related to school governance and resource allocation. While the importance of school-community partnerships is recognized, their integration into the management of secondary schools in Nigeria has been limited, and the potential benefits of such collaborations remain underexplored.

The absence of meaningful engagement between schools and communities has led to inefficiencies in school management, such as the underutilization of local resources and a disconnect between educational practices and the cultural and socio-economic context of the communities. In many cases, schools in Nigeria face a lack of necessary resources such as classrooms, textbooks, and teaching materials which could be alleviated through active community involvement. However, the existing literature suggests that school-community collaboration in Nigeria is hindered by challenges such as mistrust, ineffective communication, and the absence of structured frameworks for involvement. Despite policy recommendations that advocate for school-community partnerships to enhance educational outcomes, there is insufficient research on how these partnerships affect school management, particularly in the context of Nigerian secondary schools. The lack of empirical data on the role of community involvement in school governance, resource mobilization, and addressing student-related challenges like absenteeism

and dropout further exacerbates the problem. Therefore, understanding how school-community partnerships can be strengthened to improve school management is crucial for enhancing the quality of education in Nigeria.

This study seeks to fill this gap by exploring the impact of school-community partnerships on effective school management in Nigerian secondary schools. It examined the nature and scope of these partnerships, the challenges schools face in establishing effective collaborations, and the potential strategies that can improve the relationship between schools and local communities. The findings will inform policy recommendations and provide actionable insights into how school-community partnerships can be a tool for improving the management and performance of schools in Nigeria.

### **Purpose of the Study**

The purpose of this study is to examine the relationship between school-community partnerships and the effectiveness of school management in Nigerian secondary schools. Specifically, the study seeks to:

- i. to determine the extent of school-community partnerships on the effectiveness of school management in Nigerian secondary schools.
- ii. to assess influence of school community engagement on school management effectiveness in Nigerian secondary schools.
- iii. to determine influence of school community partnership on student' engagement in Nigerian secondary schools.
- iv. to determine influence of barriers faced by school on effectiveness of school management in Nigerian secondary schools.
- v. to examine influence of each of the three challenges strategies (Engagement, impact, challenges) on effectiveness of school management in Nigerian secondary schools.

### **Research Hypotheses**

**Ho<sup>1</sup>:** There is no significant influence of school community engagement on school management effectiveness in Nigerian secondary schools.

**Ho<sup>2</sup>:** There is no significant influence of school community partnership on student' engagement in Nigerian secondary schools.

**Ho<sup>3</sup>:** There is no significant influence of barriers faced by school on effectiveness of school management in Nigerian secondary schools.

**Ho<sup>4</sup>:** There is no significant influence of each of the three challenges strategies (Engagement, impact, challenges) on effectiveness of school management in Nigerian secondary schools.

### **Literature Review**

The importance of school-community partnerships in enhancing school management has become increasingly evident globally, particularly in resource-constrained contexts such as Nigeria. Effective school management encompasses various elements, including efficient administration, resource mobilization, student engagement, and academic performance (Okafor & Madu, 2020). School-community partnerships, which involve collaborative efforts between schools, parents, and local communities, offer a promising strategy for addressing the challenges that schools face in these areas. This literature review explores existing studies on school-community partnerships and their impact on school management in Nigeria and other African countries, highlighting both successes and challenges.

### **The Concept of School-Community Partnerships**

School-community partnerships are built on the premise that education is a shared responsibility between schools, families, and the broader community. These partnerships often include parental involvement in school activities, community contributions to school governance, and collaborative efforts to improve student learning outcomes (Beaulieu & MacDonald, 2017). In the Nigerian context, school-community partnerships can also include the provision of resources such as funding for infrastructure development, textbooks, and technology, as well as volunteer support for extracurricular activities (Mbah & Adegoke, 2021). According to Obi (2018), schools that actively engage their communities tend to benefit from enhanced school management practices, which leads to better academic and administrative outcomes.

### **Impact of School-Community Partnership on School Management**

Several studies have examined the positive impacts of school-community partnerships on school management and educational outcomes. In their study, Ekundayo and Ajayi (2019) found that schools with active community involvement often exhibit better organizational structures, improved school leadership, and more effective decision-making processes. These findings align with those of Okoli and Ugwu (2020), who argue that when communities take an active role in supporting schools, they contribute to creating an environment that values education and encourages student success. Furthermore, the impact of school-community partnerships extends beyond administration to tangible improvements in student outcomes. Studies have shown that schools with strong community ties tend to experience higher student attendance rates, improved academic performance, and reduced dropout rates (Muller & Schiefelbein, 2017). For instance, a study by Beaulieu and MacDonald (2017) demonstrated that in rural schools, where community engagement was high, there was an increase in both student performance and teacher satisfaction. This was attributed to the collaborative support from the community, which helped alleviate many of the challenges faced by these schools.

### **Challenges to Effective School-Community Partnership in Nigeria**

While the potential benefits of school-community partnerships are evident, several challenges hinder their full implementation in Nigerian schools. One major challenge is the lack of trust and communication between schools and communities. In many parts of Nigeria, there is a perception that schools are controlled by government authorities, and local communities may feel excluded from decision-making processes (Okafor & Madu, 2020). This creates a barrier to collaboration, as communities are often hesitant to engage with schools that do not involve them in key decisions. Additionally, the unequal distribution of resources in different communities further complicates the formation of effective partnerships. Many schools in rural and underserved areas lack basic infrastructure, which limits their ability to collaborate with communities on equal terms (Mbah & Adegoke, 2021).

Another significant barrier to school-community collaboration is the lack of policy support for community engagement. According to Udo (2019), while policies on school-community partnerships exist, they are often not effectively implemented due to insufficient funding, lack of training for school administrators, and a general lack of awareness about the benefits of such partnerships. In some cases, local communities are not adequately informed about the role they can play in improving education, which leads to low levels of participation.

### **Strategies for Enhancing School-Community Partnership**

To overcome these barriers, several strategies have been proposed in the literature. First, improving communication and trust between schools and communities is essential. According to Adeniran (2018), schools must foster a culture of openness and inclusivity, where community members are actively invited

to participate in school governance and decision-making. By holding regular meetings and creating avenues for feedback, schools can build stronger relationships with their communities.

Second, policy reforms that explicitly promote school-community partnerships are necessary. As Udo (2019) argues, there is a need for government-backed initiatives that encourage collaboration between schools and local communities. Such policies should provide guidelines for community involvement, offer training for school leaders, and allocate resources to support joint projects between schools and communities. Lastly, schools should invest in capacity building for both teachers and community members to enhance the effectiveness of their collaboration. Okafor and Madu (2020) emphasize the importance of training teachers in community engagement strategies, as well as educating community leaders about the benefits of supporting local schools. This training will help both parties develop the skills needed to manage and sustain productive partnerships.

### **Methodology**

This study employed a mixed-methods research design, integrating both quantitative and qualitative approaches to gather comprehensive data on the impact of school-community partnerships on school management in Nigerian secondary schools. The mixed-methods design allows for triangulation, enabling a deeper understanding of both the measurable effects of partnerships on school management and the lived experiences of stakeholders involved in these partnerships (Creswell & Plano Clark, 2018).

The population of the study comprises secondary school administrators, teachers, parents, and community leaders in selected secondary schools across Nigeria. The sample was drawn from schools in two major regions of Nigeria Northern Nigeria and South Eastern Nigeria. A multi-stage sampling technique was used to select participants. In the first stage, two states from each region were purposively selected, based on their educational challenges and community engagement initiatives. In the second stage, a total of 10 secondary schools (5 from each region) was selected randomly. From each school, a total of 10 teachers, 5 school administrators, and 5 community leaders (including local government officials, parent representatives, and community elders) was selected, providing a sample size of 120 participants.

Quantitative data was collected using a structured questionnaire designed to assess the level of school-community engagement and its impact on school management. The questionnaire consists of four sections: (1) the nature of school-community partnerships, (2) perceptions of school-community engagement, (3) the impact of these partnerships on school management (e.g., student attendance, academic performance, resource mobilization), and (4) challenges faced in implementing these partnerships. Items were rated on a 5-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). A pilot test was conducted with a small group ( $n = 15$ ) from a school outside the study area to assess the reliability and clarity of the instrument. Reliability was measured using Cronbach's alpha to ensure internal consistency of the scale. Qualitative data were collected through semi-structured interviews with school administrators, teachers, and community leaders to explore their experiences, perceptions, and the challenges they face in establishing and maintaining school-community partnerships. To ensure the validity of the study, the questionnaire and interview guide were reviewed by experts in educational management and community development to ensure that the items are both content-valid and aligned with the research objectives. A pilot study was also conducted to refine the instruments and assess their reliability. For the quantitative component, the reliability of the scale was tested using Cronbach's alpha. A threshold of 0.70 was considered acceptable for the scale's internal consistency (Gliem & Gliem, 2003). For the qualitative component, triangulation was employed to ensure the credibility of the findings by comparing responses from different participant groups (teachers, administrators, and community leaders). The researcher's reflexivity was maintained through reflective journaling, ensuring that personal biases are minimized during data collection and analysis. The quantitative data was analyzed using

descriptive statistics (means, standard deviations) to summarize the levels of school-community partnership engagement and perceptions of their impact on school management. Inferential statistics, including Pearson correlation and regression analysis, was conducted to test the hypotheses regarding the relationships between school-community partnerships and school management outcomes, such as student attendance and academic performance.

## Results

**Hypothesis 1:** There is no significant influence of school community engagement on school management effectiveness in Nigerian secondary schools.

**Table 1: The influence of school community engagement on school management effectiveness**

Predictor	B	SE B	T	P
Constant	3.344	0.289	11.57	< 0.05
Engagement	0.084	0.083	1.02	0.308

Table 1 presents the results of the relationship between school-community engagement and school management effectiveness. The coefficient for engagement ( $B = 0.084$ ) suggests a positive relationship, but it is not statistically significant ( $p = 0.308$ ). This indicates that, based on the data, there is no strong evidence to suggest that increased school-community engagement directly influences school management effectiveness. Thus, RQ1 is not supported in this case.

**Hypothesis 2:** There is no significant influence of school community partnership on students' engagement in Nigerian secondary schools.

**Table 2: The influence of school community partnership on student's engagement**

Predictor	B	SE B	T	P
Constant	-0.318	0.406	-0.78	0.435
Engagement	0.497	0.080	6.23	< 0.05
Impact	0.224	0.089	2.53	0.013

Table 2 shows that school-community engagement ( $B = 0.497$ ) and school-community impact ( $B = 0.224$ ) both significantly predict student engagement. Specifically, both engagement and impact have positive and significant relationships with student engagement, with engagement being the strongest predictor ( $p < .001$  for both). This suggests that stronger school-community partnerships can lead to better student engagement, and RQ2 is supported.

**Hypothesis 3:** There is no significant influence of barriers faced by school on effectiveness of school management in Nigerian secondary schools.

**Table 3: The influence of barriers faced by school on effectiveness of school management**

Predictor	B	SE B	T	P
Constant	3.338	0.243	13.75	< 0.05
Challenges	0.093	0.074	1.25	0.212

Table 3 shows the results of the barriers to effective school-community partnerships. The coefficient for challenges (B = 0.093) is positive, but it is not statistically significant (p = 0.212). This indicates that the barriers faced in school-community partnerships do not have a significant impact on school management practices in this dataset. It is not supported based on these findings.

**Hypothesis 4:** There is no significant influence of each of the three challenges strategies (Engagement, impact, challenges) on effectiveness of school management in Nigerian secondary schools.

**Table 4: The influence of each of the three challenges strategies (Engagement, impact, challenges) on effectiveness of school management**

Predictor	B	SE B	T	P
Constant	0.452	0.442	1.02	0.309
Engagement	0.463	0.077	6.05	< 0.05
Impact	0.263	0.085	3.09	0.003
Challenges	-0.247	0.069	-3.60	< 0.05

Table 4 shows the impact of strategies to enhance school-community partnerships. The findings show that engagement (B = 0.463), impact (B = 0.263), and challenges (B = -0.247) are all significant predictors of student engagement. Specifically, engagement and impact positively influence student engagement, while challenges have a negative effect (p < .001 for all). This supports the idea that strategies improving engagement and mitigating challenges can enhance school-community partnerships and subsequently improve student outcomes. RQ4 is fully supported.

### Discussion of Findings

This study aimed to explore the impact of school-community partnerships on effective school management in Nigerian secondary schools. The findings offer insights into how such partnerships influence school management, student engagement, and the barriers that hinder collaboration. Each research question (RQ) provided distinct results, revealing areas where school-community partnerships are impactful and areas where challenges remain.

The analysis of Ho<sup>1</sup> sought to examine the relationship between school-community engagement and the effectiveness of school management. The regression results showed that school-community engagement did not significantly predict the effectiveness of school management (p = 0.308). While there was a positive relationship, the statistical evidence was insufficient to conclude that engagement directly impacts management effectiveness. This finding contrasts with previous studies that highlight the importance of

community involvement in governance and decision-making processes, which often leads to improved school performance (Beaulieu & MacDonald, 2017; Obi, 2018). The lack of significant results in this study suggests that while engagement is necessary, it may require stronger institutional frameworks, clearer communication, and more structured forms of involvement to translate into effective school management. This result underscores the need for policy reforms that better align school-community engagement with tangible administrative outcomes.

Ho<sup>2</sup> examined the relationship between school-community partnerships and student engagement. The results revealed a statistically significant positive relationship between school-community engagement and student engagement ( $p < .001$ ), with impact also showing a positive influence ( $p = 0.013$ ). This supports the hypothesis that active school-community partnerships contribute to increased student involvement in school activities and improved academic performance. These findings are consistent with the work of Mbah and Adegoke (2021), who noted that schools with strong community ties benefit from enhanced student motivation, attendance, and achievement. The results suggest that when communities support schools through various resources whether it be volunteer efforts, infrastructure improvements, or academic support, students feel more engaged and invested in their education. This reinforces the idea that school-community partnerships are crucial for creating an environment where students can thrive.

For Ho<sup>3</sup>, the study aimed to identify the challenges that hinder the effectiveness of school-community partnerships. The findings indicated that challenges (such as communication breakdowns, mistrust, and lack of resources) were not statistically significant predictors of school-community partnership effectiveness ( $p = 0.212$ ). While the positive coefficient suggests that barriers may play a role in influencing school-community interactions, their impact was not significant in this study. This lack of statistical significance may indicate that these challenges, while present, do not directly undermine partnerships when there is a strong commitment from both schools and communities. This result highlights the complexity of barriers, suggesting that they may be more nuanced and perhaps context-dependent, requiring further exploration through qualitative insights or case studies (Okafor & Madu, 2020). Moreover, the absence of a significant finding suggests that other factors, such as institutional policies or community engagement strategies, may have a more substantial impact on the effectiveness of school-community collaboration.

The analysis of Ho<sup>4</sup> assessed the effect of various strategies for enhancing school-community partnerships. The findings from Table 4 revealed that engagement, impact, and challenges all played significant roles in student engagement. Specifically, school-community engagement ( $B = 0.463$ ) and impact ( $B = 0.263$ ) had positive influences, while challenges had a negative effect ( $B = -0.247$ ). This suggests that the implementation of strategies that promote stronger community engagement, coupled with reducing barriers such as mistrust and inadequate communication, can enhance student involvement and improve overall educational outcomes. These findings are consistent with previous research that emphasizes the importance of integrating community-driven strategies to overcome barriers and maximize the benefits of school-community collaborations (Muller & Schiefelbein, 2017). The negative effect of challenges suggests that effective strategies must not only promote engagement but also focus on minimizing obstacles that hinder collaboration. This highlights the importance of addressing institutional and relational barriers through policy reforms and community engagement initiatives.

## **Conclusion**

This study explored the role of school-community partnerships in enhancing the management of Nigerian secondary schools. The findings indicate that school-community engagement significantly influences student engagement and contributes to improved academic performance. However, the relationship between engagement and school management effectiveness was not statistically significant, highlighting

the need for more structured and formalized frameworks to link community involvement directly to school governance. The barriers to effective collaboration, such as communication breakdowns and resource constraints, were found to have a minimal direct impact on the partnership's success but remain important considerations for enhancing engagement. The study concludes that school-community partnerships, when effectively managed, have the potential to positively impact student outcomes and foster a more resourceful and supportive educational environment.

### **Recommendations**

- Policymakers should implement structured frameworks that link school-community engagement to specific school management outcomes.
- Schools should establish regular communication channels and clear roles for community involvement.
- Teacher and community leader training programs should be created to build capacity in managing school-community partnerships.
- Educational authorities should encourage resource-sharing initiatives between schools and communities to enhance infrastructural development.

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## SOCIAL IMPACT OF LOW-LEVEL VIOLENCE: PERSPECTIVES OF SECONDARY SCHOOL STUDENTS IN SOKOTO METROPOLIS, NIGERIA

LADAN Sirajo Alhaji<sup>1</sup>, NASARAWA Jamila Abubakar<sup>2</sup>, MUSA Abubakar Sadiq<sup>3</sup>  
sirajoshu@gmail.com, jamilanasarawa@ssu.edu.ng.com, Mabubakarsadiq10@gmail.com

Department of Education Foundations<sup>1</sup>  
Usmanu Danfodiyo University, Sokoto

Department of Educational Foundations<sup>2</sup>  
Sokoto State University, Sokoto

Department of Educational Foundations<sup>3</sup>  
ShehuShagari College of Education, Sokoto

### Abstract

*This study explored social impact of low-level violence in secondary schools within Sokoto Metropolis, Nigeria. Qualitative descriptive phenomenological design was used. The population of the study consisted of 854 SSII students of secondary schools in Sokoto metropolis out of which Purposive sampling Techniques was used to sample 20 students based on recommendation in Qualitative design where emphasis is given to a limited or small sample size. In-depth interview guide was used for data collection and its Content Validity of In-depth interview guide was ascertained by two (2) Sociologists of Education from the Department of Education Foundations Usmanu Danfodiyo University Sokoto while for reliability, this study selected three informants and took the transcribed data to them who evaded any inconsistency or discrepancies in the way they identified information within their views and thought. Thematic analysis revealed that students experience both physical and non-physical forms of low-level violence, including corporal punishment, sexual harassment, psychological bullying, and social stigmatization. These behaviors, often perpetrated by teachers, peers, and senior students, have profound social consequences which include low self-esteem, social withdrawal and negative peer relationships among others. The study concluded that low-level violence in secondary schools in Sokoto Metropolis is deeply embedded in school culture and significantly harmful to students' emotional and social well-being. On this basis, it was recommended among other things that, Ministry of Basic and Secondary education in Sokoto and the managements of Secondary schools should enforce clear anti-violence policies specifically addressing both physical and non-physical low-level violence that prevails in secondary schools.*

**Keywords:** Low-Level Violence, Interactionism, Bullying, School culture

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### Introduction

School is regarded as an institution where different patterns of social interactions are consciously and unconsciously designed to shape the behaviour of younger ones to conform to the norms of society. According to Ballantine and Spade (2012), school is one of the safest institutions in society, where practices are believed to impart acceptable behaviour, knowledge, and social norms, preparing students for future roles. Sociologists acknowledge this role but point out that there are undesirable aspects of school culture that often go unreported because they are taken for granted (Meighan, 2015). Duffer and Meyer-Adams (2020) described those undesirables and often ignored aspects as “*Low-level violence*”. Such violence refers to behaviours or school practices that are violent in nature or sources of violence but are

overlooked because they are perceived as normal parts of school culture. These may arise from both written and unwritten rules, beliefs, or norms used to instill school values in learners.

While incidents of “high-level school violence” such as murder, rape, or shootings attract wide media and public attention, Duffer and Meyer-Adams (2020) noted that such cases are relatively rare. In contrast, low-level violence such as bullying, battery, victimization, or psychological maltreatment of students by teachers receives little attention despite being widespread. Studies show that low-level violence is a common experience among students globally (Craig et al., 2009). In Nigeria, Adewutya et al. (2023) found that 51.9% of in-school adolescents had experienced at least one form of bullying. Similarly, Adebayo (2018) reported that physical bullying, such as kicking, pushing, or threats, was the most common. UNICEF (2007) identified various forms of violence in basic education physical, psychological, sexual, gender-based, and health-related while UNESCO reported that physical (85%) and psychological (50%) violence accounted for the majority of school-related violence. Ladan and Nasiru (2022) further classified low-level violence in Nigerian schools into physical and non-physical forms, and Ighaede et al. (2023) found that about 51.9% of students had been bullied, while 27.9% admitted to bullying others. Despite its prevalence, low-level violence has severe effects on students’ well-being. Hertz et al. (2017) linked it to anxiety, depression, and poor academic performance. Smith (2016) observed that it negatively affects students’ social relationships, leading to isolation and reduced empathy. Similarly, Olweus (2003) found that exposure to violence can increase aggression, while Olabiyi (2021) reported that bullying significantly impacts students’ anxiety and peer isolation, though not absenteeism.

### **Statement of the Problem**

Low-level violence in schools has been found to be very rampant and pervasive issue that affects students' well-being in the context where studies were conducted. Despite its prevalence globally, there is a paucity of research on the forms and social impact of low-level violence on students in Nigeria, particularly in Sokoto Metropolis. This study therefore seeks to fill this gap by exploring the experiences of students and the effects of low-level violence on their social interactions.

The problem this study seeks to address is the existing gap in understanding low-level violence in schools. Specifically, the study aims to explore, from the students’ perspective, the various forms of low-level violence they experience and how such violence affects their social interactions.

While there is a growing body of research on violence in schools, there is a need for more studies on low-level violence, particularly in the Nigerian context. This study aims to fill this gap by exploring the social impact of low-level violence among secondary school students in Sokoto metropolis, Nigeria.

### **Objectives of the Study**

The objectives of the study are as follows:

- To identify the forms of low-level violence experienced by secondary school students in Sokoto Metropolis.
- To explore the social effects of low-level violence on students’ interpersonal relationships.

### **Research Questions**

The Research Questions for the study are as follows:

- What forms of low-level violence do students experience in their schools?
- How does low level violence affect students’ social relationship?

## **Methodology**

The study adopts Descriptive Phenomenology as a Qualitative research design suitable for this study according to Giorgi (2020) in understanding human experiences. Hence, this study is an attempt to assess and understand in details the research problem from the perspective of students who experience it. The population of the study is all SSII students in three (3) secondary schools in Sokoto metropolis.

The sample of the study consisted of twenty (20) SS II Students purposively selected from the three (3) secondary schools in Sokoto Metropolis. As argues by Merriam (2002), in Qualitative study, less attention is given to number of the respondents (informants), the objective of the research can be achieved with few number of the informants. Instead, emphasis is being placed on informants with deep information on the subject matter being studied to ensure efficient and credible study outcome. UNESCO (2019) also justified the selection of SS II by suggesting that SSII having spent 3 years at junior level and additional year at senior level has more experience of school violence. In addition, the informants were suggested by their Counsellors as students with experience of low-level violence.

The instrument used for data collection was in-depth interview guide which contains items that are in lined with research questions. Content Validity of In-depth interview guide was ascertained by two (2) Sociologists of Education from the Department of Education Foundations Usmanu Danfodiyo University Sokoto who scrutinized the guide and ensure that it is in line with research questions and objectives of the study. To ascertain the reliability however, this study selected three informants and took the transcribed data to them who evaded any inconsistency or discrepancies in the way they identified information within their views and thought. This enabled the informants to suggest some fine-tuning to better capture their perspective.

Approval to conduct the interview with students was obtained from the managements of the 8 secondary schools. Based on the recommendations of Guidance and Counselling officers of schools, the researcher conducted interview with informants using interview schedule, note pad and voice recording devise. Thematic method was used and data analysis was done through the following stages namely: Transcribing stage where data recorded was transcribed in written, familiarization stage which was with reading and re-reading the transcribed data, coding and organization where related data from interviews of the respondents was organized into themes and sub-themes in lined with research questions raised for the study.

## **Results**

The results represent analysis of data collected from the 20 informants at eight (8) secondary schools in Sokoto metropolis. For confidentiality, informants were represented by letter I, or example, informant 1(I1).

### **Thematic Analysis of the Results**

Themes generated from the data were categorized into themes and sub-themes. The two themes are:

1. Forms of low-level violence students experienced
2. Social Impact of Low-level Violence on Students

#### **Theme 1: Forms of low-level violence students experienced**

With respect to this theme, this study identified many sub-themes which are the forms of low-level violence in schools found after the interview with key informants. They can be grouped into two major low-level violence namely: physical and non-physical low-level violence. Under these two broad categories, many sub-themes emerged on the basis of responses are considered forms of low-level violence.

**Bullying:** Many informants described bullying as a prevalent form of low-level violence in schools which manifests in form of threats, intimidation and exclusion among others which is done on the basis of some

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factors such as height, weight, skin, colour, academic ability or disabilities among others. (I3, I5, I7, and I12).

I frequently call with bullies that reflect my dark complexion by teachers, seniors and even mates. They would say things like, the black, why are you so black? Or Can we even see you in the dark (I3)

Informant (I17) recounted his experience with bullying in school, highlighting how his unusual physical appearance particularly his height made him a frequent target. According to him (I17), this trait, which is naturally part of his identity, became the basis for mockery, intimidation, and social exclusion.

Teachers and fellow students call me names like camel, skyscraper, or tree often laughing at how I towered over everyone else (I17).

Alongside these informants, I18 also faced bullying related low-level violence.

Teachers, seniors and peers make derogatory remarks to me, sometimes they compare me with charcoal or darkness, and joke about me being invisible at night. These comments were both hurtful and humiliating, leaving lasting emotional scars (I18).

Informant (I14) described how his obesity made him a constant target for mockery.

They call me with names such as fatty, elephant or big head and they laugh at me when I walked by. They would sometimes mimic the way I moved or made jokes about the way I ate during lunch breaks. These remarks were not only demeaning but also created an atmosphere that made school feel like a hostile place (I14).

Another informant gave his own experience of bullying this way:

Bullying was not always loud or obvious at times, it came in the form of isolation being left out of group activities or conversations or classmates shifting away from him as if his presence was unwelcome. This subtle but persistent exclusion was just as damaging as the verbal insults (I16).

**Hitting:** Forms of physical aggression such as punching, slapping, spanking, kicking, and beating were identified by I2, I6, I10, and I17 as routine practices in school.

I can recall while I was in SSI a teacher beat me multiple times for failing to answer a question in the class (I2).

Another informant with similar view expressed concern about how such violent actions are normalized and often justified as disciplinary measures.

I was slapped by a teacher for answering question wrongly even though he was the one who initially encouraged me to make an attempt (I17).

Still on this sub-theme (hitting) other informants I12, I14 and I15 recounted a deeply troubling incident that occurred during their time in junior secondary school.

I can recall how senior students routinely exerted their authority through frequent use of strokes and beating and other physical aggressions, often under the guise of maintaining discipline or enforcing school traditions (I12).

Similarly I14 stated that:

I vividly remembered time when I was punched in the chest and kicked in the legs by a senior student simply because I failed to bring water for their laundry (I14).

**Use of Hard Labour:** Informants such as I4, I9, and I13 discussed the use of hard labour as a low-level violence which they are subjected often for minor offenses. Works like cutting grass, fetching water, or carrying heavy objects were reported.

I was forced to clear overgrown fields under the sun for coming late to class(I4), while I13who also narrated the same experience emphasized that such practices can be exploitative and degrading.

**Corporal Punishments for Violation of Rules:** A common theme, as described by I1, I8, I11, and I16, was the use of corporal punishment for even slight breaches of school rules.

I still remember the humiliation of being forced to kneel down under the scorching sun as punishment. It was not just about the physical discomfort that hurt, it was the public shaming. Being made to do this in front of both junior and fellow classmate was very embarrassing. It left a lasting impact on my self-esteem (I1).

The informants (I1, I8, I11and I16) unanimously indicated that these punishments are used arbitrarily and can escalate to physical abuse. Some informants expressed concern that these punishments instill fear rather than discipline.

**Sexual Assault on Students:** Although none of the informants share personal experience on this sub-theme, some of them including I3, I7 and I18reported disturbing instances of sexual assault affecting both female and male students.

**Battery:** Informants such as I10 and I15 gave their own perspectives on cases of outright battery, describing them as unprovoked physical attacks, often from senior students or staff members.

A teacher tried to hit me with a cane aiming for my back. But when I flinched, the cane accidentally hit my eye. I can still recall the pain was intense and I ended up in the hospital facing a serious risk of losing my eye but God saved it. But the incident left a lasting impact on my vision (I10).

Incidence of this nature though less frequent, has severe physical and emotional consequences.

**Verbal Aggression:** Informants I5, I11and I20 mentioned instances where teachers and senior students shouted at or insulted their juniors. These incidents were cited as damaging to students' self-esteem. I5 stated that constant yelling creates atmosphere that stifles learning. I20 believed such verbal abuse reflects a broader culture of disrespect.

**Indecent Sexual Comments, Gestures, and Jokes:** I9, I14, and I19 reported the frequent use of sexually suggestive comments, jokes, and gestures directed at students.

At a point, I began to avoid certain students or areas of the school to escape these comments about specific parts of my body that are God given (I14).

These actions were often dismissed as harmless by perpetrators but left victims feeling uncomfortable and violated.

**Coerced Sexual Intercourse for Favors:** One of the most serious themes raised by I6, I13and I18 was the coercion of students into sexual acts in exchange for gifts, money, or academic grades. Although no personal experience was shared during the interview but I6narrated a case where a female student was pressured by a teacher with the promise of better grades. It was understood on the basis of information obtained during the interview that these situations often go unreported due to fear of stigma and disbelief.

**Labelling with Negative Phrases:** According to I2, I8, and I17students are sometimes subjected to verbal labels such as idiot, empty head or you only know how to eat.

I knew of a very slow learner while we were at JSSI who had to change school because of the constant use of these negative levels. There are certain teachers that anytime he was unable to answer their questions correctly they use negative labels on him such doll, empty head, donkey, you only know how eat among other labels (I17).

These negative labels often used by teachers are said to have long-term impacts on students' confidence and self-worth. I17 shared how a student dropped out after persistent verbal humiliation.

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Information during interview with some informants revealed that despite reporting these different forms of low level violence to a teachers, discipline masters, parents who later reported to school authorities, the acts continued to occur as if no action was taken, as such behaviors were often dismissed as part of the normal school life.

### **Theme 2: Social Impact of Low-level Violence on Students**

On the basis of responses that emerged from the analysis of data obtained, some sub-themes were found as social impact of low-level violence on students. They are outlined and explained as reported as follow:

**Negative Emotional Impact:** Negative emotional impact was also reported by some informant:

When I was labeled with names like charcoal or darkness, and joke about him being invisible at night, it is hurtful and humiliating and these of comments leave lasting emotional scars in me (I11).

**Loss of Self-Esteem and Confidence:** One of the impacts of low-level violence reported by informants was on their level of confidence.

One of the most significant impacts of the bullying I experienced was the erosion of my confidence. It was not just about hurtful jokes or teasing, the bullying was rooted in social exclusion, making me feel like an outsider. This experience had a profound effect on my self-perception and ability to interact with others (I3).

Another (I8) informant who was bullied because of his obesity narrated its impact which is related to confidence sub-themes.

Such bullies like fatty and elephant among others made me doubt my worth. At some points, I started wondering if there was something fundamentally wrong with me that made them treat me this way(I8).

Similarly, Informants like **I3, I7, I9, and I17** mentioned that repeated exposure to low-level violence (such as insults, ridicule, or labelling) leads to a **decline in students' self-esteem**. **I3** described a student who, after being repeatedly called “empty head” by a teacher, stopped participating in class discussions. **I7** noted that some students become overly self-conscious, avoid social interactions, and exhibit signs of low self-worth. These emotional effects often hinder students’ ability to interact well in peer groups.

**Social Withdrawal and Isolation:** Some informants reported being isolated and in some cases isolated themselves from some activities as results of bullies on them and feared of being bullied.

The physical bully I experienced from seniors while at JSS III made me feel like outcast.

The slapping I received left me humiliated and embarrassed. I started to avoid social interactions especially while we were in the hostel fearing I would be targeted again. I feel like I did not belong and my self-esteem fell (I9).

Many informants, including **I2, I10, and I13**, observed that victims of verbal abuse, sexual harassment, or bullying tend to **withdraw from peers and social gatherings**. **I2** noted that a female student who was subjected to indecent sexual jokes by male classmates became unusually quiet and refused to engage in extracurricular activities. **I10** highlighted that this social withdrawal makes students vulnerable to depression and alienation, creating a cycle of exclusion and emotional distress.

**Development of Aggressive or Violent Behavior:** A number of informants, such as I4, I5, and I14, indicated that low-level violence often lead to aggressive tendencies in students. I5 pointed out that students who are frequently beaten or harshly disciplined by teachers may start to see aggression as a legitimate way to handle conflicts. I14 described how bullied students later became bullies themselves, perpetuating a culture of violence. This internalization of violence affects not only peer relationships but also classroom interaction and group collaboration.

**Distrust of Authority and Breakdown of Student-Teacher Relationships:** Informants I6, I11, and I15 emphasized lack of trust between students and school authorities as a significant social impact. I6

observed that when teachers or senior students abuse their power through corporal punishment or insults, students begin to view authority figures with suspicion. I15 mentioned that this lack of trust discourages students from reporting issues, seeking help or forming meaningful mentoring relationships, leading to a breakdown in the school's support system.

**Stigmatization and Peer Rejection:** According to I1, I8, and I18, students who are frequently labelled with derogatory names or ridiculed for their background or appearance often experience stigmatization. I1 shared that some students are mocked for their socioeconomic status, which leads to social segregation and exclusion from peer networks. I8 discussed the long-term effects of such rejection, including reluctance to trust peers or form close friendships.

**Impact on Academic Group Participation:** Several informants, like I9, I16 and I20 discussed how low-level violence affects student collaboration and group learning. Victims of violence tend to avoid participating in study groups, discussions, or joint projects for fear of mockery or conflict. I16 noted that this not only hampers the individual's academic growth but also creates barriers to academic classroom interactions.

**Gender-based Social Impact: I12, I17, and I19** highlighted that the social consequences of violence differ between male and female students, especially regarding **sexual harassment**. I12 explained that female students subjected to indecent comments or sexual coercion may be forced avoid social interaction especially in co-education settings.

**Reinforcement of Negative Stereotypes and Prejudices:** Informants such as I5, I10, and I18 noted that the labelling and name-calling some students can reinforce stereo types and social divisions. For example, students from poorer families being called bush people or village kids by others fosters class-based discrimination. I18 emphasized that these social barriers affect unity, collaboration, and the sense of community in schools.

### **Discussion of Findings**

The findings of this study largely agree with previous studies reviewed. For example, Craig et al. (2009) and Adewutya et al. (2023) highlighted the high prevalence of bullying among adolescents, consistent with the present study's evidence of widespread bullying in secondary schools in Sokoto metropolis. Similarly, Hertz et al. (2017) and Smith (2016) described the psychological impacts of violence—such as anxiety, depression, and social isolation which are reflected in the emotional scars and social withdrawal reported by the study's informants.

Moreover, Olweus (2003) found that exposure to violence can lead to aggression among students, which aligns with this study's finding that some victims of low-level violence later became aggressors themselves.

However, the study shows some disagreement with Olabiyi (2021), who found that bullying, had no significant impact on school absenteeism. Although absenteeism was not directly investigated in this paper, the profound effects on students' emotional well-being and social interactions reported suggest that absenteeism could potentially be an outcome if not addressed over time.

Unlike previous studies that focus heavily on peer bullying, this study emphasizes the role of teachers and staff as perpetrators of low-level violence is a less highlighted issue in some earlier research. This finding adds new dimensions regarding authority-student relations in Nigerian secondary schools.

### **Conclusion**

The study concludes that low-level violence in secondary schools in Sokoto Metropolis is deeply embedded in school culture, and significantly harmful to students' emotional and social well-being. Both physical and non-physical forms of violence negatively impact students' self-esteem and social

relationships. Without appropriate interventions, these experiences harm individual students and perpetuate a hostile school environment that undermines education.

### **Recommendations**

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

- Ministry of Basic and Secondary education in Sokoto and the managements of Secondary schools should enforce clear anti-violence policies specifically addressing both physical and non-physical low-level violence that prevails in secondary schools.
- Functional and confidential counseling units should be established or strengthened within schools to provide emotional support for victims and promote conflict resolution. Similarly, Teachers, administrators, and senior students should undergo regular training to recognize, prevent, and address low-level violence. Emphasis should be placed on building respectful teacher-student and peer relationships.

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**ASSESSMENT OF THE IMPLEMENTATION OF THE UNIVERSAL BASIC EDUCATION PROGRAMME IN TARABA STATE, NIGERIA**

VINCENT Yohanna Iwah PhD & AHMADU Yusuf  
vincentiwah@gmail.com, ahmaduyusuf2020@gmail.com  
Department of Educational Foundations,  
Faculty of Education,  
Federal University of Kashere, Gombe State, Nigeria

**Abstract**

*The newly adopted Universal Basic Education programme is part of Nigeria's effort to uphold and renew its commitment for the provision and promotion of basic education for all. The Universal Basic Education (UBE) programme is a school quality programme which aimed at repositioning education; especially at the basic level with the motive to play its role as a positive instrument of change and development. This study was guided by two objectives which were translated into research questions. Descriptive survey design was adopted for the study. 2,628 head Teachers of primary and Junior Secondary schools were used as population of the study, and 300 Head Teachers were randomly selected as sample size, based on Research Advisers committee (2006) recommendation. The instruments used for data collection was Check list and Proforma. Both face, content and construct validity of the instrument were established by Experts in measurement and Evaluation. Percentages, Rating, Mean, and bar chart were used for answering research questions. The findings showed that there was a partial implementation of UBE Objectives in UBE schools in Taraba States, and there were shortage of human and material resources availability in Taraba State UBE schools. It was recommended that: there should be a concerted effort by all stakeholders to ensure that UBE objectives are fully implemented. There should be an effort by Stakeholders to ensure that human and material resources are made sufficiently available and evenly distributed to the various UBE schools in Taraba State.*

**Keywords:** Assessment, Implementation, Universal Basic Education, Programme.

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**Introduction**

The newly adopted Universal Basic Education programme is part of Nigeria's effort to uphold and renew its commitment to the provision and promotion of basic education for all. The Universal Basic Education (UBE) programme is a school quality programme aimed at repositioning education; especially at the basic level so that it will play its role as a positive instrument of change and development. The Universal Basic Education programme (UBE) is an intervention programme as a positive and timely response to salvage the primary education and indeed the entire educational system from total collapse by enhancing its quality through the provision of inputs (human and material).

The importance and need for Basic Education for the child featured prominently at the World Conference on Education for All (WCEFA), held in Jomtein, Thailand in 1990, and were further articulated by the Millennium Development Goals (MDG) on Education for All by 2015 (UNESCO, 2005). Basic Education was considered necessary to accomplish the following aims:

- To inculcate literacy and numeracy and the ability to communicate effectively.
- To lay a sound basis for scientific and reflective thinking.
- To develop citizenship for effective participation in and contribution to society.

- To develop character, morality and sound attitudes.
- To develop the ability to adapt to changing environment.
- To develop skills for cooperation, communication, problem solving and lifelong learning.
- To develop manipulative skills to function effectively in the society within the limits of his capacity.

Ejere (2011) defines policy as a statement of action and intentions, and a programme as the means designed to achieve the action and intentions. A programme is known to consist of sets of strategies or activities meant to attain some intended objectives. The execution of these strategies and activities to attain intended objectives constitute what is known as policy implementation.

Educational policy implementation involves the practical execution of public statements and intentions for the realization of set educational goals or objectives. This could be laced with many challenges. Oladunjoye (2011) posited that the implementation of any educational programme may have to contend with practical problems which will make it impossible for the actualization of intended goals and objectives. He identified some of these problems to include the political will, transparency of process, environmental security, proper budgeting and fund management, mass sensitization, and cultural harmony among others. During and after implementation, there should be available means for periodic monitoring of results and evaluation of the extent to which objectives have been attained.

According to Ejere (2011), one of the major problems affecting educational policy reforms and educational programme framework in Nigeria is poor programme implementation. He noted with dismay that programme implementation has always been the missing link in Nigeria's educational development, and that often times, laudable educational programmes have failed due to poor implementation.

Nigeria has gone through a variety of educational policies, many of which could not achieve the envisaged goals due to several reasons. Prominent among such educational programmes were the Universal Primary Education (UPE) and the 6-3-3-4 system of education that succeeded it. These previous educational programmes could not achieve their intended goals because of several factors which culminated in eventual failure of implementation. Since basic education is considered to be very important, and it is accepted as the foundation for other further educational adventures, the government has not ceased to show some form of concern about it. This has always manifested in the introduction of new educational policies or reforms of the existing one. These programmes, though seemingly new, are observed to be well related in objectives and content, and sometimes could pass for just a change of structural nomenclature. In the long run the new programme is also faced with the hitches of the former.

Following the UPE programme, was the 6-3-3-4 system of education which was introduced Nationwide in 1982. This system of education required that a school child will spend 6 years in primary, 3 years in junior secondary, 3 years in senior secondary, and 4 years in a tertiary institution. According to Asuru (2011), the purpose of the 6-3-3-4 system was to lay the foundation for scientific and technological take-off as stated in the National Policy on Education (NPE, 1981). It was seen as an instrument of national unity, and was designed to inject functionality into the Nigerian School system. Asuru (2011) reported that the Federal Government at that time spent huge sums of money to import heavy equipments and machinery considered necessary for the implementation of the 6-3-3-4 system, and in some cases even built workshops in secondary schools across the country. The schools were split into Junior and Senior Secondary Schools, each of three years duration, with the Junior school culminating in the award of the Junior School Certificate (JSC), while the Senior School led to the award of Senior School Certificate (SSC) to successful candidates. The 6-3-3-4 system adopted a more comprehensive but liberal method of evaluating learners' progress. This method laid emphasis on the three domains of learning - affective and the psychomotor - and also advocated the use of systematic and regular continuous assessment as part of the evaluation process for a number of reasons, the 6-3-3-4 system could not accomplish the envisaged

goals. Otonti (2000) and Asuru (2011), identified some of these reasons to include public ignorance due to inadequate sensitization, lack of real commitment on the part of policy makers and implementers, inadequate provisions for the training of the appropriate manpower to operate the equipment, inadequate security for the expensive equipment, poor planning, monitoring and evaluation, poor funding of the school system, political instability, and poor or irregular remuneration of the primary manpower of the policy, the teachers.

The launching of another programme in the name of Universal Basic Education (UBE) by the same Federal Government of Nigeria shows that there is something unique in education that Nigeria is yet to achieve. The UBE is viewed by many as a policy reform measure aimed at rectifying distortions and setbacks in basic education delivery in the country occasioned by the failures of the previous policies. By policy design, the three major dimensions of the UBE are:

- a. The formal school system, consisting of six years of primary education and three years of junior secondary education.
- b. Nomadic education designed for children of school age among mobile communities of pastoral nomads and migrant fishermen.
- c. Adult literacy and non-formal education programmes for out of school youths and illiterate adults.

It was from this context that the issue of the Universal Basic Education (UBE) programme came up, since it is the aim of the Government to ensure education for all. The Universal Basic Education programme was launched by the then President Olusegun Obasanjo on 30th of September 1999, in Sokoto. This was a follow up to issues arising from the World Conference on Education for All (WCEFA), held in Jomtein, Thailand in 1990, and the Millennium Development Goals (MDG) on Education for All by 2015 (UNESCO, 2005). The UBE programme is designed to cater for a wide range of formal education, informal education and skills development activities and schemes. It is intended to enable individuals to live meaningful and fulfilling lives, to contribute to the development of their society, to derive maximum social, economic and cultural benefits from their society and to discharge their civic obligations as patriotic citizens.

The Universal Basic Education Commission (UBEC) was formally established on 7th. October 2004. The Government's Vision is that at the end of nine years of this continuous education, every child should acquire appropriate and relevant skills and values and be employable in order to contribute his or her quota to National Development. The mission is to serve as a prime energizer of National movement for the actualization of the nation's Universal Basic Education (UBE) vision, working in concert with all stakeholders, thus mobilizing the Nation's creative energies to ensure that "Education for All" becomes the responsibility of all. The specific objectives of the UBE are (Federal Government Implementation Guidelines, 2000):

1. Developing in the citizenry a strong consciousness for education and a strong commitment to its vigorous promotion;
2. The provision of free, universal basic education for every Nigerian child of school age;
3. Reducing drastically the incidence of dropout from the formal school system (through improved relevance, quality, and efficiency);
4. Catering for the learning needs of young persons who for one reason or the other, have had to interrupt their schooling through appropriate
5. Forms of complementary approaches to the provision and promotion of basic education;
6. Ensuring the acquisition of appropriate levels of literacy, numeracy, manipulative, communicative and life skills, as well as the ethical,
7. Moral and civic values needed for laying a solid foundation for life-long learning possibilities.

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By design, the UBE programme is for a duration of nine years of basic education, and it is to cater for a child's education from primary school to the end of the Junior Secondary School. It is also expected to be universal, free and compulsory. There is an extension of the duration of UPE to include the first three years of secondary education in the current UBE scheme. The classifications of UBE as related to the previous educational system are as follows:

Lower Basic Classes: These are UBE I (primary one), UBE II (primary two), and UBE III (primary three).

Middle Basic Classes: These are UBE IV (primary four), UBE V (primary five), and UBE VI (primary six).

Upper Basic Classes: These are UBE VII (JSS one), UBE VIII (JSS two), and UBE IX (JSS three).

The UBE programme in each State is to be supervised by the State Universal Basic Education Board (SUBEB) while the Universal Basic Education Commission (UBEC) is the national body that monitors and evaluates school programmes. It is expected that during the 9-year period, the various levels of government in Nigeria will work to improve the conditions of teaching and learning in schools through interventions in Teachers' quality improvement, updating of infrastructural facilities and enhanced availability of instructional material (Osadebe, 2009). It is against this background that the researchers decided to investigate the evaluation of the implementation of the universal basic education programme in Taraba State, Nigeria.

Evaluation in the other hand involves objectives or goals for which information are gathered, analyzed and reported to aid judgment of merit in decision making. According to Odili and Ajuar (2001), it is a statement which specifies the extent to which objectives of a programme have been achieved. It is therefore required to determine the effectiveness of the current UBE programme and to provide necessary feedback for the improvement of the programme so that it remains on course and to enable it achieve its envisaged objectives.

### **Objective of the Study**

The main objective of this study is to assess the Implementation of the Universal Basic Education Programme and students Enrolment in Taraba States. Specifically, the study will achieve the following objectives;

- i. determine the extent of the Implementation of UBE objectives in Public Basic Schools in Taraba State
- ii. determine the Level of human resources available in the implementation of UBE in Public Basic Schools in Taraba State.
- iii. examine the level of Materials resources available for the implementation of UBE in public Basic schools in Taraba state.

### **Research Questions**

In line with the above objectives of the study, the following research questions are proposed:

- i. To What extent have UBE Objectives been implemented in Public Basic Schools in Taraba State?
- ii. What is the level of human resources available for the Implementation of UBE in public Basic Schools in Taraba State?
- iii. What is the level of Materials resources available for the implementation of UBE in public Basic schools in Taraba State?

### **Methodology**

The descriptive survey design was adopted for this study. Descriptive survey describes and interprets prevailing conditions or available situations based on the data (Aggarwal cited in Salaria, 2012). The design, according to Salaria (2012), is concerned with the present phenomena in terms of conditions, practices beliefs, processes, relationships or trends invariability, and includes proper analyses,

interpretation, comparisons, and identification of trends. Therefore, the design was adopted to examine the extent of Implementation of Universal Basic Education (UBE) programme and objectives accomplished in Taraba State, the level of the availability of human and material resources and the level of Students Enrolment in the system using the specifications of the UBE minimum standard as a basis. The population of this study consists of all Head Teachers in public UBE schools in the entire Eight (8) Educational Zone of Taraba State. This is made up of all the public primary and Junior Secondary Schools in the State. The number of public primary schools Taraba State is 2290 and the number of Junior Secondary Schools is 338. And in the study area, there is a total of 2,290 Head Teachers in public primary schools and total of 338 Head Teachers in public Junior Secondary Schools, all amounting to 2,628 Head Teachers in the Public UBE schools, that makes the Population of the study. (Sources: Ministry of Education, Taraba State, 2025).

The sample Size for the study consists of 300 Head Teachers drawn proportionately from the 2628 Head Teachers in the 2628 upper and lower Basic Schools in the Eight (8) Educational Zones of Taraba State, using simple random sampling techniques. The table below shows the total number of Head Teachers in the Primary and Junior Public Secondary Schools in Taraba State and the sample selected.

School Types	No. of Schools	No. of Head Teachers	Sample Selected
Public Lower Basic Schools	2290	2290	260
Public Upper Basic Schools	338	338	40
<b>GRAND TOTAL</b>	<b>2628</b>	<b>2628</b>	<b>300</b>

Source; (Ministry of Education (ASC) 2025).

With the above procedure, 260 Head Teachers is selected from the 2290 Head Teachers in the 2290 Public Lower basic schools (primary schools) in Taraba State, While 40 Head Teachers is also selected from the 338 Head Teachers in the 338 Public upper Basic Schools (Junior Secondary Schools). The aggregate of 300 sample Size was arrived at which is inline with the research advisor (2006) at 95.0% confidence level and 0.05 degree of accuracy/margin of error. The sampling technique adopted for this study was simple random sampling techniques. The adoption of this sampling techniques is done because it gives equal opportunities to the sample selected to represent the whole Population used in the study. The researcher does not discriminate between male and female Head Teachers, he gives equal opportunity for them to participate in responding to the items in the check lists and to fill in the design Proforma. Two researcher-designed instruments was used to gather information from respondents and this includes Check list and Proforma. The first instrument is checklist and was used to gather information on the extent to which UBE objectives have been implemented, the level of the implementation of UBE Programme in terms of human and material resources availability that consists section A, B & C, where section A, is check list for the extent of the Implementation of UBE objectives with 10 items, section B, is a check list for human resources availability with 13 items and section C, is a checklist for material resources availability, with 26 items. While the second research instrument is Proforma which was used to obtained data on male and female Students Enrolment in the Upper and Lower Public Basic Schools in Taraba State. The instrument of data collection is validated by the lecturers who are specialists in measurement and evaluation and by some other psychometricians from the Department of Educational Foundation under the Faculty of Education, Federal University Kashere, Gombe State. The instrument was properly scrutinized based on the objectives of the UBE Programme. With further modification and editing of items, the instrument was judge to possess face and content validity by the above experts. The self-developed checklist and Proforma was reliable because the data involved was discrete in nature, as it sought for the exact situation

of human and material resources available in the schools, the extent of implementation of the UBE objectives and the level of students Enrolment in Universal basic schools in Taraba State. These were discrete data that needed to be compared against the minimum standards. The Sources of data for this study was categorized into two; the primary and secondary sources. The primary sources of data include information on the UBE Objectives Implementation, the availability of human and material resources which was filled in by the researcher designed ‘Checklists’ by the Head teachers. The Secondary sources of data include. data-sets, manual database published annual reports, government departments’ data, on Pupils/students Enrolment and will be collected using researcher designed proforma, by authorized Educational officers in SUBEB or Ministry of Education. The data collected were analyzed using descriptive statistics to answer the research questions.

## Results

**Research Question One:** To What extent have UBE objectives been implemented in Public Basic School in Taraba State?

**Table 1: Rating of the head Teachers on the Implementation of UBE Objectives in public Basic School in Taraba State.**

S/N	UBE Objectives	Completely implemented	Partially implemented	Not implemented	Total Percentage %
1.	The provision of free, universal basic education for every Nigerian child of school going age	45(15%)	255(85%)	0(0%)	300(100%)
2.	The development in the entire citizenry, a strong consciousness for education	45(15%)	255(85%)	0(0%)	300(100%)
3.	The development of a strong commitment to the vigorous promotion of Education	52(16%)	252(84%)	0(0%)	300(100%)
4.	Ensuring the acquisition of appropriate levels of literacy	45(15%)	255(85%)	0(0%)	300(100%)
5.	Ensuring the acquisition of appropriate levels of numeracy and manipulative skills	45(15%)	255(85%)	0(0%)	300(100%)
6.	Ensuring the acquisition of appropriate level of communicative skills	54(18%)	246(82%)	0(0%)	300(100%)
7.	Ensuring the acquisition of appropriate levels of life skills	69(23%)	231(77%)	0(0%)	300(100%)
8.	Ensuring the acquisition of appropriate levels of ethical, moral and civic values	60(20%)	240(80%)	0(0%)	300(100%)
9.	Ensuring the acquisition of a solid foundation for life-long learning	60(20%)	240(80%)	0(0%)	300(100%)
10.	Reducing drastically the incidence of drop-out from the formal school system	75(25%)	225(75%)	0(0%)	300(100%)

Table 4.1 above shows the extent of the implementation of UBE objectives in Taraba State, as perceived by head teachers. The result shows that most of the respondents in Taraba State agree that the objectives of UBE in the Taraba State are partially implemented.

The results are presented in descending order, 255 (85%) of the Head Teachers asserted that provision of free universal basic education were partially implemented with 45 (15%) head Teachers agreed that the UBE programme was completely implemented; 255 (85%) head Teachers affirmed that development in the entire citizenry and a consciousness for education were partially implemented while 45 (15%) of the respondents submitted that UBE was completely implemented; 252 (84%) Head Teachers attested that development of Strong commitment to the vigorous promotion of education was partially implemented and 52(16%) of the respondents submitted that was completely implemented; 255 (85%) of the respondents submitted that ensuring the acquisition of appropriate levels of literacy and appropriate levels of numeracy and manipulative skills were partially implemented while 45 (15%) of head Teachers affirmed that were completely implement; 246 (82%) of the respondents submitted that ensuring the acquisition of appropriate level of communicative skills was partially implemented and 54 (18%) of the head Teachers asserted that it was completely implemented: 231 (77%) of the head Teachers agreed that ensuring the acquisition of appropriate level of life skills was partially implemented and 69(23%) of the respondents affirmed that it was completely implemented; 240 (80%) of the head Teachers attested that ensuring the acquisition of appropriate level of ethical, moral and civic values and acquisition of life-long learning were partially implemented and 60 (20%) of the respondents submitted that they were completely implemented; and 225 (75%) of the head Teachers asserted thatreduction in the incidence of dropouts from the formal school system was partially implemented and 75 (25%) of the respondents affirmed that it was completely implemented.

**Research Question Two:** What is the level of human resources available for the implementation of UBE programme in public Basic School in Taraba State?

**Table 2: Rating of the head Teachers on the availability of human resources for the Implementation of UBE Programme in public Basic School in Taraba State.**

S/N	Human resources	Sufficiently available	Not Sufficiently available	Total Percentage %
1.	School Head	288(96%)	12(4%)	300(100%)
2.	Assistant school head	141(47%)	159(53%)	300(100%)
3.	Subject Teachers	66(22%)	234(78%)	300(100%)
4.	Teacher-Librarian	78(26%)	222(74%)	300(100%)
5.	First-aid teacher	78(26%)	222(74%)	300(100%)
6.	Laboratory/workshop Attendants	6(2%)	294(98%)	300(100%)
7.	Computer operators	51(17%)	249(83%)	300(100%)
8.	Counsellors	78(26%)	222(74%)	300(100%)
9.	Bursars	102(34%)	198(66%)	300(100%)
10.	Clerical staff	78(26%)	222(74%)	300(100%)
11.	Technicians	45(15%)	255(85%)	300(100%)
12.	Security men	48(16%)	252(84%)	300(100%)
13.	Messenger-cleaners	168(56%)	132(44%)	300(100%)

Table 4.2, above shows that 288 (96%) of head Teachers in Taraba state agreed that school head were sufficiently available and 12 (4%) of the respondents were with the opinion that school head were not sufficiently available; 141 (47%) of the head Teachers asserted that Assistant head Teachers were sufficiently available and 159 (53%) stated that Assistant heads are not sufficiently available in the UBE schools; 66 (22%) of the respondents submitted that Subject Teachers were sufficiently available while 234 (78%) of the head Teachers stated that they were not sufficiently available; 78 (26%) head Teachers

asserted that teacher Librarian were sufficiently available and 222 (74%) were with the opinion that teachers Librarian were not sufficiently available in the UBE schools; 78 (26%) of the head Teachers also agreed that first aid teacher were sufficiently available and 222 (74%) of the respondents stated that first aid teacher were not sufficiently available in the UBE schools; 6 (2%) of the head Teachers asserted that laboratory/ workshop attendants were sufficiently available while 294 (98%) stated that laboratory/ workshop attendance were not sufficiently available; 51 (17) of the respondents submitted that computer operators were sufficiently available and 249 (83%) head Teachers agreed that the Compute operators were not sufficiently available in the UBE schools; 78 (26%) head Teachers affirmed that Counselors were sufficiently available while 222 (74%) of the respondents opted that counselors were not sufficiently available in the Schools; 102 (34%) respondents asserted that bursars were sufficiently available while 198 (66%) said that bursars were not sufficiently available; 78 (26%) of the respondents submitted that clerical staff were sufficiently available while 222 (74%) of the respondents submitted that they were not sufficiently available in the UBE schools; 45 (25%) of the respondents are with the opinion that Technicians' were sufficiently available while 255 (85) of the respondents submitted that they were not sufficiently available; 48(16%) of the respondents attested that security men were sufficiently available in the UBE schools while 252 (84%) of the respondents are with the opinion that they were not sufficiently available; and 168 (56%) asserted that messengers and cleaners were sufficiently available and 132 (44%) head Teachers asserted that they were not sufficiently available in the UBE schools.

This means that human resources for the implementation of UBE programme in public Basic schools in Taraba State is only sufficiently available in few of the sample schools and not sufficiently available in most of the sample schools visited.

**Research Question Three:** What is the level of Material resources available for the implementation of UBE programme in public Basic School in Taraba State?

**Table 3: Rating of the head Teachers on the availability of Material resources for the Implementation of UBE Programme in public Basic School in Taraba State.**

S/N	Material resources	Sufficiently Available	Not sufficiently available	Total Percentage %
1.	Classrooms	174(58%)	126(42%)	300(100%)
2.	Science laboratory	135(45%)	165(55%)	300(100%)
3.	Well-stocked library with books	120(40%)	180(60%)	300(100%)
4.	Workshops for intro-tech and technical subjects	12(4%)	288(96%)	300(100%)
5.	Workshops for Home Economics and Arts	12(4%)	288(96%)	300(100%)
6.	Head Master's/Principal's Office	282(94%)	18(6%)	300(100%)
7.	Asst. Head Masters'/ Vice Principals' Office	60(20%)	240(80%)	300(100%)
8.	Staff room	12(4%)	288(96%)	300(100%)
9.	School hall	6(2%)	294(98%)	300(100%)
10.	Chairs for staff	165(55%)	135(45%)	300(100%)
11.	Tables for staff	165(55%)	135(45%)	300(100%)
12.	Desks and chairs for pupils/students	72(24%)	228(76%)	300(100%)
13.	Toilets for male staff	105(35%)	195(65%)	300(100%)
14.	Toilets for female staff	105(35%)	195(65%)	300(100%)
15.	Toilet for male pupils/students	90(30%)	210(70%)	300(100%)
16.	Toilet for female pupils/students	90(30%)	210(70%)	300(100%)
17.	Store	75(25%)	225(75%)	300(100%)
18.	First-Aid Room/Sick bay	0(0%)	300(100%)	300(100%)
19.	Play field	60(20%)	240(80%)	300(100%)
20.	Perimeter fence	75(25%)	225(75%)	300(100%)
21.	First-aid Box	90(30%)	210(70%)	300(100%)
22.	School garden/farm	30(10%)	270(90%)	300(100%)
23.	Chalk/marker boards	135(45%)	165(55%)	300(100%)
24.	Electricity supply/generating set	0(0%)	300(100%)	300(100%)
25.	ICT facilities-computers	0(0%)	300(100%)	300(100%)
26.	Portable water/borehole	6(2%)	294(98%)	300(100%)

Table 4.3, above shows that 174 (58%) of the head teachers submitted that classrooms were sufficiently available in their schools while 126 (42%) head Teachers affirmed that they were not sufficiently available; 135 (45%) attested that science laboratories were sufficiently available in their schools while 165 (55%) opted not sufficiently available; 120 (40%) affirmed that libraries were sufficiently available in their schools and 180 (60%) were of the opinion that they were not sufficiently available; 12(4%) head Teachers attested that Intro- tech. and home Economics Workshops were sufficiently available while 288 (98%) opted for not sufficiently available ; 282 (94%) head Teachers affirmed that Headmasters/Principals office were sufficiently available in their schools and only 18 (6%) of the respondents disagreed; 60 (20%) of the respondents submitted that Assistant headmasters/Vice principals office were sufficiently available While 240 (80%) were of the opinion that they were not sufficiently available; only 12 (4%) of the head teachers asserted that staff common rooms were available in their schools while 288 (96%) stated that they were not sufficiently available; 6(2%) head Teachers asserted that school hall were sufficiently available while 294 (98%) opted for not sufficiently available; 165 (55%) head Teachers affirmed that chairs for staff were sufficiently available and 135 (45%) attested that they were not sufficiently available; 165

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(55%) respondents submitted that Table for staff were sufficiently available while 135 (45%) were of the opinion that, they were not sufficiently available; 103 (35%) affirmed that toilets for staff were sufficiently available in their schools and 195(65%) were of the opinion that they were not sufficiently available; 90 (30%) head Teachers affirmed that toilets for students/pupils were sufficiently available in their schools while 210(70%) disagreed; 75 (25%) Head teachers stated that Store were sufficiently available in their schools while 225 (75%) opted that they were not sufficiently available; all the 300(100%) Head teachers declared that First aid/ sick bays were not available in their schools; 60 (20%) of the respondents submitted that sports/play grounds were sufficiently available in their schools while 240 (80%) declared not sufficiently available; security perimeter fence was said to be sufficiently available in 75 (25%) of schools visited and not sufficiently available in 225 (75%) of the schools; first aid Box were said to be sufficiently available in 90 (30%) schools and not sufficiently available in 210 (70%) of the schools; 30 (10%) respondents declared that school garden/farm were sufficiently available in all the schools visited while 270 (90%) Head teachers disagreed; 135 (45%) Head teachers asserted that Chalk/ marker boards were sufficiently available while 165 (55%) of the respondents opted for not sufficiently available. This mean that classrooms, tables and chairs for staff, Head teachers offices were the only materials resources which is sufficiently available in the sample schools while chalkboards/marker boards, assistant head teachers and staff common rooms, libraries science laboratories, security perimeter fences, among others materials were not sufficiently available in most of the schools. However, none of the schools visited had ICT facilities, computer Laboratory, sick bay and electricity supply or generators.

### **Discussion of Findings**

Arising from the results presented above, a brief discussion of the findings of this study were made in relation to how the findings agree or disagree with the materials reviewed in related literatures as well as current issues in the area under study.

With regards to the implementation of the UBE objectives in Taraba State, the study came up with this major finding that UBE objectives are generally perceived by head teachers, to be partially implemented in Taraba State.

The partial implementation of the UBE objectives as in the first finding above, may be attributable to high level of corruption in policy implementation, poor funding and poor management of programme fund, dearth of data for planning, policy somersaults and policy inconsistencies as well as lack of political will and commitment. This finding agrees with the work of Amuchie, Asotibi and Audu (2013) that attempts in the past to provide free education whether at federal or state level, has never been successful due to poor planning and implementation. It is also in agreement with the observations of Aluede (2006), who questioned some initial guidelines associated with the UBE and further noted that the objectives of UBE did not differ significantly from that of UPE which failed majorly due to poor planning, and wondered whether the new scheme will not suffer the same fate.

These findings are also supported by the works of Ejere (2011) who asserted that poor implementation has been the bane of public policies in Nigeria, and the UNESCO\_EFA Global Monitoring Report (2009) which claimed that Nigeria has more primary school age children out of school than any other country in the world, and by Obioma (2006) who emphatically stated that some of the objectives of the UBE are not achievable in the near future. The first finding above is also in line with the conclusion of Osadebe (2011) that the extent of achievement of the UBE objectives in Delta State is low.

On the question of availability of relevant human resources for the UBE programme, the study revealed that there was shortage of all categories of staff, except for head teachers and messenger and cleaners.

The low level of human resources in Taraba State could be attributed to the inexplicably high cost of governance in the present democratic dispensation which leaves little or no funds for other vital activities

of government, including education. This has made it very difficult for employment of fresh hands to fill vacancies or for the replacement of retired or dead workers. Teachers are the key implementers of the basic education, but the programme is faced with the problem of inadequacy in number of this vital human resource. For effective and efficient execution of any educational programme, the right caliber of non-teaching staff must also be available.

These findings agree with the findings of Nwachukwu (2009) that basic education is plagued by acute shortage of professionally qualified teachers, and that the actualization of the goals and benefits of education for self-reliance is a heavy task on all UBE personnel, who obviously are in short supply. They are also in tandem with findings of Jekayinfa (2010), as well as that of Adamu and Adole (2015), who in separate works inferred gross inadequacy of teaching staff, especially.

On this, the study revealed that the level of material resources is generally low in Taraba State, it was observed that classrooms, tables and chairs for staff, Head Teachers offices were the only materials resources which is sufficiently available in sample schools while chalkboards/marker boards, assistant head teachers office and staff common rooms, libraries science laboratories, security perimeter fences, among others materials were not sufficiently available in most of the sampled schools. However, none of the sampled schools had ICT facilities, computer Laboratory, sick bay and electricity supply or generators in their respective Schools.

The findings disagree with the work of Edho (2009) that because of the financial burden of government, parents are forced to get involved in the funding of basic education and that funds released from the national fund to SUBEB is diverted thus shifting the burden to parents in terms of levies.

Comparing the level of material resources available in schools in both states with the minimum standard for basic education Universal Basic Education Commission, 2010), the study showed that none of the schools in the two states have met the minimum requirements in full, meaning that the shortage of material resources is real. The findings agree with the work of Agabi (2005), (FME 2009) and Oladunjoye (2010) on the state of facilities in Nigerian schools.

They also corroborated the findings of Odili and Osadebe (2008), Falaye (2009), and Osiobe (2010), who variously agreed that there was declining concern for the nature of the learning environment and that physical resources were not adequate in schools.

### **Conclusion**

The findings from this study concluded that the extent of implementation of the UBE programme in Taraba State is low. This implies that a lot still need to be done in the area of human and material resources, curriculum implementation, employing more qualified and professional teachers who will be able to teach the learners, giving teachers maximum motivation and availing them the opportunity to be retrained as often as possible on new methods and uses of modern teaching technologies that will enhance teaching and increase students enrolment.

### **Recommendations**

Based on the findings of this study, the following recommendations are made, with the hope that if faithfully implemented it, could restore a focus and programme integrity of the UBE.

1. There should be an effort by all stakeholders to ensure that the UBE objectives is fully implemented in the public basic schools.
2. That there should be concerted effort by all stakeholders to ensure that sufficient human resources are available in all the schools whether primary or Junior Secondary in Taraba State.
3. The State Universal Basic Education Board should ensure that human resources are

provided and evenly distributed across the public basic schools for the implementation of the UBE programme in Taraba State.

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ANALYSIS OF GENDER-RELATED DIFFERENTIAL ITEM FUNCTIONING OF 2021 NECO  
BECE MATHEMATICS MULTIPLE-CHOICE ITEMS IN NIGERIA

OLUTOLA Adekunle Thomas PhD, ALI Binta Ado PhD, APENANIBO Terkaa Jude  
aolutola@fudutsinma.edu.ng; baali@fudutsinma.edu.ng; apenat.jude@fudutsinma.edu.ng  
Department of Educational Psychology and Counselling  
Faculty of Education, Federal University Dutsin-Ma, Katsina State

**Abstract**

*This study examined the Gender-related Differential Item Functioning of 2021 NECO BECE Mathematics Multiple-Choice Items in Nigeria. The survey research design was adopted. The target population comprised five thousand one hundred and seventy-eight (5,178) junior secondary school three (JSS 3) students in Federal Unity Colleges in North Central, Nigeria. A sample of one thousand two hundred and seventy-five (1,275) was drawn through proportionate stratified random sampling. The 2021 NECO (BECE) Mathematics multiple-choice test served as the instrument for data collection. The instrument was not validated based on it's a standardized test developed by National Examinations Council (NECO). The instrument was administered to students in a school which is not part of the sample. The 2021 NECO (BECE) Mathematics multiple-choice test was the primary instrument. Content validity was affirmed by mathematics education experts, and reliability for the study sample was established with a Cronbach's alpha of 0.78. Data obtained for the study were analyzed using Binary Logistic Regression, chosen for its capacity to detect both uniform and non-uniform DIF and provide interpretable odds ratios. Findings revealed that three (3) items functioned differentially in favour of male candidates and one (1) item favour female candidates, which show that, there is significant difference in the items which functioned differentially in the 2021 Mathematics NECO (BECE) multiple choice items in North-central, Nigeria based on gender. Based on the finding of the study conclusions were made and appropriate recommendations were made.*

**Keywords:** Differential Item Functioning, Gender, Mathematics Achievement, NECO, BECE, Multiple-Choice Test

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**Introduction**

Testing remains one of the most important processes in educational assessment, providing the basis for decisions about students' placement, progression, and certification. Among the different forms of assessment is multiple-choice tests item that are particularly valued for their objectivity, efficiency in covering wide curriculum content, and ease of scoring (Aminu & Okonkwo, 2021). In Nigeria, the Basic Education Certificate Examination (BECE), conducted by the National Examinations Council (NECO), is a key assessment at the end of basic schooling, determining students' educational achievement and readiness for senior secondary education.

However, for such high-stakes examinations to be considered fair and valid, the test items must be free from biases and measure the intended construct across all groups, irrespective of irrelevant personal attributes such as gender, school location, or school type (Obioma & Salau, 2020; Queen soap & Orluwene, 2019). When items behave differentially for subgroups of examinees who possess the same underlying ability is referred to as Differential Item Functioning (DIF) (Zhang & Stout, 2016; Boone, Staver & Yale 2020). Olutola and Nuraddeen (2025) opines that, DIF occurs when examinees from

different groups of the same ability show different probabilities of success on the item after matching on the underlying ability that the item is intended to measure.

Gender is an important variable in the school system. Gender is one of the most extensively studied variables in DIF research (Olutola, Ihechu & Nuraddeen 2022). Numerous studies have shown mixed findings regarding gender differences in mathematics performance. Some researchers have reported that males outperformed females in certain mathematics domains (Okeke & Nwankwo, 2018; Akanwa, Ihechu & Nkwocha, 2022), while others found no significant difference or even female advantage in specific cognitive tasks (Ezenwa, Nwankwo & Eze, 2021; Adewale & Yusuf, 2019). These inconsistencies underline the importance of evaluating test fairness at the item level rather than relying solely on overall scores.

In Nigeria and other developing countries, both genders can influence students' attitudes towards mathematics, potentially leading to test bias. While NECO strives to ensure fairness, empirical evidence is required to verify that its items function equally well for both male and female candidates. High-stakes examinations such as the National Examinations Council BECE are expected to provide an unbiased measure of students' academic ability. However, several studies in Nigeria and elsewhere have raised concerns about potential item bias in standardized mathematics tests (Ihechu & Madu, 2016). When DIF exists in an examination, candidates of equal ability from different gender groups may have unequal chances of answering items correctly, thereby questioning the fairness and validity of the test.

Gender-related DIF is particularly important in mathematics because of the persistent debate over gender gaps in STEM fields (UNESCO, 2022). Although previous studies have examined DIF in BECE and other national examinations, most have focused on earlier years or combined multiple variables such as school location and type, leaving limited recent evidence on gender DIF in NECO (BECE) Mathematics.

High-stakes standardized tests like the NECO (BECE) are pivotal in determining the educational and professional trajectories of Nigerian students. For these examinations to be valid and equitable, they must provide a fair and unbiased measure of academic ability for all candidates, irrespective of gender. Despite the National Examinations Council's (NECO) commitment to fairness, the potential for test bias, particularly Differential Item Functioning (DIF) related to gender, remains a significant concern.

The existence of DIF in mathematics tests is especially critical due to mathematics' role as a gateway subject for Science, Technology, Engineering, and Mathematics (STEM) careers. Persistent socio-cultural beliefs and gender stereotypes in Nigeria can influence students' engagement and performance in mathematics, potentially leading to biased test items that systematically favour one gender over another (Bello & Olatunji, 2023). When items with DIF are present, they compromise the validity of the examination, as students of equal ability do not have an equal probability of success, thereby undermining the fairness of the entire assessment system. While previous studies have examined DIF in Nigerian examinations, there is a scarcity of recent, focused evidence on gender-based DIF in the NECO (BECE) Mathematics test. For instance, studies like Madu (2012) and Abedalaziz (2010) found evidence of DIF favouring males, suggesting a persistent issue. However, other researchers, such as Yusuf and Dauda (2022) and Lawal and Salami (2023), reported no significant gender DIF, creating an inconsistent and inconclusive body of literature. This inconsistency underscores the need for continuous, test-specific DIF analysis.

The core problem this study addresses is the lack of contemporary, empirical evidence on the fairness of the 2021 NECO (BECE) Mathematics test specifically concerning gender. This gap is critical given the high-stakes nature of the examination and the ongoing concern about gender equity in STEM education in Nigeria. Crucially, a recent and comprehensive study by Olutola (2021) on the 2019 NECO Mathematics objectives test found that 12 out of 60 items exhibited significant DIF, with a majority favouring male students. This finding directly highlights that gender bias is not a hypothetical concern but a documented

issue in recent NECO mathematics papers. It is therefore imperative to investigate whether this pattern of bias persisted in the subsequent 2021 examination.

Therefore, this study is necessitated by the critical need to provide empirical, up-to-date evidence on the fairness of the 2021 NECO (BECE) Mathematics items. The problem this study investigates is whether items in the 2021 examination function differentially for male and female students of equal mathematical ability, thereby identifying potential bias and contributing to the improvement of test quality in Nigeria.

### **Purpose of the Study**

The main purpose of this study was to examine analysis of gender-related differential item functioning of 2021 NECO (BECE) Mathematics multiple-choice items in Nigeria.

Specifically, the study seeks to:

- i. determine the items in the 2021 National Examinations Council Basic Education Certificate Examination Multiple-Choice Mathematics items that functioned differentially by gender.

### **Research Hypothesis**

The following research hypothesis is formulated to guide the study:

Ho<sup>1</sup>: There is no significant difference in the items that functioned differentially in the 2021

National Examinations Council Basic Education Certificate Examination multiple choice Mathematics examination paper based on gender.

### **Methodology**

The survey research design was adopted. The target population comprised five thousand one hundred and seventy-eight (5,178) junior secondary school three (JSS 3) students in Federal Unity Colleges in North Central, Nigeria. The sample comprised one thousand two hundred and seventy-five (1,275) Junior Secondary School Three (JSS 3) students drawn through proportionate stratified random sampling. The strata were defined by the six Federal Unity Colleges in North Central, Nigeria. The sample consisted of six hundred and seventy-five (675) male and six hundred female students, ensuring proportional gender representation from each school.

The 2021 NECO (BECE) Mathematics multiple-choice test served as the instrument for data collection. As a standardized national examination, its content validity is established. For this study, its contextual appropriateness was confirmed by two experts in mathematics education.

The instrument was pilot-tested with fifty (50) JSS3 students from a non-participating school to check for administrative clarity. The data obtained was analyzed using Cronbach's formula with the reliability index of 0.78. This reliability was computed on the current study's sample, indicating good internal consistency. Data obtained for the study were analyzed using Binary Logistic Regression (BLR) to detect items functioning differentially by gender. Binary Logistic Regression (BLR) was selected for its robustness in modeling both uniform and non-uniform.

### **Results**

**Hypothesis 1:** There is no significant difference in the items that functioned differentially in the 2021 National Examinations Council Basic Education Certificate Examination multiple choice Mathematics examination paper based on gender.

**Table 1: Binary Logistic Regression of DIF by Gender for 2021 Mathematics NECO (BECE) multiple-choice Items**

Item	B	S.E	Wald	Sig	Exp (B)	95% C.I for Exp (B)		Decision
						Lower	Upper	
1.	.192	.122	2.484	.115	1.212	.954	1.538	NO DIF
2.	-.142	.124	1.311	.252	.867	.680	1.107	NO DIF
3.	.138	.117	1.406	.236	1.148	.914	1.443	NO DIF
4.	.084	.112	.558	.455	1.088	.873	1.356	NO DIF
5.	.026	.113	.051	.821	1.026	.822	1.282	NO DIF
6.	-.052	.115	.210	.647	.949	.758	1.188	NO DIF
7.	.128	.112	1.289	.256	1.136	.912	1.416	NO DIF
8.	-.167	.113	2.179	.140	.846	.678	1.056	NO DIF
9.	-.069	.112	.379	.538	.933	.749	1.163	NO DIF
10.	-.091	.114	.642	.423	.913	.731	1.141	NO DIF
11.	.103	.114	.819	.365	1.109	.887	1.386	NO DIF
12.	.176	.113	2.438	.118	1.192	.956	1.487	NO DIF
13.	.026	.113	.054	.817	1.026	.823	1.280	NO DIF
14.	-.034	.113	.093	.761	.966	.775	1.205	NO DIF
15.	.064	.112	.324	.569	1.066	.855	1.329	NO DIF
16.	.007	.119	.003	.955	1.007	.797	1.271	NO DIF
17.	.211	.116	3.319	.069	1.235	.984	1.551	NO DIF
18.	.074	.112	.428	.513	1.076	.864	1.341	NO DIF
19.	.052	.122	.185	.667	1.054	.830	1.338	NO DIF
20.	.151	.115	1.724	.189	1.163	.928	1.458	NO DIF
21.	.086	.113	.583	.445	1.090	.874	1.360	NO DIF
22.	-.106	.121	.766	.381	.900	.710	1.140	NO DIF
23.	-.120	.113	1.124	.289	.887	.711	1.107	NO DIF
24.	-.158	.113	1.935	.164	.854	.684	1.067	NO DIF
25.	.003	.112	.001	.979	1.003	.805	1.250	NO DIF
26.	-.116	.112	1.074	.300	.890	.714	1.109	NO DIF
27.	.013	.112	.013	.911	1.013	.813	1.262	NO DIF
28.	.006	.112	.003	.958	1.006	.807	1.254	NO DIF
29.	.054	.113	.234	.629	1.056	.847	1.317	NO DIF
30.	-.192	.113	2.905	.088	.825	.662	1.029	NO DIF
31.	.106	.114	.876	.349	1.112	.890	1.390	NO DIF
32.	-.281	.113	6.174	<b>.013*</b>	.755	.605	.942	DIF
33.	-.102	.113	.822	.365	.903	.724	1.126	NO DIF
34.	-.210	.113	3.469	.063	.811	.650	1.011	NO DIF

35.	-.024	.112	.045	.833	.977	.784	1.217	NO DIF
36.	.165	.123	1.786	.181	1.179	.926	1.501	NO DIF
37.	.190	.118	2.572	.109	1.209	.959	1.525	NO DIF
38.	.199	.120	2.740	.098	1.220	.964	1.545	NO DIF
39.	.031	.117	.071	.789	1.032	.821	1.296	NO DIF
40.	-.036	.112	.100	.751	.965	.774	1.203	NO DIF
41.	-.002	.112	.000	.984	.998	.801	1.243	NO DIF
42.	.095	.114	.697	.404	1.099	.880	1.374	NO DIF
43.	.012	.112	.011	.916	1.012	.812	1.261	NO DIF
44.	.130	.112	1.349	.245	1.139	.914	1.420	NO DIF
45.	-.101	.113	.801	.371	.904	.725	1.128	NO DIF
46.	.254	.112	5.095	<b>.024*</b>	1.289	1.034	1.607	DIF
47.	.045	.112	.158	.691	1.046	.839	1.303	NO DIF
48.	.027	.113	.057	.811	1.027	.824	1.281	NO DIF
49.	-.114	.112	1.034	.309	.892	.716	1.112	NO DIF
50.	-.035	.113	.097	.756	.966	.774	1.204	NO DIF
51.	.259	.113	5.263	<b>.022*</b>	1.296	1.038	1.617	DIF
52.	.126	.113	1.249	.264	1.135	.909	1.416	NO DIF
53.	.240	.112	4.548	<b>.033*</b>	1.271	1.020	1.585	DIF
54.	-.116	.113	1.060	.303	.890	.713	1.111	NO DIF
55.	.174	.112	2.386	.122	1.190	.954	1.483	NO DIF
56.	.097	.113	.744	.388	1.102	.883	1.375	NO DIF
57.	.085	.112	.577	.448	1.089	.874	1.357	NO DIF
58.	.126	.112	1.259	.262	1.134	.910	1.414	NO DIF
59.	-.128	.113	1.273	.259	.880	.704	1.099	NO DIF
60.	.050	.112	.196	.658	1.051	.843	1.310	NO DIF

Variables on Gender: \*DIF EXIST; Items 32, 46, 51 and 53 only.

**Table 2: Gender Cross Tabulation in Group Performance of 2021 Mathematics NECO (BECE) multiple choice Items.**

Items	Dichotomous Score	Male	Female
<b>Q32</b>	INCORRECT	327	249
	CORRECT	348	<b>351*</b>
<b>Q46</b>	INCORRECT	306	310
	CORRECT	<b>369*</b>	290
<b>Q51</b>	INCORRECT	283	290
	CORRECT	<b>392*</b>	310
<b>Q53</b>	INCORRECT	305	307
	CORRECT	<b>370*</b>	293

**a = the gender that DIF favoured**

Table 1 and 2 shows four (4) items that identified significant DIF in gender of students using binary logistic regression analysis with the aid of SPSS version 23 which items 32, 46, 51 and 53 reveals significant differences between male and female students with significant level less than 0.05, i.e ( $P < .05$ ). This represents 7% of the total in the 2021 Mathematics NECO BECE multiple choice items while 93% of items do not differentiate significantly between male and female students. The results further reveal that, item Items 46, 51 and 53 favoured male students which placed the female students at disadvantaged group which DIF was found only from item 32. Therefore, there is significant difference in the items that functioned differentially in the 2021 Mathematics NECO (BECE) multiple choice items in North Central Nigeria based on gender. Thus, the null hypothesis one is rejected.

### **Discussion of Findings**

The finding of hypothesis revealed a significant difference in the items that functioned differentially by gender in 2021 NECO (BECE) Mathematics items. A small subset of items (7%) showed statistical DIF, with three items favouring males and one favouring females. This pattern is consistent with studies like Madu (2012) and Abedalaziz (2010), which also reported male advantages in certain mathematics domains, potentially linked to spatial reasoning or context familiarity. However, the failure of these items to retain significance after multiple testing corrections aligns more closely with the findings of Yusuf and Dauda (2022) and Lawal and Salami (2023), who reported no significant gender bias.

### **Conclusion**

The researcher concluded that, while a small number of items in the 2021 NECO (BECE) Mathematics examination initially showed signs of gender-related Differential Item Functioning, these findings were not robust to statistical correction for multiple comparisons. Therefore, the examination as a whole demonstrates a high degree of gender fairness. Nonetheless, the pattern observed in a few items underscores the value of continuous DIF monitoring and qualitative item review to uphold the highest standards of assessment equity.

### **Recommendations**

1. NECO and other examining bodies should initiate specialized training programs for their item writers and test development committees. This training should focus on identifying and mitigating sources of construct-irrelevant variance that may lead to DIF, such as context, phrasing, or illustrative examples that could be unconsciously gendered. The goal is to proactively build fairer tests from the outset, rather than solely relying on post-hoc statistical detection.
1. NECO examining body should establish a qualitative item review panel which will propose the establishment of a permanent, diverse review panel comprising experts in gender studies, mathematics pedagogy, and curriculum development. This panel would conduct a qualitative and sensitivity review of all mathematics items before they are finalized. Their role would be to scrutinize items for potential biases that statistical DIF analysis might only catch after the examination has been administered, thereby adding a crucial layer of preventative quality control.
2. Educational research bodies and examining agencies like NECO commission in-depth qualitative and mixed-methods studies specifically focused on the items flagged for DIF. Instead of just identifying that an item favors one gender, this research should investigate why by using think-aloud protocols and interviews with male and female students. Understanding the cognitive processes and reasoning behind the differential performance is essential for creating meaningful, evidence-based guidelines for future item writing.

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