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It is no gainsaying the fact that this maiden publication Volume 1, No. 1 (January, 2025) of AKSU International Journal of Research in Education (AKSUIJRE) contains well researched, discussed and peer-reviewed academic papers that make positive contributions to knowledge, practices and pedagogy of education. There is no doubt whatsoever that individuals, researchers, teachers, educators, counsellors, agencies, administrators saddled with the responsibility of addressing issues and challenges in education would find the papers useful reference materials. Moreso, Postgraduate students pursuing their Masters and Doctorate Degree programme in various fields of Education and across other disciplines will find AKSUIJRE an inspiring companion.

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## **GUIDELINES FOR PREPARATION AND SUBMISSION OF ARTICLES FOR AKSU INTERNATIONAL JOURNAL OF RESEARCH IN EDUCATION (AKSUIJRE)**

The editorial board of AKSU International Journal of Education (AKSUIJRE) is seeking articles for the next edition of the journal. The guidelines for preparation and submission of research and position based articles in all areas of education including: science, arts, foundations and humanities would be as follows:

1. The article should be the original work of the author(s).
2. The cover page of the article should carry the title of the paper, author(s) full names, institutional affiliation(s), phone numbers and email addresses.
3. The subsequent page should contain the title of the article (no abbreviation), not more than 20 words, abstract of not more than 250 words typed in single-line spacing and keywords between 3-4 words.
4. The manuscript should be precise, typewritten in double-space on A4 paper and not more than 12-15 pages (including abstract and references), (Maximum of 4500 words).
5. Tables and figures should be closed and logically presented and be included within the 12-15 pages.
6. Citations in the manuscript and references should follow the APA (7<sup>th</sup> edition) format and the references should be arranged in alphabetical order and consistent with the context citations.
7. Articles submitted for publication in AKSUIJRE should not be submitted for consideration in another journal.
8. Articles which do not conform to the above specifications will not be sent out for review.
9. Submitted articles must be accompanied with the sum of **Five Thousand Naira (#5,000.00)** as vetting fee.
10. Articles should be submitted as an attachment to the Managing Editor using the email address: [andrewabasi@aksu.edu.ng](mailto:andrewabasi@aksu.edu.ng)
11. Articles are accepted throughout the year but published twice a year – January and July.
12. Published articles are available both in hard copies and online.

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## **Insecurity and Provision of Quality Education in Nigeria**

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### **Abstract**

The Nigerian nation has for the past two decades, been plagued by unprecedented crises such as economic downturn, terrorism, banditry, militancy, religious extremism, kidnapping, corruption, leadership crises and more. The educational system being a part of the mainstream society has not been spared from these maladies. This paper discusses insecurity and quality education in Nigeria. It examines the concept of insecurity and quality education, types of insecurity, causes of insecurity, the effects of insecurity on the provision of quality education and factors militating against security delivery in educational institutions. Arising from the discussions, some suggestions for maintaining security to achieve quality education are provided.

**Keyword:** Insecurity, education, quality, Nigeria.

### **Introduction**

Education is the foundation of national developments and the channel through which individuals in the society achieve their life goals. Without peace, no functional and quality education can thrive. Globally, there is a rising wave of insecurity and the educational system is not spared from this problem (Ekpoh, Edet & Ukpog, 2020). The rising wave of insecurity in the nation has been a source of great concern recently. In the 60s, 70s and up to 80s, educational environments were relatively peaceful for teaching-learning process to go on without hindrance. However, the situation changed since in the 1990s. Recent happenings have shown that educational environments are not so safe for the students and the school personnel any more, due to some threatening security challenges.

Insecurity means a state of being unsafe, fearful and being threatened. Insecurity varies in dimensions and magnitude across regions in Nigeria. Each region in Nigeria seems to be confronted with different forms of insecurity. For instance, in the North Eastern region there is Boko Haram, a sect with an ideology that is opposed to western education and anything it represents. The IA- Foundation (2024) describes Boko Haram as a major driver of insecurity in Nigeria that perpetuates violent attacks on citizens. In the North West there are banditry and cattle rustling. In the West, there is the Odua People's Congress (OPC). In the Eastern region, there are such groups as the Movement for the Actualization of Biafra (MOSSOB), who advocates for self-independence, together with the Indigenous People of Biafra (IPOP), who encourage defiant actions such as sit at home every Monday, which disrupts school activities on such days all throughout the year. Ogunode, Umeora and Olatunde (2022) reported that IPOP disrupted teaching and learning and that teachers and students are not usually allowed to come for teaching and classes regularly. Militancy and kidnapping exist in the South-South region, while in the Middle Belt farmers and herdsmen deadly clashes are prevalence. In all these security crises, Nwankwo (2013) noted that the educational system is unavoidably the first casualty in times of serious national security problems. Apart from this, in serious security crises situations, schools are closed and school buildings and facilities taken over and occupied either by the aggressor or intervention forces or humanitarian relief workers. With this, progress in the provision of quality education programmes suffer near total collapse as educational services are not delivered and curriculum implementation poor.

Insecurity is a formidable threat to providing quality education to the teeming population of Nigerian children. According to Mensah, Baafi, Arthur, Somuah, and Mprah (2019) educational institutions are no longer

safe havens for learning but have become targets of violence and terror. Over the last 10 years since the 2014 Chibok school girls' abduction, Nigeria has been grappling with the alarming escalation of insecurity within the educational sector. The reality of insecurity is that no educational institution is free from attacks and many Nigerian school children and teachers have become victims of abduction, kidnapping and ransom demands. In the process, many innocent children have lost their lives, some taken as hostages, some forced into early marriages, some have dropped out of schools and some schools have been closed, leaving many students stranded and without hope of having education. It has been reported that insecurity crises have caused the closure of 11,536 schools in Nigeria since December, 2020 (IA Foundations, 2024).

Safe-guarding the academic environment for educational activities is very important. It is for this reason that Okebukola (as cited in Youdeowei and Iruoma, 2015) submits that "no safe school, no future for the world". The author gave three reasons to justify this assertion as follows; (i) The dream of harnessing the power of education for achieving goals in health, food, employment, enrolment, energy, security will come to naught. (ii) Without safe schools, the vision of education for all will remain a pipe dream (iii) Quality education yearned by all countries of the world will be hindered.

Xaba (2014) describes safe school environment as one that is not dangerous and possess no threats to physical, emotional, psychosocial and psychological well-being of the occupants. In other words, it is an environment that is secure and free from threat and danger. This is needful because as cautioned by Gomme and Micucci (1997), the perception of school environment as a dangerous place may erode the quality of academic and social life for students, faculty, as well as, undermining a school's ability to attract and retain both clientele and personnel. The focus of this discourse is on insecurity and quality education in Nigeria.

### **Meaning of insecurity**

Insecurity is a situation in which a society that once enjoyed peace and tranquility is no longer secure. It is a state of being fearful, unsafe and threatened. Insecurity means sustained increase in violence, criminal activity and general lawlessness, which threatens the safety, stability and well-being of members of a community. Achumba, Ighomereho and Akpan-Robaro (2013), defines insecurity as a condition of being open or subject to danger or threats of danger, where danger is the condition of being susceptible to harm or injury. To Ogege (2013), insecurity is a situation in which members of the society cannot go about their daily activities as a result of threat and harmful interference with their lives and properties. Belard (as cited in Kpee, Uchendu and Bright 2013) defined insecurity as the absence of protection from crime and lack of freedom from psychological harm. Insecurity has been a serious threat to the provision of quality education as it has resulted in massive loss of lives of staff, students and school properties.

### **Quality**

Quality is something that is of high value, very good and of high standard. According to Asiyai (2014), quality is defined as a measure of how good or bad the products of education institutions in Nigeria have become. Quality has a connotation of differentiation according to standards or grades. To Saleh, Uwaleke and Allahnana (2019), quality in the field of education refers to the highest or finest standards to be pursued, a sort of degree of excellence to be aspired to.



### **Quality education**

Quality education is one that produces a whole individual and prepares the individual for success in life. It is based on a holistic development that equips one with knowledge and skills for the future as well as inculcating the right values and imbuing students with positive learning attitudes. Quality education is one which is relevant to the needs of the society. It is the type of education that takes place in a learner-friendly environment, with supportive learning facilities and quality teachers that are continuously developed to cope with global changes in educational sector. Quality education can only be provided in a safe and secure environment.

### **Types of insecurity in educational institutions**

Various types of insecurity exist that threaten the lives, properties, peace and tranquility in educational institutions and thus, hinder the provision of quality education. They include:

1. Abduction and kidnapping for ransom
2. Cultism
3. Boko Haram insurgency
4. Militancy
5. Armed robbery
6. Communal clashes
7. Vandalism
8. Arson
9. Assassination
10. Ritual Killings
11. Religious extremism and intolerance.
12. Farmer/ Fulani herdsmen clashes
13. Banditry
14. Suicide bombing
15. Piracy
16. Militant Biafran separatists
17. Stealing

### **Some Cases of Security Threats in Nigerian Educational Institutions**

Ekpoh, Edet and Ukpog (2020), has catalogued some incidence of security threats in Nigerian educational institutions as follows:

1. In 2011, students of University of Calabar went on rampage over increase in school charges, destroying buildings, facilities, cars and entering staff residential areas to destroy houses and staff properties worth millions of Naira. The security personnel were over powered by the rioting students. This incident resulted in the loss of academic months (Ekpoh, 2018).
2. In 2012, about 40 students of Federal Polytechnic Mubi were massacred by Boko Haram terrorist group.
3. In 2013, students of University of Abuja demonstrated over non-provision of adequate laboratory facilities for medical and engineering students, which led to failed accreditation.
4. In 2013, students of University of Uyo rioted against school authorities due to increase in intra-campus transport fare and insufficient lecture halls. This led to the destruction of school properties on campus and also the loss of a student's life.

5. On August 16<sup>th</sup> 2013, a female student of Abia State University was held hostage for over one hour and gang-raped by persons suspected to be cultists.
6. On 18<sup>th</sup> December 2013, suspected cultists attacked and killed Dr. Segun Onabanjo, a Senior Lecturer in The Department of Sociology of Olabisi Onabanjo University (OOU), Ogun State.
7. On 3<sup>rd</sup> April 2015, Mrs. Awala George, a lecturer in University of Port Harcourt was kidnapped but later freed by police operatives eight days later (Oni, 2016)
8. On April 14<sup>th</sup> 2014, about 276 girls were abducted from Government Secondary School, Chibok. The girls were in the process of writing their Senior School Certificate Examination. This particular incident attracted global condemnation. Some of the girls have since been released while others are still in captivity till date.
9. In July 2015, an 18-year-old admission seeker in University of Lagos was raped by a lecturer.
10. On August 29, 2015, a 4<sup>th</sup> year law student of the University of Calabar was sexually assaulted by her lecturer, the then Dean of Faculty of Law.
11. In the University of Calabar Staff Quarters, lecturers were attacked and three persons were kidnapped on May 23<sup>rd</sup> 2016. The incident of 23<sup>rd</sup> May led to one week withdrawal of service by academic staff.
12. In July 2016, a female under-graduate of Babcock University, Ogun State, was kidnapped her friend to make money from the parents (Oladipo, Awoyinfa & Adefarakan, 2018).
13. In 2017, a Professor in the Department of Zoology, University of Calabar was kidnapped by gunmen while he was jogging on campus at about 6.40 am. The kidnapped lecturer was dragged for over 100 meters on the road by his abductors amidst intense gun shooting, before whisking him away to a waiting boat at the Big Qua River that borders the University.
14. On 16<sup>th</sup> January 2017, two suicide bombers attacked University of Maiduguri, killing three people including a professor.
15. On 19<sup>th</sup> February, 2018, 111 secondary school girls from Government Girls' Science and Technical College, Dapchi, Yobe State were abducted.
16. In May 2019, a final year male student in Cross River State University of Technology was butchered in the classroom by persons suspected to be a rival cultist group.
17. On February 17, 2020, an Associate Professor in the Institute of Public Administration, University of Calabar was kidnapped in his house. His abductors demanded the sum of N50 million ransom.
18. In April 2020, three students of University of Port Harcourt were kidnapped, killed and subsequently buried in a shallow grave.
19. On 27<sup>th</sup> May, 2020 some suspected assassins entered University of Calabar staff quarters and killed a policeman on duty and escaped with his gun. The suspects escaped without being apprehended.

Also, IA Foundation (2024) reports that between January to September 2021, more than 20 attacks on schools were reported where over 1400 children were abducted, 16 killed and over 200 missing. In March 2024, gunmen were reported to have attacked a primary school in Kaduna State, abducting 227 students alongside many teachers and the head teacher. The aforementioned cases are not exhaustive. There are many more incidents of insecurity till date, which indicates that educational institutions in Nigeria are no longer safe havens but have been seriously infiltrated and invaded by criminals.

## **Causes of insecurity in Nigeria**

A number of factors are responsible for the high level of insecurity in Nigeria. The following are the major causes of insecurity in Nigeria:

1. **Bad governance:** Government that is insensitive to the plight of the teeming population. Government that consistently formulates policies without due consideration of the welfare of the citizens, and the outcome which is abject poverty among the citizenry. There is high level of impunity among the political class and non-compliance to the rule of law is a common feature of governance in Nigerian society. This situation has been observed by Oke (2021) that some Nigerian leaders consider themselves superior to their followers because of their levels and positions of authority, and this is not good for mutual cooperation in tackling security threats.
2. **Unemployment:** Most youths in Nigeria are unemployed. The current unemployment rate in Nigeria is put at 36%. It is rather unfortunate that most graduates from universities stay for periods up to 10 years and above without jobs. Zakaria (as cited in Okosun 2013), noted that the unemployed youths are easy tools in the hands of politicians. The saying that an idle mind is a devil's workshop becomes manifest when able-bodied youths are prepared to work but with no available work and are easily lured into criminality.
3. **Unequal socio-economic development of the various regions** has led to inter-ethnic and intra-ethnic conflict. The dissatisfaction by the youths of South-South (Niger Delta) on the paltry development given to their region and the damage done to their ecosystem by oil exploration and exploitation are the major causes of alarming rates of insecurity in the region.
4. **Poverty:** Another major cause of insecurity is the dehumanizing poverty situation in Nigeria. Poverty is defined as a condition of lacking the basic necessity of life such as food, shelter and clothing. A greater number of people in Nigeria are living below two Dollars a day (Padilla, 2024). The poverty index released by the Federal government in 2022 indicated that 130 million Nigerians were poor. Also, a World Bank 2022 report indicated that 4 in 10 Nigerians live below 1.90 USD per day. Nigeria is ranked among the 25 poorest nations of the world, below other African countries like Ghana and Kenya, despite its abundant natural resources. Kale (2012) laments that 112.519 million Nigerians live in relative poverty conditions. According to Kolade (2013), poverty is the cause of all the woes – terrorism, kidnapping, piracy, and so on, experienced in Nigeria. This assertion is confirmed by Olatunde and Onwudiwe (2013), who observed that the greater percentages of the Boko Haram sect members are poor and illiterate people who do not see the need to stay alive. When an individual has basic needs and there is no hope of satisfying the needs, the available option is to look for money through whatever means to solve the problem. Hence involvement in crime.
5. **Poor parental upbringing:** Good family upbringing is a sure foundation for good societal behaviour. Unfortunately, most children are not properly raised by their parents and so do not have good moral values for proper societal conduct. They engage in anti-social behaviour. The Almajiri's in Northern Nigeria is a clear example of children without proper upbringing and this has made them to be easily indoctrinated and recruited into criminality.

6. Corruption: This is another major contributory factor to insecurity in Nigeria. Corruption is perpetuated at all levels of governance in the country, which has been a major reason for the deplorable situation currently being experienced in Nigeria. Unfortunately, the Judiciary which could have acted as a watchdog is also involved in corruption, making the situation almost hopeless.

Furthermore, Achumba, Ighomeroho and Akpan-Robaro (2013), also identified the following as causes of insecurity in Nigeria:

1. Lack of institutional capacity resulting from government failure to deliver public services and provide for the basic needs of the masses.
2. Inequality and unfairness, which has contributed to the high level of dissatisfaction among members of the society. Government policies are not people friendly and political offices are no longer equitable.
3. A mis-match between the public and government perceptions on socio-economic issues. The government and the citizens no longer operate on the same level concerning issues that pertain to the citizens, such as petroleum product pricing.
4. A weakness in the security architecture of the nation, where there are inadequate facilities and equipment for law enforcement personnel in the discharge of their duties.

### **Insecurity and quality education provision**

Insecurity in whatever form it may manifest has disrupted quality education provision in many parts of Nigeria, especially in northern parts, middle belt and eastern states of Nigeria. Schools have increasingly become targets of attacks and this has at times led to closure of institutions for months, leading to displacement of students and teachers. The prevailing insecurity, particularly in the northern part of the country, has resulted in the abduction of innocent school children and forced the closure of schools due to concerns for safety of both teachers and students. This has made it impossible for the curriculum in the affected schools to be covered. Insecurity challenges has caused the closure of 11,536 schools in Nigeria since 2020, affecting the education of 1.3 million children (IA Foundation, 2024). The fear of attack has influenced parents from sending their wards to schools, thus leading to an increase in the number of out of school children in the country. It is alleged that Nigeria has the highest number of out-of-school children globally, with about 18.5 million Nigerian children out-of-school (UNESCO, 2022). This figure is alarming and does not augur well for educational development and the desire for quality education in Nigeria.

Due to constant violence and threats to life, schools located in violent-prone areas have witnessed mass exodus of qualified teachers from the affected areas. The lack of security and constant fear for their lives have forced many teachers to seek safe environments, leading to shortages of educators who would have provided quality education, thereby making the provision of quality education in the affected areas a mirage. Insecurity poses a significant obstacle to construction and maintenance of school facilities and classrooms. The fear of attack on educational facilities has discourage investment in infrastructure development, making it increasingly challenging to meet the demand for educational space. Without adequate infrastructure, the goal of providing quality education cannot be achieved. Insecurity causes disruption of academic calendars. When schools are attacked, educational programmes are suspended. When schools are reopened, teaching is rushed, examination is rushed over and students are made to graduate without the requisite knowledge and skills. Hence, quality is compromised. The consequence, is that the end users of the products of educational institutions, the employers of labour cannot obtain the desired quality of skilled manpower. The current insecurity in the nation has created a

bad business environment and has prevented parents in vulnerable areas from engaging in viable economic ventures. This has affected parents negatively, making it difficult for them not to have enough money to meet their children's educational needs.

Prior to insecurity crises, Nigeria was already behind other countries in budgetary allocation to education. Presently, with the current security challenges, the money that would have been used in providing quality education has arguably been redirected to fight insecurity. Budgetary allocation continues to decline against increased budgets to defense. Seye (2021) reported that N 2.41 trillion budgetary proposal to security and defense was more than the entire allocation to education and health. The entire budget proposal for education in 2021 was N1.290 trillion, out of which N875.93 billion was for Ministry of Education, all Universities, all Polytechnics, all Colleges of Education, Unity schools and Federal Government owned schools. While the Universal Basic Education was given N108 billion and TETFUND was given N306 billion for infrastructure in tertiary education. All these funds are less than half allocated to defense and security.

The incidence of security threats, has to some extent, increased expenditure on education. Attacks on educational institutions is usually accompanied with loss of school facilities, which cost fortunes to replace. Hence according to Kpee et al (2013), when learning facilities such as classrooms, laboratories, sports facilities, hostels and learning materials are destroyed during attacks on schools, it results in reintroduction of already incurred expenditure. Also, the cost of monitoring school facilities during periods of insecurity results in an increase to the cost of education. Funds, which otherwise would have been used in providing educational services are channeled into security. The implication of this scenario is that it creates a vicious circle whereby educational expenditure will increase without commensurate increase in the provision of quality education. Insecurity contributes to increased inequality in access to education. The dimension and magnitude of insecurity in some states of the federation have continued to expand the imbalance in access to quality education in Nigeria. Security challenges have cripple effective supervision and inspection of schools which are carried out to maintain and improve quality of teaching and learning. According to Ogunode, Ukozor and Ayoko (2023) supervisors and inspectors are scared of going out for supervision as expected and when they do, it is haphazardly done for fear of attack.

### **Factors militating against security delivery in educational institutions**

There are many factors militating against effective security delivery in educational institutions. Ekpoh, Edet and Ukpong (2020), enumerated the factors that militate against effective security delivery in educational institutions to include the following:

1. Inadequate security personnel
2. Insufficient patrol vehicles.
3. Poor lighting of educational environments.
4. Non-availability of modern security facilities.
5. Poor funding of security departments
6. Porous campus environment
7. Lack of security awareness education.
8. Non-availability of electronic security gadgets (E.g. Close Circuit Television, CCTV to monitor campus environments).
9. Low morale among security personnel.

### **Strategies for achieving effective security for quality education**

1. Federal government should prioritize the safety and security in educational institutions by taking decisive actions to ensure the safety of students and staff in all educational institutions, especially in high- risk areas.
2. Adequate number of security personnel should be deployed to schools especially in high-risk areas, as this will deter potential attacks and provide security and safety to both staff and students as well as infrastructure.
3. There is a need for collaboration with the local communities in which the education institutions are located, so as to promote community policing and information gathering to prevent attacks on schools. The local communities should, as a matter of utmost importance, take the responsibility of safe guarding their schools against attack by criminals.
4. Government should invest in infrastructural development of schools by providing perimeter fencing and gates to barricade school environments from intrusion by criminal elements. The school fence should be reinforced by capping the fence with sharp objects or barbed wires to create some degree of difficulty for people who may attempt to scale through the fence. Additionally, a security post to house security officers at the gate should be provided.
5. Security units in institutions of learning should be equipped with adequate facilities to combat crimes. For instance, Close Circuit Television (CCTV) should be deployed at strategic areas within the school vicinity to monitor suspicious movements and criminal activities. Also, available facilities should be maintained and serviced when necessary. Additionally, school environment, should be well lighted with security lights as criminals operate under the cover of darkness to unleash mayhem in schools.
6. Federal and state governments should ensure prompt and quick rehabilitation of damaged school infrastructure to encourage continuous schooling without disruption.
7. Given the magnitude and the dimension of insecurity which prevails in educational institutions, and to ensure provision of quality education in institutions of learning, there is need for school managers at all levels to engage in strategic partnership and alliance with the Nigerian Police Force, the State Security Service (SSS), the Civil Defense Force Corps (NSCDC), the Criminal Investigation Department (CID) and private security agencies to step up preventive security management systems.
8. Innovative approaches such as deployment of technology, radio broadcast and distance learning to deliver quality education to students in areas that are having insecurity challenges should be encouraged.
9. Efforts should be made by Federal government to address the fundamental causes of insecurity in Nigeria by initiating policies that will reduce poverty and also provide employment opportunities for the teeming youth population.

### **Conclusion**

The insecurity challenges in educational institutions constitute a serious threat to a safe academic environment for quality educational activities. The scourge of insecurity in Nigeria's education sector demands a concerted effort of all stakeholders- government officials, security agencies, community leaders, parents, educators and students themselves to forge a path towards a safer and more secured environment for teaching and learning process. Quality education is the right of every child which should never be sacrificed at the altar of insecurity. Otherwise, the consequence will affect the overall development of children with limited education who

will not be able to compete with their peers globally. Also, as cautioned by IA- Foundation (2024), failure to address the educational crisis caused by insecurity will undermine the achievement of sustainable development goals (SDG), especially SDG 4 which addresses quality education.

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## **Kakistocracy and Administrators' Professional Development in the 21st Century in Secondary Schools in North West Senatorial District, Akwa Ibom State, Nigeria.**

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### **Abstract**

This study set out to determine the relationship between kakistocracy and administrators' professional development in the 21st century in secondary schools in North West Senatorial District, Akwa Ibom State. Two objectives, two research questions and two null hypotheses were formulated to guide the study. The correlational design was adopted for the study. The population of the study consisted of all the 336 administrators in the 84 public secondary schools in the nine Local Education Committees (LEC) of the North West Senatorial District of Akwa Ibom State, 2024/2025 academic year. Multi-stage sampling procedure involving proportionate stratified and simple random sampling technique was used in selecting the 106 administrators for the study. The researchers' developed instrument: "Kakistocracy and Administrators' Professional Development Questionnaire (KAPDQ)" was used for data collection. The instrument was face validated by three experts. The reliability of the instrument was determined using Cronbach Alpha Statistics and the Reliability Coefficient of KAPDQ was .89. The research questions were answered using r-value of Pearson product moment correlation (PPMC) Statistics and the null hypotheses were tested at 0.05 level of significance using Significance value of PPMC Statistics. All the null hypotheses were rejected. The findings of the study revealed that there is a significant relationship between idiocracy, kleptocracy and administrators' professional development in the 21<sup>st</sup> century in public secondary schools in Akwa Ibom North West Senatorial District of Akwa Ibom State, Nigeria. Recommendations had that Government should avoid the practice of idiocratic and kleptocratic system of governance in the school organization as these may hinder the administrators' professional development in the 21<sup>st</sup> century.

**Keywords:** Kakistocracy, idiocracy, kleptocracy, administrators, professional development and 21<sup>st</sup> century

### **Introduction**

Administrator's professional development refers to the improvement of skills and knowledge for enhanced school community performance. In Nigeria, specifically in Akwa Ibom State, the management, administration and implementation of educational policies and programmes in secondary schools traditionally falls within the purviews of the school administrators. They are saddled with the administration of school personnel and facilities, conscious supervision of teaching and learning processes by supervising teachers lesson preparation, lesson delivery, evaluation of learning outcomes, mentoring both the teachers and the students, monitor, manage and discipline erring staff, maintain the school plant, plan for extra-curricular activities, provide effective management of school records as well as provide the school community with the necessary favorable and conducive physical and psychological working environment to facilitate the effective execution of the students' learning to bring about the much desired behavioral and attitudinal change in the learner for the realization of educational goals

Administrators to Thomas and Inyang (2022) refers to principals/ vice principals of secondary schools system responsible for developing the students to fit into their role expectation as leaders of tomorrow. They are responsible for ensuring every teacher has work tools for effective productivity like teaching, class administration,

technology, expertise and personal wellbeing. To Thomas et al, teachers are professional educators employed in a formal education setting to help students learn and grow by teaching them academic information and guiding their personal development under the auspices of the school Administrators. The school administrator supervises the teachers/ students' progress and provide guidance services, considering the fact that the broad goals of secondary school as contained in the National Policy on Education (2013) is to equip its beneficiaries with the necessary knowledge, skills, values, attitudes and belief system to be self-reliant and contribute to the development of the society.

Students to Thomas (2022) are the raw materials for the enhanced nation's economic development. As future educators, they need to be well processed and equipped not only with practicing tools and techniques to uphold the tenet of the society, but by well-equipped personnel with practicable experience in a very conducive learning environment. Education therefore is the veritable tool used for the change, hence the Federal Government of Nigeria adopting it as an instrument per excellence for national development. It's not only to foster tolerance, understanding and promotes harmony and stability among diverse communities but aims at meeting human and environmental needs as well as help in human interconnectivity. Its skills spur innovation, productivity and social advancement and these are mainly school-based.

In our contemporary highly competitive global knowledge economy, a nation's position according to Agbo (2024) as published in the Nigerian Vanguard of 3 September (2024). 4 and 19 November, 2024 publication is directly dependent on the aggregate of its educated human capital; that is the knowledge and skills imparted to its citizens by its educational system. In Sept.3, 2024- Featured Report: Nigeria ranked 66 out of 67 countries in Economic Performance (EP). Going by the list of African countries by Gross Domestic Performance (GDP) (nominal), Nigeria ranked fourth with 877.073 per capita (US\$). Nigeria is therefore depleting as its economy is also tanking as a result of low growth and productivity. The Nigerian nominal GDP once biggest in Africa, has slipped to \$285 billion in 2024, making it fourth largest in Africa (4 Nov 2024), hence Thomas (2019) assertion that, "a true education is not just a legacy; it is the ultimate legacy. It is the gift of enlightenment, empowerment and endless possibilities. It can empower people to make positive impact on the world. It can also provide people with the tools to understand and solve problems and the mental agility to do well." Education also help people access better job opportunities, gain financial security, fulfill dreams and goals, achieve better society with a greater economic growth, gain personal development, secure peace and safety, freedom etc. hence the need for secondary school administrators to be professionally developed by the government to place Nigeria's economy alongside its counterparts the world over especially in this 21<sup>st</sup> century.

Much emphasis has been placed on secondary school administrators for the attainment of a stable, functional and qualitative standard of secondary education system in Nigeria to fulfil the national aim of preparing the students for useful living within the society and higher education, but the prospect of meeting this aim is still very bleak. Educationally, the world is evolving from the traditional to technological system of education and this is stirring dynamic changes in the society. Government should therefore provide administrators, teachers and students with the opportunities of adapting to new teaching, learning strategies and methods to meet up with these global standards. They should be greatly influenced by technology in terms of communication, networking, seeking and accessing information. To Itighise and Thomas (2022) the potentials of technology have not only increased assess and improved relevance and quality of education, but has facilitated the acquisition and

absorption of knowledge as well as offer developing countries unprecedented opportunities to enhance the school personnel professional development.

Government presence in funding of the system, implementation of approved policies like training and retraining of personnel, making education not just free and compulsory but motivating the personnel, providing of infrastructures especially scientific and technological gadgets for Information and Communication activities, Artificial Intelligence (AI) compliance and other world best practices is of great essence. Several education stakeholders like the United Nations Education Science and Cultural Organization (UNESCO), Education for All (EFA) have worked assiduously to improve the required education goals in Nigeria, but the developmental pace is very slow.

Administration does not only involve planning activities which aim at the fulfillment of the goals of a particular organization, it also requires skills, new knowledge, understanding, behaviours, values, attitude, preferences and competence of the administrator to meet the demands and expectations of their role. This knowledge can be developed by the administrator embarking on educational processes like training, taking classes or workshop, attending conferences, earning certificates and expertise and adapting to new practices like Artificial Intelligence (AI). It is not usually realized that inadequate professional development of administrators constitute one of the major sources of frustration and dissolutionment. Effective administrators need to be well connected, cultured and competent with the ability to make right decisions.

Educationally, Nigeria is considered the least literate nation in the world with only 15% of its adults able to read and write. 5.2 percent only has secondary education and nearly 31percent drop out of primary school. To Agbo (2024) as published in the Nigerian Vanguard of 19, Nov. 2024, Nigeria is counted among the top ten countries with the worst education system. The United Nation Education Scientific Cultural Organization (UNESCO) Educational Development Index (EDI) present Nigeria as a country with a population of 21 million and the least educated nation in Africa with an EDI of 0.528. These and other factors may contribute to poor school administration resulting in social problems like early marriages, child labour, poverty etc. hence the research on kakistocracy: the role of government in shaping the educational outcomes has become very imperative. The well emphasized relevance of education to nations building and development has prompted this research work on kakistocracy and administrators' development in the 21<sup>st</sup> century. The role of government in enhancing the administrator's professional development is sin-qua- non to the development and sustainability of the nation's growth.

Kakistocracy is a system of government where the least qualified, incompetent, or corrupt individuals hold positions of authority (Onebunne & Chukwujekwu, 2023). To Keane (2018), kakistocracy is "a form of rule where the least principled, most venal, and morally inept citizens or rulers occupy positions of authority." Runciman (2020) explains *kakistocracy* as "a situation where those in power lack competence, vision, or moral decency, leading to governance that actively undermines the interests of the governed." Runciman views it as a threat to democratic governance. In Signer (2017) opinion, kakistocracy is "the government by the worst, most incompetent, and morally bankrupt leaders, where power is seized and exercised for self-interest rather than public service." Signer connects this concept to corruption and inefficiency. These definitions highlight the moral and ethical degradation of those in power over the abandonment of education as the most dependable tool for national development. (Thomas 2019).

The influence of kakistocracy on administrators' professional development presents a complex challenge that merits closer examination especially in the 21st century. The concept of Idiocracy and kleptocracy are all forms of governance marked by dysfunction and mismanagement, yet they each have unique characteristics that affect educational institutions differently. They hinder educational quality, resource availability, and alignment of education with current professional demands. Understanding their influence is important to assessing and addressing challenges in administrators' preparedness for modern professional environments.

Idiocracy is characterized by lack of competence among the governing bodies, these often leads to policies that are misaligned with the needs of the education system. In such governance, education may be underfunded, poorly structured, and detached from the practical skills required in contemporary professions. The World Bank emphasizes that an effective education system requires not just resources but a sound, strategic vision for curriculum development, teacher training, and resource allocation (World Bank, 2018). Educational systems that suffer from idiocratic governance often show poor professional preparation programs, as education becomes a secondary concern for policymakers lacking the insight or capability to implement effective changes (Anderson, 2020). For instance, countries with underdeveloped or unstable governments often experience high dropout rates of students, low teacher quality, and inadequate infrastructure, which impact negatively on administrators' readiness for professional environments (Olufemi, 2019).

Kleptocracy according to Acemoglu & Robinson (2019) is a government where leaders exploit national resources and wealth for personal gain. This poses significant challenges to the education sector. In kleptocratic regimes, educational funding may be diverted from schools and universities, leading to poor infrastructure, low teacher salaries, and scarcity of learning resources. This fosters a learning environment where students have limited access to the tools needed for professional success resulting in only a privileged few benefitting from robust educational resources, to the detriment of the majority left in under-resourced institutions. To Uche (2020), the professional development of administrators is severely impacted in such contexts as lack of exposure to advanced skills, internships, and training opportunities necessary for sound supervision of organization goals is seriously lacking.

The lack of adequate funding, poor policy implementation, and low academic standards associated with Kakistocracy, idiocracy and kleptocracy have far-reaching effects on administrators' professional development. In the 21st century, the demands and expectations of the labor market are really changing. Administrators are expected to acquire not only theoretical knowledge but also critical thinking, adaptability, and digital skills (World Economic Forum, 2020). In systems marred by incompetence or corruption, these skills are often undervalued or overlooked. Administrators in such environments may also experience lower self-efficacy and motivation, as the educational system does not provide a clear or attainable path to professional success, hence, administrators' aspirations and career ambitions are significantly influenced by the perceived quality of education and the resources available to them (Luthans et al., 2015).

In a world with increasingly values for innovation, critical thinking, and technological competence, the professional landscape especially in the 21st century demands skills and competencies that extend beyond traditional armed chair administration to pragmatic administration (Brown & Thornton, 2018). Administrators must be trained by government to navigate complex and evolving industries, not undermining the necessary support structures as opined by (Rubaii, 2016). Mismanagement, corruption, and lack of foresight by government

hinders the implementation of educational reforms and professional development initiatives of administrators, thereby affecting students' ability to acquire the skills needed for professional success (Kassner & Heller, 2021).

Education and governance are inherently linked, with the former often reflecting the efficiency and priorities of the latter. Education is a huge government investment so government should provide a conducive learning environment by allotting sufficient resources, formulating policies that prioritize education, as well as foster an ecosystem where teachers and students can flourish (Ihekoronye, 2020). Conversely, a kakistocratic system often breeds dysfunction, creating an environment where educational institutions are underfunded, policies are inconsistently implemented, and corruption is pervasive (Sawant, 2019). This can lead to stagnation in the professional development of administrators, as they are deprived of the quality educational know-how, resources and mentorship required to reach their clients full potential.

The global job market especially in this 21st century is increasingly competitive, nations that fail to prioritize education risk creating a workforce that is ill-equipped to compete on an international scale. According to Thomas and Thornas (2017) and Thomas and Thomas (2024) professional development simply hinges on research which is the bedrock of innovation, economic growth, and societal advancement hence the need for government intervention. But in kakistocratic governance, administrators are often left to navigate their professional journeys without the requisite skills or opportunities. This affects not only the administrators' career trajectories but also has broader implications for national economic development and global competitiveness (Brown & Thornton, 2018). Based on the above scenario, this study sought to investigate and determine the relationship between kakistocracy and administrators' professional development in the 21st century.

### **Statement of the Problem**

In the contemporary Nigeria society, Secondary school Administrators are faced with lots of challenges culminating from lack of or inadequate government presence in their professional development. The society expects the educational system to be transformed from the traditional to the technological with administrator's acquisition of contemporary skills in instructional leadership, technological integration, strategic planning and stakeholder engagements etc. to meet up with global demands. However, several issues have impeded their professional development, creating gaps between expectations and the reality of leadership performance in many schools. One of the significant gap is the lack of structured and ongoing professional development programs for the 21st-century administrators. In many cases, professional development initiatives focus narrowly on compliance and procedural knowledge rather than fostering leadership skills, innovation, creativity and adaptability. Administrators often struggle to keep pace with technological advancements that have redefined teaching and learning. The integration of digital tools and data-driven decision-making processes require administrative skills that many administrators have not yet fully acquired, leaving them unprepared to address the challenges of modern education.

Several in-house training programmes on personnel management, school supervision, financial management, professional development packages like sponsored participation in conferences etc has been advocated by the School Management Board and Parent –Teachers Association ( P.T.As) for improved administrative purposes but the gaps still remain unabridged as some of the mounted programmes often lack depth and consistency to address the modern challenges, hence the researcher's interest to investigate the relationship between kakistocracy, that is government presence and administrators' professional development in the 21st century in secondary schools in North West Senatorial District of Akwa Ibom State.

## **Purpose of the Study**

The purpose of this study was to examine the relationship between kakistocracy and administrators' professional development in the 21st century in secondary schools in North West Senatorial District of Akwa Ibom State. Specifically, the study sought to:

1. Determine the relationship between idiocracy and administrators' professional development in 21st century.
2. Determine the relationship between kleptocracy and administrators' professional development in 21st century.

## **Research Questions**

What is the relationship between idiocracy and administrators' professional development in the 21st century?

What is the relationship between kleptocracy and administrators' professional development in the 21st century?

## **Hypotheses**

1. There is no significant relationship between idiocracy and administrators' professional development in the 21st century.
2. There is no significant relationship between kleptocracy and administrators' professional development in the 21st century.

## **Methods**

This study employed a Correlational research design. Correlational research design is used to identify and analyze the relationships between two or more variables without manipulating them. This type of design is commonly used in situations where experimental manipulation is either impractical or unethical, and it helps the researchers to understand whether, and to what extent, a relationship should exist between variables. The study was conducted in the North West Senatorial District of Akwa Ibom State, Nigeria.

The population of the study consisted of 336 administrators (84 principals and 252 vice principals) in the 84 public secondary schools in nine Local Education Committees (LEC) in the North West Senatorial District of Akwa Ibom State during the 2024/2025 academic year (Akwa Ibom State Secondary Education Board, Uyo, 2024). Multistage sampling procedure involving stratified proportionate sampling and simple random sampling technique was used in selecting 106 administrators from 30 randomly selected secondary schools. The instrument for data collection was titled "Kakistocracy and Administrators' Professional Development Questionnaire (KAPDQ). The instrument was developed by the researcher and consisted of 20 items. 10 items on Kakistocracy and 10 items on Administrators' Professional Development. These items were developed using a four point Likert scale of strongly agree (SA) - 4points, agree (A) - 3points, disagree (D) - 2points and strongly disagree (SD) - 1point.

To ensure the face validity of the instrument, draft copies were given to two lecturers in the area of Science Education and one lecturer in Educational Management, all in Department of Science Education in Akwa Ibom State University. The reliability of the instrument was determined by trial testing the instrument using a sample of 25 administrators who was not part of the sample for the study. The instrument was administered by the researcher. The reliability coefficient was determined using Cronbach Alpha. The reliability indices obtained was 0.89 which affirmed the reliability of the instrument.

In the course of the study, the researcher obtained a letter of introduction from the Head of Department of Science Education, Akwa Ibom State University to proceed with instrument administration. The researcher administered the instrument through the help of research assistants to the administrators selected for the study. The instrument was immediately retrieved after completion. The data collected was analyzed using Pearson Product Moment Correlation (PPMC) statistics. The r-value of PPMC was used to answer the research questions while the significance value of PPMC was used to test the formulated null hypotheses at 0.05 alpha level of significance.

## Results

### Research Question One

What is the relationship between idiocracy and administrators' professional development in the 21<sup>st</sup> century?

**Table 1: Pearson Product Moment Correlation between idiocracy and administrators' professional development in 21<sup>st</sup> century**

Variables	N	R	Remark
Idiocracy	106	-.812	Very Strong Negative Relationship
Administrators' professional development	106		

**Source:** Computed by the Researcher using data from the respondents.

From the result in Table 1, it is revealed that r-value is -.812. This implied that there is a very strong negative relationship between idiocracy and administrators' professional development in 21<sup>st</sup> century. This means that as idiocracy increases, the administrators' professional development in the 21<sup>st</sup> century also decreases very strongly. Therefore, idiocracy could affect administrators' professional development in the 21<sup>st</sup> century.

### Research Question Two

What is the relationship between kleptocracy and administrators' professional development in the 21<sup>st</sup> century?

**Table 2: Pearson Product Moment Correlation between kleptocracy and administrators' professional development in the 21<sup>st</sup> century**

Variables	N	R	Remark
Kleptocracy	106	-.755	Strong Negative Relationship
Administrators' professional development	106		

**Source:** Computed by the Researcher using data from the respondents.

From the result in Table 2, it is revealed that r-value is -.755. This implied that there is a strong negative relationship between kleptocracy and administrators' professional development in the 21<sup>st</sup> century. This means that as kleptocracy increases, the administrators' professional development in the 21<sup>st</sup> century decreases strongly. Therefore, kleptocracy could affect administrators' professional development in the 21<sup>st</sup> century.

### Hypothesis One

There is no significant relationship between idiocracy and administrators' professional development in the 21<sup>st</sup> century.

**Table 3: Summary of Pearson Product Moment Correlation between idiocracy and administrators' professional development in the 21<sup>st</sup> century**

Variables	N	p-cal.	p-crit.	Decision at .05 alpha level
Idiocracy	106	.000	.05	(S) H <sub>01</sub> Rejected
Administrators' professional development	106			

df= 104, S= Significant at .05 alpha level.

**Source:** Computed by the Researcher using data from the respondents.

The result in Table 3 revealed that the p-cal of .000 is less than the .05 alpha level of significance at the 104 degrees of freedom. This showed that in the formulated null hypothesis one, that there is no significant relationship between idiocracy and administrators' professional development in the 21<sup>st</sup> century was rejected. Therefore, there is a significant relationship between idiocracy and administrators' professional development in the 21<sup>st</sup> century.

### **Hypothesis Two**

There is no significant relationship between kleptocracy and administrators' professional development in the 21<sup>st</sup> century.

**Table 4: Summary of Pearson Product Moment Correlation between kleptocracy and administrators' professional development in 21<sup>st</sup> century**

Variables	N	p-cal.	p-crit.	Decision at .05 alpha level
Kleptocracy	106	.000	.05	(S) H <sub>02</sub> Rejected
Administrators' professional development	106			

df= 104, S= Significant at .05 alpha level.

**Source:** Computed by the Researcher using data from the respondents.

The result in Table 4 revealed that the p-cal of .000 is less than the .05 alpha level of significance at the 104 degrees of freedom. This showed that in the formulated null hypothesis two, that "there is no significant relationship between kleptocracy and administrators' professional development in the 21<sup>st</sup> century" was rejected. Therefore, there is a significant relationship between kleptocracy and administrators' professional development in the 21<sup>st</sup> century.

## **Discussion of the Findings**

### **Idiocracy and Administrators' professional development in the 21<sup>st</sup> century**

The findings revealed that there is a very strong negative relationship between idiocracy and administrators' professional development in the 21<sup>st</sup> century. The result also shows that there is a significant relationship between idiocracy and administrators' professional development in the 21<sup>st</sup> century. This result could be attributed to the fact that "Idiocracy," highlights the consequences of absence of critical thinking and decision-making, which can influence administrators' professional development by emphasizing the need for creativity, adaptability, innovation, and the fostering of intellectual growth. In the 21st century, administrators must navigate a rapidly changing world, requiring constant learning and up -skilling to lead effectively. This also highlights the importance of promoting thoughtful leadership and fostering environments that can challenge traditional mindsets and embrace progressive strategies for enhanced development. The finding of this study is synonymous to the



findings of Olufemi(2019) who reported that idiocracy significantly impacts Administrators' professional development in the 21<sup>st</sup> century.

### **Kleptocracy and Administrators' Professional Development in the 21<sup>st</sup> Century**

The findings revealed that there is a strong negative relationship between idiocracy and administrators' professional development in the 21<sup>st</sup> century. The result also shows that there is a significant relationship between kleptocracy and administrators' professional development in the 21<sup>st</sup> century. This result could be attributed to the fact that in the 21<sup>st</sup> century, administrators must focus on transparency, accountability, and ethical leadership to counter the negative effects of corruption. This environment demands the development of strong governance skills and integrity to promote sustainable organizational progress. The finding of this study is in support of Uche (2020) who reported that kleptocracy significantly impacts Administrators' professional development in the 21<sup>st</sup> century.

### **Conclusion**

Based on the findings of the study, it is hereby concluded that there is a significant relationship between idiocracy, kleptocracy and administrators' professional development in the 21<sup>st</sup> century in public secondary schools in Akwa Ibom North west senatorial district. Thus, administrators' professional development in the 21<sup>st</sup> century depend on kakistocracy.

### **Recommendations**

Based on the findings and the conclusions reached, the following recommendations are made:

1. Government should not practice idiocratic system of governance in the school organisation as this may hinder the administrators' professional development in the 21<sup>st</sup> century.
2. Government should not practice kleptocratic system of governance in the school as this may hinder the administrators' professional development in the 21<sup>st</sup> century.

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## **Management of Examination in the University System**

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### **Abstract**

The paper focuses on management of examinations in the university. The paper present education as an expensive social service which requires adequate financial provision from stakeholders, including the government for successful operation of all identified educational program adopted for implementation. The paper further pointed that the decline in quality of university education of the fall in the standard of services rendered by the universities, attributed principally to the inadequacy of funding by the government. The examination is defined as the process or act of testing for knowledge and ability to determine its worth and that an examination is said to be valid if it performs the functions which it is designed to perform. Effective management of examinations requires marshalling and organizing all the materials and human resources needed for smooth examination conduct. The paper highlights several roles of the administration for effective management of examinations as well as role of students, role of examiners and invigilators for effective management of examination. The paper revealed that examination is the responsibility of the university management just like teaching. It has implication for the university plant planning as well as personnel management. The degrees and certificates awarded by universities are recognized because examinations are effectively and efficiently managed. The paper conclude that conducive environments must be established in universities that would promote and enhance effective management of examinations and examination halls must be in order, well equipped and seats arranged appropriately before the commencement of examinations.

**Keywords:** Funding, Planning, Effective, Management, Examination.

### **Introduction**

The rapid changes and developments in education have signified the role of educational planning and management. The traditional role of educational management must be reconsidered now to rationalize and integrate the management functions in the process. Education is an expensive social service which requires adequate financial provision from the government for successful operation of all identified educational program adopted for implementation. According to Ezeugbor and Udoh (2014), funding is considered as the ultimate and critical determinant of the level of growth of the entire university system if quality would be assured in all the facets of it programmes and projects. The decline in quality of university education and standard of services by the universities is attributed principally to the inadequacy of funding by the government. The main objective of attaining university education as contained in the National Policy on Education (NPE, 2014) is to train students to gain requisite knowledge and skills to enabling them to contribute effectively to the national development. Education and training require periodic assessment and evaluation in form of examinations to ascertain the level of competences developed among graduates who are ultimately employed in a variety of the production sectors.

The term examination in the context of this paper is perceived as the process or act of testing for knowledge and ability to determine its worth. This implies that an examination is a means of measuring

knowledge, skills and or aptitude of a candidate (Hornby, 2000). Examinations are generally used for evaluation of students' progress, evaluation of effectiveness of instruction, effectiveness of the teacher, and the teaching methods employed. Examination results are also used for selection of individuals for a particular educational institution, or specific type of employment. Examinations are further used for certification; and evidence to determine whether a person has achieved a specified standard of attainment or achievement (Hornby, 2000). Due to the crucial roles that examinations play in socio-economic life; examinations need to be well managed. The management of examination should be a vital issue to be seriously considered if we want our examination result(s) to be valid and reliable and at the same time to maintain its value.

Jones and George (2018) define management as the planning, organizing, leading, and controlling of human and other resources to achieve organizational goals efficiently and effectively. Grundei and Kaehler (2018) pointed that management is a steering influence on market, production and/or resource operations in an organization and its units that may address both people, and non-people issues and is exerted by multiple organizational actors through either anticipatory norm-setting (= constitutive or strategic management) or situational intervention (= operational management) with the aim of achieving the unit's objectives. To manage a unit is synonymous with "directing" or "leading" it. Management is a body or a team constituting of different individuals that accept responsibilities to run an organization, they plan how to get things done, organize work to be efficient and effective, direct and control all the essential activities of the organization. Management team does not manage themselves; rather they motivate and coordinate others to execute the work with the target of achieving the objectives of the organization. Management brings together all, men and women, money, machines, materials, methods and markets. Effective management of examinations is the process or act of planning, organizing and administration of examinations. It spans from classroom teaching, setting of examination questions, administration of examinations, marking and grading, to the issuance of certificate. This means that teachers, examination administrators, students and parents are part of effective management of examinations. Effective management of examinations requires marshalling and organizing all the material and human resources needed for smooth examination conduct. The quality of effective management of examinations, therefore, dictates the level of malpractices or cheating in a particular examination and its occurrence or non-occurrence.

In educational settings, resources are used for achieving the objectives of the higher learning institutions. Some of the objectives are producing employable graduates, developing knowledge through research, publications and ultimately attainment of economic development of the entire community or nation. In the context of this paper, effective management of examinations refers to the skillful or resourceful use of resources such as personnel (lecturers, students and supporting staff), teaching and learning materials, time, application of appropriate technique(s) and technology in teaching and examinations processes and maintain ethical practices. If these aspects are effectively practiced, education institutions are mostly like to achieve quality results or set goals.

### **Effective Management of Examination in the University**

Examination management is the act or process of planning, organising and administration of examinations. It starts from classroom teaching, setting of examination questions, administration of examination, marking of scripts, grading, to issuing of certificates. This means teachers, students and administrators are part of the examination management process. In educational institutions, the management of exams plays a crucial role in assessing student knowledge and evaluating their academic progress. Traditionally, this process has been

manual and time-consuming, involving numerous administrative tasks such as exam scheduling, registration, question paper preparation, invigilation, result processing, and report generation. Examinations are regarded as one of the major means of assessing and evaluating students or learners' skills, knowledge and attitude in both general and specific areas of studies. It is on this basis that university had established an examination unit responsible for the administration, conduct and effective management of examinations. The Examinations Unit conducts its examinations under the specify departments in the university. The Examinations Unit works cooperatively with the Examinations invigilators and supervisors (Lecturers).

Effective management of examination bring numerous benefits to students and lecturers alike, making it indispensable at school level student performance evaluation. Benefits of examination are varied; the most important being the competitive environment it creates among students at all levels. It equally enables students and teachers know student achievement levels to inform the necessary remedial action; thus, students who are performing consistently well and those lagging and by how much. This enables teachers to reorient their teaching methods and try to overcome weaknesses in teaching and learning (Mufanechiya, 2013). Additionally, parents needed to be informed about the progress of their children during each new school year. Through these parents and teacher tackled challenges that confronted teaching and learning in school and finally, through examination, teachers identified hidden abilities, capabilities, desires and interests of the students to guide them accordingly.

According to Irira, (2014) determining factors of transformation of management of examinations was the second component of conceptual framework which constituted conducive working environment. The elements in inputs of managing examinations may not be successfully processed without determining factors (such as setting of tests/exams, effective handling of tests, effective invigilation of examinations, moderation of examinations, marking of students' exams, and grading of scores) put in place. The first element that falls under determining factors is effective management and evaluation of assignments/tests, invigilation of examinations and marking of examinations. This implies that adequate, competent, trustful and qualified academic staffs are needed to ensure quality assurance and control during evaluation processes period. The second element that falls under determining factors is examinations moderation that examines and determines the clarity, quality and standards of setting, marking and grading examinations.

However, it has been observed that in almost all examinations, rules, regulations, standards and best practices of examination conduct are sometimes overtly or covertly violated. Examination management therefore requires marshalling, organizing all the human and material resources needed for the smooth conduct of the examinations. The human resource may be construed as lecturers/examiners, invigilators, students, supervisors and administrators. The material resource involves facilities available for teaching -learning process and the assessment process. These include provision of textbooks, library facilities, examination rooms, question papers and answer booklets as well as other examination materials needed for a particular paper. The roles of these inputs in managing examinations according to Aikins, (2019) are discussed below.

#### **a. The Role of Administration in Effective Management of Examinations**

The university administration as an examining body is a core of examination management process in the university. The university administration has the onerous task of making the examination process work effectively. It is obligation on the University to provide an enabling environment for the smooth conduct of examinations. To

this end, the responsibilities of those involved that is examiners, invigilators, supervisors and others in examination management must include:

- i. Ensuring that adequate arrangements for examinations in the university are made. This involves preparation of examination timetable on time, allocation of examination rooms and assignment of invigilators. Ensuring that copies of examination timetables are made available to staff (examiners and invigilators) and supervisors for adequate preparation and readiness for the examinations. Copies of the timetables for students must be pasted on Students' Notice Boards without the names of invigilators.
- ii. Ensuring total compliance with examinations' regulations by examiners, invigilators, attendants and students as well as the general supervision of examinations in the university. In view this, it is prudent that prior to the commencement of the examinations, a pre-examination orientation should be organized to brief all examination support staff on rules and regulations and code of examination conduct.
- iii. Ensuring security and confidentiality of examination question papers and scripts sent to the examination centres before and after the examinations respectively.
- iv. Ensuring provision of facilities, material resources needed for the examination. Arrangement should be made for provision of adequate examination rooms, examination materials, seats, invigilators, security, vehicles and refreshment. The materials needed to complete an examination apart from answer booklets, for example, graph paper required must be known and supplied before the students are seated.
- v. Maintaining highest academic standards of ethics and integrity in the conduct of examination. Every university desire to uphold the ideals of academic integrity since regulations concerning academic code and ethics together with sanctions for violations are outlined in its academic programmes and students' handbook. Such regulations are also usually communicated to students during orientation programmes for freshmen and women. Some individuals (staff and students) still violate them with impunity. University administration should investigate cases of violation of code and ethics of examination conduct and punish offenders to serve as deterrent to others.

**b. The Role of Students in effective Management of Examination**

Students play a significant role in effective management of examination. Students are those who are taught and examined. Students' achievement in the content areas of their academic programmes determines whether the academic standards set by the institution have been achieved. They set the pace for academic excellence in any institution by their performance. Thus, any bad behaviour of students during the conduct of examinations would show on the results obtained from the examinations. Consequently, the role of the student in the examination management process is very important. The following behaviour are expected from students during examination:

- i. It is the responsibility of the student to prepare adequately for the examination by gaining thorough knowledge of the content areas of the subjects to be examined. Lack of preparation puts fear and anxiety in students which make them engage in examination malpractice.
- ii. It is the responsibility of students to check and confirm the final timetable of the examinations.
- iii. It is the duty of students to locate the examination center, hall or room in advance before the examination starts.
- iv. Students should be punctual. They are to be seated in the examination hall accordingly.
- v. Students must give the invigilators, examiners, supervisors and administrators' due respect.

- vi. Protect their question papers, answer scripts. It is the responsibility of the student to ensure that he/she has submitted his/her answer script before leaving the examination hall at the expiration of the time.

**c. The Role of Examiners in Effective Management of Examination**

University examinations are internal in nature and as such lecturers are the core of examination management process in the university. The lecturers who are involved in the teaching-learning process are also involved in the management of the examination process. Thus, they play the role of teachers as well as examiners. As teachers, they must ensure that the right kind of knowledge and skills are imparted to the students as outlined in the curriculum content prescribed by the university. This is done by teaching the students course contents as designed the course. Besides, the teachers oversee setting examination questions, marking of examination scripts and awarding marks for students which would lead to a decision to be taken for award of certificates. Consequently, when the methods of delivery and content competence of the lecturers are treated with lack of seriousness, it creates enabling environment for cheating in examinations. The two basic assumptions of any examination are that (a) it should be valid and (b) it should be reliable. The two are distinct concepts. An examination is said to be valid if it performs the functions which it is designed to perform. The concept of reliability, of course, refers to consistency of measurement. Examination questions should therefore reflect the objectives and learning outcomes of courses. Examiners must ensure that as much as possible, examination questions should be devoid of mistakes for corrections to be made during the examination period. It is worthy to note that examination is central to the success and recognition of universities. Degrees/certificates are awarded based on the outcome of examinations. University examinations are confidential and, therefore, all examiners must exercise due diligence to ensure sustainability of its confidentiality.

**d. The Role of Invigilators in Effective Management of Examinations**

An invigilator is a person who watches students while they take examinations to identify and address signs of cheating. When examinations are held, the invigilator secures the room for the students, removing any materials that could be used for cheating, and making available a supply of pencils, scrap paper, calculators, and any other authorized tools (Ogunji, et al 2005). Invigilators also play an important role towards effective management of examinations in the university. The purpose of invigilation is to ensure that all examinations are conducted in accordance with the rules and regulations governing the examinations in line with the directives' of quality assurance to provide students with every opportunity within the rules to complete their examinations; to ensure that all students are treated in a fair and consistent manner; to ensure the examinations are conducted smoothly and successfully and to help deal with any problem(s) that may arise during examinations.

It is the primary role of invigilators to maintain discipline and absolute silence during the examination and to be vigilant for any irregular practices or cheating. Some of the usual tricks employed by students include storing foreign materials in the lavatories, entering the examination room with unwanted materials hidden in their socks, pants, brassiers, artificial hair/wigs, bracelets, copying notes or potential answers on their body, mathematical sets, handkerchiefs, manuals of calculators, tables and chairs, intentionally copying or exposing answers to their colleagues. Others include "giraffing", using sign language to communicate answers to colleagues when multiple choice questions are used. Some students go into the washroom only to read information stored on mobile phones. Students deliberately smuggle out the answer booklets from the examination room. Some ladies dress provocatively to ward off shy invigilators to enable them copy. Impersonation is also common where students hire the services of others either among themselves or from outside to write the examination on their

behalf and. students influencing attendants with cash to facilitate cheating. It is expected that invigilators must be punctual to the examination centres. They should arrive at the examination centres at least thirty minutes before the start of the examination since their actions such as absence or lateness to examination venues contribute to compromising examination standards since they create enabling environment for candidates to cheat.

### **Responsibilities of Invigilators for Effective Management of Examinations in the University**

- i. It is the responsibility of every invigilator to ensure that the examination materials are collected at least thirty minutes before the scheduled time and distributed to the students in time to enable the examination to start at the time specified on the examination timetable. When distributing examination materials, it is important that invigilators put the examination paper on the desk face down and then cover it with the answer book, which should also be placed face down.
- ii. Invigilators are to ensure that no student is allowed to leave the examination room until thirty minutes after the examination has begun.
- iii. Whilst invigilating an examination, it is invigilator responsibility invigilators not do anything that will disturb any of the students. They are not supposed to do the following: eat, talk, read, do their own work or use a mobile phone. They must inform the students when they may start writing and when the examination period is over. Invigilators are not expected to instruct students to begin the exams before schedule. Invigilators must sit in front of the examination hall or sit at the back.
- iv. During the examination, invigilators need not to read other materials, leave the examination hall or do anything that might compromise their observation of the examination and the students taking it.
- v. It is invigilators responsibility to walk around the room on regular basis always observing students, deal with any queries or problems any of the students have. Invigilators must ensure that only examination stationery (answer booklets, question paper, log tables and writing implements) are allowed by students in the examination room. The use of electronic calculators should not be permitted in university examinations except where specified in the examination paper that they could be used.
- vi. It is the responsibility of invigilator not to allow students take into the examination hall any of the following: book, paper, hat, headgear, bag, mobile phone, scanner, radio, palm-top computer, programmable calculator, etc. unless specifically authorized by the examiner.
- vii. It is the responsibility of invigilator to confiscate any items and make a written report of the alleged breach of examination regulations to the University Examination Section.
- viii. It is the responsibility of invigilator not to allow students to borrow any item during examination. Invigilators must ensure that the attendance list is appropriately signed by the respective students during the examination. The names of absentees should be noted.
- ix. It is the responsibility of invigilator to ensure that the counting of all examination scripts in the examination hall at the end of the session tallies with the attendance list, enveloped, sealed, signed and submitted to the Examiner or the Faculty Examination Officer.
- x. It is the responsibility of invigilators to ensure that they announce to students regularly about the time, example every thirty minutes and five minutes to the end of the paper and they stop the examination at the appointed time and give instructions for the collection of scripts. At the end of the examination, students must remain in their seats until the examination scripts have been collected from each desk.



- xi. It is the responsibility of invigilator to ensure that the script is handed by any student who leaves the room before the end of the period of the examination. They must ensure that scripts are counted and well packed in an envelope at the end of each session. The scripts, together with all unused copies of the examination papers and answer booklets and the attendance list should be returned to the University Examination Section.
- xii. It is the responsibility of invigilator not to allow any student to take any paper/sheet out of the examination room except when authorized. To check the incidence of impersonation, invigilators must inspect the identity cards of students before they enter the examination halls. Students without the identity cards should not be allowed to enter the examination halls.

## **Conclusion**

Conducive environments must be established in universities that would promote and enhance effective management of examinations and examination halls must be in order, well equipped and seats arranged appropriately before the commencement of examinations. Examinations is the responsibility of the university management just like teaching. It has implication for the university plant planning as well as personnel management. Despite its importance, especially in making decisions about many aspects of the education system, it has always been denied its budgetary allocation and careful planning and implementation which will reflect in poor management of examinations. There must be adequate qualified and disciplined personnel for invigilation who should report at the examination centres on time and work according to the regulations of the examination process.

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## **Impact of Artificial Intelligence on School Management and Record Keeping in Secondary Schools in Dutsinma Local Government Area of Katsina State**

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### **Abstract**

This study examined the impact of artificial intelligence on schools management and record keeping in secondary schools in Dutsinma Local Government Area of Katsina State. Descriptive survey design was adopted for the study. The population for the study comprised all the ten (10) Government secondary schools in Dutsinma LGA, making 2,155 teachers as the population. The sample for the study was 322 teachers. This was got from Krejcie and Morgan, 1970, who states that when the population of a study is in thousands, the closest sample should be picked. A research instrument titled Artificial Intelligence on Adequate Management of Schools and Record Keeping Questionnaire (AISMRKQ) in Dutsinma Local Government Area of Katsina, was used to elicit information from the respondents. Mean and standard deviation was used to answer the three research questions raised. The study found out that, Artificial Intelligence, if adequately used can reduce some of the difficulties found in administrative tasks and workload of the teachers. Based on the findings, it was concluded that AI is a veritable tool to reducing the teachers' workload in all the administrative tasks in secondary school. It was also found out that if the management of schools use AI in all the administrative daily routines, there would be little or no errors in the job of administration. The researchers recommended therefore that Artificial Intelligence should be used in all the administrative tasks in the school.

**Keywords:** Artificial intelligence, record keeping, adequate management, workload

### **Introduction**

Educational administration is the process of managing and overseeing the organizational aspects of educational institutions, such as schools or universities. It encompasses task such as Planning, decision-making and coordination to ensure the optimal functioning of schools or educational system. This includes tasks like budgeting, staffing, curriculum development, and policy implementation and educational planning, on the other hand, involves the systematic process of setting educational goals, determining the resources needed to achieve these goals, and devising strategies to implement and evaluate educational programs effectively (Goksel & Bozkurt 2019).

In a broad term, educational administration involves managing educational institutions, while educational planning focuses on strategic development and implementation of educational programs (Goksel & Bozkurt 2019). Bayne (2015) posit that Education is the process of facilitating learning, acquisition of knowledge, skills, values, beliefs, and habits. It occurs through various formal and informal means, such as schooling, mentoring, self-directed learning, and experiential learning. Bringing Artificial Intelligence (AI) to education is revolutionizing education by offering personalized learning experiences, automating administrative tasks, and providing data-driven insights to improve teaching and learning outcomes. AI-powered educational tools assist

teachers in lesson planning, grading, scheduling, record-keeping, and providing feedback, thereby enhancing efficiency and effectiveness, freeing up time for educational administrators to focus on strategic planning of students support initiatives in the classroom.

A well-structured and organized administration, schools and educational institutions can provide a conducive learning environment for students, support teachers in their instructional practices, and foster overall growth and development. Additionally, Educational administration and planning have become even more significant in the face of technological advancements. With the integration of technology in education, administrators and planners have the opportunity to leverage innovative tools, platforms, and data-driven approaches to enhance teaching and learning experiences.

Technology has transformed education by revolutionizing also facilitated the automation of routine administrative processes. Tasks like student registration, grading, and reporting can now be efficiently managed through integrated software systems. This automation not only saves time but also minimizes errors and ensures data accuracy. Technology in education refers to the integration of digital tools, resources, and platforms to enhance teaching, learning, and administrative processes within educational institutions (Thahirah, 2018). This includes hardware such as computers, tablets, and interactive whiteboards, as well as software, online resources, and learning management systems (Goldberg 2015). Technology in educational system encompasses various aspects. Firstly, digital platforms and tools have simplified administrative tasks such as record-keeping, scheduling, and communication. For example, cloud-based systems allow for easy access to information, reducing paperwork and administrative burden.

In recent years, secondary schools have encountered a surge in the complexity and volume of administrative tasks, creating an unprecedented burden on educational institutions. The responsibilities ranging from student lesson plan creation, enrollment and class attendance tracking, data-keeping to curriculum planning and reporting, has significantly increased the workload for administrative staff. The traditional methods of managing these tasks, often reliant on manual processes and outdated systems, struggle to keep pace with the evolving demands of the educational landscape. This escalating administrative workload not only hampers operational efficiency but also poses challenges in maintaining accuracy, meeting regulatory requirements, and fostering a student-centric learning environment. This makes one wonder how teachers manage to handle the never-ending tasks of curriculum planning, creating engaging lesson plans, taking attendance, and keeping track of student data. It's a lot to handle, but imagine if they had a helping hand in the form of Artificial Intelligence (AI).

Artificial Intelligence (AI), refers to the development of computer systems capable of performing tasks that typically require human intelligence (Goksel & Bozkurt, 2019). These tasks include learning, reasoning, problem-solving, perception, understanding natural language, and interacting with the environment. AI encompasses various techniques and approaches, including machine learning, neural networks, natural language processing, computer vision, and robotics, among others. The goal of AI is to create systems that can autonomously process information, adapt to changing circumstances, and perform tasks with efficiency and accuracy, often surpassing human capabilities in specific domains (Devlin, Chang, Lee, and Toutanova 2018).

Artificial Intelligence refers to the simulation of human intelligence processes by machines, especially computer systems. Accordingly, Nathan, Abasi and Isuaiko (2025) refers to Artificial Intelligence (AI) as the study of how the human brain makes decisions, learns new things, and thinks through difficulties. Artificial

Intelligence (AI) has the potential to revolutionize various industries by augmenting human capabilities and automating tasks (Russell and Norvig 2020).

This includes learning, reasoning, problem-solving, perception, and language understanding. Artificial Intelligence, commonly known as AI, plays a significant role in various fields, including education. In the educational context, AI refers to the utilization of technologies that simulate human intelligence processes in machines, particularly computer systems. This simulation encompasses a range of functions such as learning, reasoning, problem-solving, perception, and language understanding.

The use of Artificial Intelligence continues to grow in the education sector. It is becoming increasingly clear to all that it offers many exciting possibilities for the learning outcomes of students and its importance help in achieving modern educational goals. AI offers some potential benefits to the students and teachers. AI brings benefits and opportunities to education by facilitating personalization of learning, providing instant feedback and improving efficiency in the assessment process. Thus, artificial intelligence can be integrated into online learning platforms, allowing content and activities to be customized according to the needs and knowledge level of each student. Management systems can use artificial intelligence to provide personalized recommendations, automatic feedback and monitor student progress. Thus, teachers and students can access relevant materials and resources according to their individual needs.

Furthermore, AI can be used to create tutorials and interactive virtual assistants, systems that can answer students' questions, provide additional explanations, and guide students in real time through the learning process. Thus, through tutorials and virtual assistance students can benefit from additional support and learn at an individualized pace receiving real-time guidance to support the learning process (Rutkin, 2015). AI can automate many time-consuming administrative tasks in teaching and learning. It could be used in grading assignments, providing feedback on student work, or even detecting plagiarism. AI can be used to create personalized learning experiences for students. Sonderlund, Hughas and Smith (2019) stated that AI-based learning systems can analyze student data, such as their learning style, pace, and preferences, and then provide them with tailored learning experiences. This can lead to improved engagement, motivation, and ultimately, better learning outcomes.

Brew and Leacock (2013) posits that the use of artificial intelligence (AI) in educational management can improve intelligent tutoring systems (ITS) by providing personalized and adaptive feedback to students. Thahirah (2018) also posits that AI-powered ITS can collect and analyze data on student performance, learning patterns, and engagement levels to provide individualized support and interventions. According to Chen, Yin, Isaisa, and Psotka (2020) AI can enable the ITS to adjust the difficulty of the content based on the student's proficiency level, which can promote mastery learning and increase motivation. AI-powered intelligent tutoring systems can provide immediate feedback to students, identify knowledge gaps and suggest suitable learning strategies. This can be particularly beneficial for students who need extra support in their learning.

Sonderlund, Hughas and Smith (2019) stated that AI can be used to improve the efficiency of administrative tasks in educational institutions. Zawacki-Richter & Anderson (2014) AI-powered systems can automate routine tasks, such as grading, scheduling, and record-keeping, freeing up educators' time to focus on more impactful work, such as lesson planning and student engagement. Educational institutions have to deal with a lot of administrative tasks, such as scheduling, grading, and record-keeping. He continued by stating that AI can automate many of these tasks, freeing up educators' time to focus on teaching and supporting students.

The integration of AI in automating administrative tasks in secondary schools in Dutsinma LGA, cannot be overemphasized because of its enhancing efficiency and reducing the workload on teachers. By embracing AI technologies for automation, data analytics, and decision support, schools can optimize their operations, improve student outcomes, and create a more conducive learning environment.

### **Statement of the Problem**

Many secondary schools in Nigeria in general and Dutsinma in particular, are grappling with so many challenges marked by an overwhelming administrative workload, extending across a spectrum of critical responsibilities essential for effective operation. Some of these tasks included spanning student enrollment, attendance tracking, grading, communication management, curriculum planning, and lesson plan creation, has expanded beyond the capacity of conventional administrative processes where manual entries are made. Manual methods of task execution are proving increasingly insufficient, leading to inefficiencies, inaccuracies, and placing strain on the operational resources of educational institutions.

The challenges faced by secondary school's teachers in managing administrative tasks are multifaceted and gone beyond manual tasks. Student records and data-keeping, curriculum planning, lesson plan creation, along with attendance tracking and grading, demand meticulous attention. These tasks often involve time-consuming processes prone to human errors. Furthermore, the evolving landscape of educational standards and the integration of technology bring forth a surge in regulatory compliance and data reporting requirements, amplifying the complexity of administrative responsibilities.

To this end, emphasis should be laid on the need for efficient solutions which is crucial, given that this escalating workload not only impede the operational efficiency of secondary school teachers but also raises concerns about staff burnout and compromised productivity. Conventional manual methods are no longer sustainable, and secondary school teachers should urgently require innovative approach that may leverage technology to streamline administrative processes. The introduction of such solutions is pivotal not only for reducing the workload but also for improving productivity, allowing administrators to redirect their efforts toward strategic initiatives that enhance the overall educational experience. This was why the researchers seek to explore and advocate for these efficient solutions, with a specific focus on the transformative potential of Artificial Intelligence (AI) in redefining secondary school teachers' administrative practices.

### **Objectives of the Study**

The main objective of this study is to explore the potential of Artificial Intelligence (AI) in automating administrative task and reducing workload on secondary school teachers in Dutsinma LGA, Katsina state, Nigeria. Specifically, the study sought to:

1. Examine impact of using Artificial Intelligence in automating administrative tasks and reducing workload on secondary school teachers in Dutsinma LGA of Katsina State.
2. Examine the Impact of using Artificial Intelligence in automating student's records and data keeping by reducing administrative task and teachers' workload in Dutsinma LGA of Katsina State.
3. Examine the impact of using Artificial Intelligence (AI) in automating the class attendance of students by reducing teachers' workload in secondary schools in Dutsinma LGA of Katsina State.

### **Research Questions**

1. To what extent has the use of Artificial Intelligence reduced the administrative task and workload on teachers in secondary schools in Dutsinma LGA of Katsina State?

2. What is the impact of using Artificial Intelligence in automating student's records and data keeping by reducing administrative task and teachers' workload in secondary school in Dutsinma LGA of Katsina State?
3. What is the impact of using Artificial Intelligence in automating the class attendance of students by reducing teachers' workload in secondary schools in Dutsinma LGA of Katsina State?

### Methods

This study used descriptive research design to examine Secondary Schools effectiveness of integrating AI in automating administrative tasks and reducing the workload of secondary school teachers in Dutsinma LGA, Katsina State. The population of the study comprised all the ten (10) Government secondary schools in Dutsinma LGA, making 2,155 teachers as the population. These schools were purposively selected among others. The sample for the study was 322 teachers out of the population. This was got from Krejcie and Morgan, 1970, who states that when the population of a study is in thousands, the closest sample should be picked. The instrument for the study was a self-structured questionnaire on Artificial Intelligence on Schools Management and Record Keeping Questionnaire (AISMRKQ) in automating the class attendance of students by reducing teachers' workload in secondary schools in Dutsinma LGA of Katsina State? Impact of Artificial Intelligence on Adequate Management of Schools and Record Keeping (IAIAMS RK) in Dutsinma Local Government Area of Katsina. It was Four Likert-scale questionnaire of 15 items which was designed to elucidate information from the respondents, ranging from Strongly Agree (SA= 4), Agree A = 3), Disagree (D = 2) and Strongly Disagree (SD = 1). The instrument was validated by two experts in the department of Educational Management and the unit of Measurement and Evaluation Faculty of Education, Federal University Dutsinma, Katsina State with a reliability index of 0.75. The data collected was analysed using descriptive statistics of mean and standard deviation.

### Results

**Research Question 1:** To what extent has the use of Artificial Intelligence to reduce the administrative task and workload on teachers in secondary schools in Dutsinma LGA of Katsina State?

**Table 1:** Indicates the responses of the teachers on the extent to which the use of AI has reduced the administrative task and workload in secondary schools in Dutsinma LGA, Katsina State N = 322

S/N	Statements	SA	A	D	SD	X	STD	Decision
1.	AI technology can effectively automate routine administrative tasks in schools	102	63	41	15	3.40	0.70	Agreed
2.	Integrating AI in school administration can help reduce the workload on teachers	125	78	48	32	4.40	0.90	Agreed
3.	AI systems can improve the efficiency of handling student records and data in schools	115	62	43	18	3.70	0.74	Agreed
4.	AI tools can enhance communication and collaboration among teachers, students, and parents	135	33	22	15	3.18	0.64	Agreed
5.	AI can positively impact the daily administrative tasks in your school	127	78	46	20	4.21	0.84	Agreed
<b>Cumulative Mean</b>						<b>3.78</b>		

*Source: Field work, 2024.*

Table 1 indicated that the use of AI reduces the administrative task and workload of the teachers in secondary schools in Dutsinma in particular and Nigeria in general. This can be seen in the cumulative mean of 3.78 and the items on the table which shows an affirmation to the decision by the respondents.

**Research Question 2:** What is the impact of using Artificial Intelligence in automating student's records and data keeping by reducing administrative task and teachers' workload in secondary school in Dutsinma LGA of Katsina State?

**Table 2:** Shows the responses of the respondents on the impact of using AI in automating the students' records and data keeping by reducing administrative task and workload for teachers in secondary school in Katsina State N = 322

S/N	Statements	SA	A	D	SD	X	STD	Decision
1.	There has been training on how to use AI tools for administrative tasks in your school	85	61	52	28	3.51	0.70	Agreed
2.	AI technologies are often used to assist in your administrative responsibilities	55	36	25	15	2.03	0.41	Disagreed
3.	AI tools are user-friendly and easy to integrate into your daily work routine	145	75	30	24	4.25	0.85	Agreed
4.	There has been challenges when using AI technologies in your administration tasks in your school	171	85	15	11	4.38	0.88	Agreed
5.	There is the need to assess more training and support to enhance your use of AI tools for administrative purposes.	159	71	42	8	4.35	0.87	Agreed
<b>Cumulative Mean</b>						<b>3.70</b>		

*Source: Field work, 2024.*

In table 2, it is indicated that AI impacted so much in automating students' records and data keeping by the teachers and managers of schools. This also seen in the cumulative mean of 3.70 for affirmation, though, item two in the series was disagreed upon, stating that AI technologies are not used in the administrative duties of the administrators and the teachers. AI-based learning systems can analyze students' data, such as their learning style, pace, and preferences, and then provide them with tailored learning experiences. This can lead to improved engagement, motivation, and ultimately, better learning outcomes and easy automating of students' records and data keeping.

**Research Question 3:** What is the impact of using Artificial Intelligence in automating the class attendance of students by reducing teachers' workload in secondary schools in Dutsinma LGA of Katsina State?

**Table 3:** Indicates the responses of the respondents on the impact using of AI in automating the class attendance of students by reducing teachers' workload in secondary schools in Dutsinma LGA of Katsina State N=322

S/N	Statements	SA	A	D	SD	X	STD	Decision
1.	The teachers use AI to prepare their lesson	43	36	27	10	1.80	0.36	Disagreed
2.	Automated lesson plan makes the lesson easier	152	42	21	15	3.57	0.71	Agreed
3.	AI has potential impact on the lesson delivery	143	57	28	12	3.73	0.75	Agreed
4.	The integration of AI in schools has drawn lesson closer to the students	162	88	31	21	4.69	0.94	Agreed
5.	The integration of AI has created laziness to the teachers	155	78	52	14	4.64	0.93	Agreed
<b>Cumulative Mean</b>						<b>3.69</b>		

For table 3, it is seen that the teachers' use of AI to automate their lesson plan has reduced the administrative task and workload in secondary school in Katsina State. This can be seen in the cumulative mean of 3.69, though item 1 on the table indicated negative in disagreement. In support to the table and responses, items 2, 3, 4, and 5 indicated in affirmation that the use of AI has really reduced the workload and administrative tasks of the teachers.

### **Discussion of Findings**

Results in table 1 revealed that AI reduces the administrative tasks and workload on teachers in secondary school in Dutsinma LGA. In cause of the investigation, it was discovered that the use of Artificial Intelligence reduces the administrative task and workload on teachers in secondary schools in Dutsinma LGA of Katsina State in particular and Nigeria in general. This can be seen in the cumulative mean of 3.78 which was as a result respondent responses on the table. In line with this agreement, Sonderlund, Hughes and Smith (2019) AI-powered systems can automate routine tasks, such as grading, scheduling, and record-keeping, freeing up educators' time to focus on more impactful work, such as lesson planning and student engagement, invariably reducing the old system of using manual record-keeping.

Table two revealed that the use of Artificial Intelligence in automating the students' records and data keeping reduces the administrative task and workload for teachers in secondary school in Kaduna State. It was also discovered that if AI is adequately used it will automatically reduce the mistakes and amount of work on students' records and data keeping among the administrative tasks for the teachers. This can be seen in the cumulative mean of 3.70 for affirmation, though, item two in the series was disagreed upon. This result was from the respondent responses as indicated on the table. Sonderlund, Hughes and Smith (2019) stated that AI can be used to create personalized learning experiences for students. AI-based learning systems can analyze students' data, such as their learning style, pace, and preferences, and then provide them with tailored learning experiences. This can lead to improved engagement, motivation, and ultimately, better learning outcomes.

Table 3 revealed the responses of the teachers on the use of AI in automating the lesson plan to reduce administrative task and workload in secondary schools in Katsina state. It was seen that the teachers' use of AI to automate their lesson plan has reduced the administrative task and workload in secondary school in Katsina State. This can be seen in the cumulative mean of 3.69, though item 1 on the table indicated negative in disagreement. In line to the table and responses of the respondents, it was really affirmed that the use of AI has reduced the workload and administrative tasks of the teachers. Mislevy, Yan, Gobert and Sao-Pedro (2020) suggested that the application of artificial intelligence (AI) in educational management can help to improve teaching and learning outcomes for teachers and students. Again, O'Neil and Chuang, (2019) posited that AI-powered tutoring systems can provide personalized feedback and adaptive learning experiences that are tailored to each student's needs and learning styles. Brew and Leacock (2013) suggested that the application of artificial intelligence (AI) in educational management can help to improve learning outcomes for students. Again, Thahirah (2019) posited that AI-powered tutoring systems can provide personalized feedback and adaptive learning experiences that are tailored to each student's needs and learning style. Furthermore, Zawacki-Richter & Anderson (2014) posited that AI can also be used to analyze large amounts of student data, such as assessment scores and behavioral patterns, in order to identify areas where students may be struggling and provide targeted interventions.

### **Conclusion**

The study examined the impact of Artificial Intelligence on School Management and Record Keeping in Secondary Schools in Dutsinma Local Government Area of Katsina State. Based on the findings, it was concluded



that AI is a veritable tool to reducing the teachers' workload in all the administrative tasks in Secondary School in Dutsinma Local Government Area of Katsina State. It was also found out that if the schools management use AI in all the administrative daily routines.

### Recommendations

Based the finding of the study, the following recommendations were made:

1. Artificial Intelligence (AI) should be used in all the administrative tasks in secondary school;
2. AI should be used in keeping all the data and records of the students;
3. Teachers should be compelled to use AI to compile students records as it will enable them have accurate records in both the lesson plan and other records of the students, in Dutsinma Local Government area of Katsina State;
4. Teachers should be trained on the use of AI in the classroom; and
5. AI should be included in the curriculum by the curriculum planners and educational policy makers.

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## **The Influence of Cultural integration in Social Studies Education for early childhood students with Special needs in Delta State.**

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### **Abstract**

This study examines the influence of integrating culture into Social Studies for early childhood students with special needs in Delta State, Nigeria. A survey research design was adopted, involving 1,094 students in Upper Basic Education level, with a sample of 200 selected through a simple random sampling technique. The study was guided by three research questions and three hypotheses. Data were gathered using a structured questionnaire with a reliability coefficient of 0.76. Analyses employed Pearson's Product-Moment Correlation and Chi-square statistics. Findings revealed a moderate positive relationship between cultural integration and academic performance, underscoring its significance in enhancing educational outcomes, there was a significant impact of cultural integration in Social Studies on students' social and emotional development. Teachers' perceptions also correlated significantly with the perceived effectiveness of cultural integration. The study recommends embedding culturally inclusive practices in Social Studies curricula and enhancing teacher training to foster adaptive learning environments. Such initiatives can promote equitable education for students with special needs, ensuring comprehensive academic and emotional development.

**Keyword:** Culture, integration, Social Studies, early childhood and special need students.

### **Introduction**

The integration of culture into early childhood education plays a critical role in shaping the cognitive, social, and emotional development of children. In particular, social studies education offers a unique avenue to incorporate cultural understanding in young learners, including those with special needs (Rosenberg, 2020). Cultural education in early childhood seems to promote the development of an appreciation for diversity, fosters an inclusive environment, and enhances social skills. Moreover, early childhood is a formative period when children are most receptive to new ideas and concepts. As such, providing them with culturally relevant education can significantly impact their growth and academic success (Adewusi et.al, 2023). One of the central reasons for the importance of culture in early childhood education is that it supports the development of a child's identity and self-awareness. According Eden Et.al (2024), cultural awareness in early education can lead to improved academic outcomes and social interactions, especially for students from marginalized or minority groups. This focus on culture helps children recognize the value of their own heritage while also fostering an appreciation for the differences of others. When students are introduced to diverse cultural perspectives in a supportive and structured environment, they are better equipped to navigate an increasingly multicultural society (Kafadar, 2021).

Social studies education, when infused with cultural relevance, serves as a powerful tool to develop cultural awareness (Ohanyere & Ohanyere, 2022). Social studies is not merely the study of history, geography, and civics but also a vehicle through which children can learn about themselves and others in the world around them. Social Studies lessons that include cultural narratives allow children to explore the significance of their own culture as well as the customs, traditions, and beliefs of different communities (Qin, 2017). Authors such as Pagaddut and Tamana (2024) have emphasized that a culturally relevant curriculum in social studies can improve

students' engagement, motivation, and academic performance, particularly for those from diverse backgrounds. The inclusion of cultural perspectives in Social Studies helps children develop empathy, understand societal structures, and recognize the importance of social justice.

For children with special needs, cultural integration in education is equally essential as Apebende et.al (2008) noted that students with special needs often face barriers to academic success due to factors like exclusion, stereotyping, and a lack of tailored educational strategies. The authors posited that incorporating cultural diversity into the curriculum, educators can create a more inclusive and equitable learning environment that respects and values the uniqueness of every student. For students with special needs, culture may not only serves as a medium for learning but also as a bridge that connects them to their peers and communities. Culturally responsive teaching practices are critical in meeting the diverse needs of all students, including those with disabilities.

A culturally responsive curriculum helps teachers understand the cultural backgrounds of their students, allowing them to tailor instruction in ways that are meaningful and relevant to the learners' lived experiences (Biswas, 2022). Teachers who understand the cultural contexts of their students could adopt teaching strategies that recognize and value differences, which may enhance students' academic and social success. Abacioglu et.al (2020) argued that teachers who are equipped with culturally relevant pedagogical strategies are better prepared to support students with special needs, particularly in classrooms where diversity is high. Incorporating culture into the Social Studies curriculum may benefit students with special needs by promoting their emotional and social development. Early childhood education is a time when children learn to interact with their peers, understand emotions, and develop social skills. Culturally inclusive practices, such as sharing diverse stories, traditions, and practices, offer students with special needs the opportunity to connect with others, develop empathy, and feel a sense of belonging (Balik et.al, 2024). Studies show that children with special needs who are exposed to culturally diverse content are more likely to feel included and valued in their learning environment, which can lead to improved social interactions and self-esteem (Molina et.al, 2021).

Furthermore, integrating culture into social studies education for students with special needs aligns with the principles of Universal Design for Learning (UDL). UDL is an educational framework that emphasizes flexibility in teaching and learning to accommodate the diverse needs of all students (Akintayo et.al, 2024). According to Almumen (2020) culturally responsive teaching is a key component of UDL because it recognizes the varied cultural backgrounds, learning styles, and abilities of students. By using culturally relevant materials and approaches in social studies, educators may create more inclusive and accessible learning experiences for students with special needs.

The benefits of cultural integration extend beyond the classroom as well. In the broader context of society, early childhood education that is rooted in cultural understanding prepares children to become active, informed, and empathetic citizens. Children who are taught to appreciate cultural diversity are more likely to grow into adults who are open-minded, socially responsible, and capable of contributing to a harmonious society (Sakti et.al, 2024). Social Studies, when taught with a cultural lens could equip children with the skills they need to navigate and thrive in a complex, globalized world. Additionally, research has shown that culturally relevant teaching improves not only the social and emotional development of children but also their academic outcomes (Lau & Shea, 2024). Cultural integration in education also plays a role in addressing achievement gaps among students with special needs. Research has indicated that students with disabilities often perform at lower levels academically compared to their peers without disabilities. However, when these students are provided with

culturally responsive teaching, they are more likely to experience academic success and feel a stronger sense of connection to their education (Dyliaeva et.al, 2024). Culturally relevant teaching strategies allow students with special needs to make meaningful connections between the content they are learning and their personal experiences, which can lead to improved comprehension, engagement, and performance. The importance of cultural integration in early childhood education cannot be overstated, especially in Social Studies. For children with special needs, it is crucial that educators recognize and address the cultural dimensions of their learning experiences. By doing so, teachers could help ensure that all students, regardless of their background or abilities, have access to a rich, inclusive education that promotes academic success, social growth, and personal development. Cultural relevance in Social Studies appears to be critical in understanding how children engage with the subject matter. Social Studies, which encompasses topics related to history, geography, economics, and civics, plays a crucial role in shaping young children's understanding of the world. According to Karadag et.al (2021) integrating cultural relevance into Social Studies education ensures that all students, regardless of background, can see themselves reflected in the curriculum. The authors advocates for a multicultural education approach, which helps students to appreciate diverse perspectives and fosters global citizenship. This view aligns with the concept that education should not only focus on content delivery but also on creating a space for students to learn about their own and others' cultures.

Previous research on the role of culture in Social Studies has demonstrated that culturally relevant teaching practices positively affect student engagement and learning outcomes. For example, a study by Gulya and Fehervari (2024) on culturally relevant pedagogy highlighted the importance of teaching methods that recognize the cultural backgrounds of students. The findings suggest that when teachers incorporate students' cultural references into their teaching practices, it enhances student learning and fosters a more inclusive and supportive classroom environment. This concept is particularly relevant in diverse classrooms where students come from varied cultural and socio-economic backgrounds. In the context of children with special needs, cultural considerations also play a significant role in supporting effective learning. Many children with special needs come from backgrounds that may not align with traditional educational practices. Therefore, culturally responsive strategies may be essential to ensure that the educational experiences of these children are meaningful and engaging. Efthymiou (2023) has explored how cultural factors can influence the learning experiences of children with disabilities, emphasizing the importance of personalized approaches that consider the child's cultural context. Apebende et.al (2008) examined how early childhood education can foster cultural integration through the social studies curriculum, emphasizing the importance of exposing children to diverse cultural values and practices in Nigeria. It concludes that such education not only instills virtues like tolerance and understanding but also equips children to become productive citizens in a multicultural society. Suri and Chandra (2021) explored strategies employed by early childhood education teachers in Lampung, Indonesia, to implement multicultural education grounded in local cultural values and character building. The study found that the use cultural exchanges and problem-based learning strategies fosters multiethnic and multicultural understanding in school environments. Kafadar (2021) examined the inclusion of cultural heritage elements in Turkey's Social Studies curriculum and middle school students' awareness of such heritage, finding a stronger emphasis in grades 4 and 5 compared to higher grades. Students associated cultural heritage with historical buildings and intangible traditions, highlighting its importance in preserving cultural identity and history while recommending strategies for its protection. Pagaddut and Tamana (2024) examined the integration of Indigenous People's Education (IPEd) in teaching Social

Studies among senior high school students in the Philippines, highlighting its benefits and challenges. Findings revealed that while students and teachers perceived IPed positively, teachers often undervalue cultural integration, emphasizing the need for training and feedback mechanisms to enhance inclusivity and effectiveness.

Cultural competence among teachers is another key factor that influences the effectiveness of early childhood education for children with special needs (Biswas, 2022). Teachers who are culturally competent may be better equipped to create inclusive learning environments. These teachers could recognize and address the diverse cultural needs of their students, which is especially important when working with children with special needs who may face additional barriers to learning. Additionally, the integration of technology in early childhood education has introduced new opportunities to enhance culturally relevant learning experiences. As digital tools become more widespread, teachers can use technology to create personalized learning experiences that are both culturally relevant and accessible to children with special needs. Okoye (2024).demonstrated that technology can support language development and other learning needs in early childhood classrooms, particularly for children with disabilities. The ability of technology to offer tailored, interactive learning experiences seems to present a unique opportunity to make education more inclusive and culturally responsive.

The global shift towards inclusive education has led to increased emphasis on the need for culturally responsive teaching in diverse classrooms, particularly in Social Studies. As global migration and multiculturalism continue to shape educational settings, educators are tasked with fostering inclusive environments that meet the diverse needs of all students.

#### **Statement of the Problem:**

The role of culture in social studies education for early childhood students with special needs in Delta State remains underexplored, despite its significance in shaping an inclusive, responsive, and effective educational environment. There is limited understanding of how cultural factors influence the curriculum, teaching strategies, and overall educational outcomes for young learners with special needs. Early childhood education plays a crucial role in the development of social, emotional, and cognitive skills, yet the integration of culturally responsive teaching methods tailored to children with special needs is not well established. In Delta State, the diverse cultural backgrounds of students may present both opportunities and challenges in delivering social studies content that is both accessible and engaging for all children. This study aims to investigate the role of culture in shaping the educational experiences of early childhood students with special needs, focusing on how cultural sensitivity can improve social studies instruction and support better learning outcomes.

#### **Purpose of the Study:**

1. To examine the impact of culturally relevant Social Studies on the academic performance of early childhood students with special needs in Delta State.
2. To explore the role of cultural integration in enhancing the social and emotional development of early childhood students with special needs in Delta State.
3. To assess the relationship between the perceptions of early childhood students with special needs and the perceived effectiveness of cultural integration in Social Studies in Delta State.

#### **Research Questions:**

1. How does the integration of culture in Social Studies education influence the academic performance of early childhood students with special needs in Delta State?

2. In what ways does cultural integration in Social Studies education affect the social and emotional development of early childhood students with special needs in Delta State?
3. What is the relationship between the perceptions of early childhood students with special needs and the perceived effectiveness of cultural integration in Social Studies in Delta State?

**Hypotheses:**

1. There is no significant relationship between the integration of culture in Social Studies and the academic performance of early childhood students with special needs in Delta State.
2. There is no significant impact of cultural integration on the social and emotional development of early childhood students with special needs in Social Studies in Delta State.
3. There is no significant relationship between teachers' perceptions and the perceived effectiveness of cultural integration in Social Studies for early childhood students with special needs in Delta State.

**Methods**

This study explores the influence of integrating culture into Social Studies for early childhood students with special needs in Delta State, Nigeria. A survey research design was employed, targeting 1,094 students at the Upper Basic Education level. From this population, a sample of 200 students was selected using a simple random sampling technique to ensure representativeness. The study was guided by three research questions and three corresponding hypotheses. Data collection was conducted using a structured questionnaire titled 'Integrating Culture into Social Studies for Early Childhood Students with Special Needs Questionnaire' (ICSSECSSNQ). The questionnaire comprised 30 items, rated on a 4-point Likert scale: Strongly Disagree, Disagree, Agree, and Strongly Agree. The instrument was divided into two sections. Section A captured the demographic characteristics of the respondents, while Section B consisted of items related to the research questions designed to elicit relevant responses. The questionnaire's validity was ensured through expert judgment by two lecturers from the Department of Social Science Education, Delta State University, Abraka. To establish reliability, the instrument was administered to a sample of 30 students from schools in Anambra State, who were not part of the main sample. After two weeks, the reliability coefficient of 0.76 was obtained using the test-retest method and the Pearson Product-Moment Correlation Coefficient was applied to analyze the consistency and stability of the instrument over time. This value of 0.76 indicates an acceptable level of reliability for the instrument. To measure students' academic performance, the study relied on academic records provided by the schools, assessing students' grades in Social Studies. Data analysis involved using Pearson's Product-Moment Correlation and Chi-square to test the hypotheses.

**Results**

**Hypothesis 1:**

There is no significant relationship between the integration of culture in Social Studies and the academic performance of early childhood students with special needs in Delta State.

**Table 1: Correlation analysis of relationship between the integration of culture in Social Studies and the academic performance of early childhood students with special needs**

Variable	N	Mean	STD.D	df	R	P-Value	Remarks
Culture in Social Studies Academic performance	200	16.21	4.053	604	0.405	0.000*	Sig
	200	17.31	2.093				

**Source:** Author's Survey, 2024

*\* denotes significant relationship at 0.05 level of significant*

The table shows a positive and significant relationship between the integration of culture in Social Studies and the academic performance of early childhood students with special needs. The correlation coefficient is  $r=0.405$ , which indicates a moderate positive relationship between the variables. The mean score for the integration of culture in Social Studies is 16.21 (STD.D = 4.053), while the mean score for academic performance is 17.31 (STD.D = 2.093). With a P-value of 0.000, which is less than the significance level of 0.05, the null hypothesis stating that "there is no significant relationship between the integration of culture in Social Studies and the academic performance of early childhood students with special needs" is rejected. This result implies that the integration of cultural elements in Social Studies positively and significantly contributes to the academic performance of early childhood students with special needs.

### **Hypothesis 2:**

There is no significant impact of cultural integration on the social and emotional development of early childhood students with special needs in social studies in Delta State.

**Table 2: Chi-square Analysis of the Impact of Cultural Integration on the Social and Emotional Development of Early Childhood Students with Special Needs**

Variables	N	df	Crit X <sup>2</sup> value	Calc X <sup>2</sup> value	Decision
Cultural Integration	200	3	7.815	19.547	Rejected
Social and Emotional Development					

**Source:** Author's Survey, 2024

The results in Table 2 shows that the calculated Chi-square value of 19.547 is significantly greater than the critical Chi-square value of 7.815 at a 0.05 level of significance with 3 degrees of freedom. Consequently, the null hypothesis, which posits that cultural integration does not significantly impact the social and emotional development of early childhood students with special needs in Social Studies, is rejected. This implies that cultural integration has a significant impact on the social and emotional development of these students.

### **Hypothesis 3:**

There is a significant relationship between the perceptions of early childhood students with special needs and the perceived effectiveness of cultural integration in Social Studies in Delta State.

**Table 3: Correlation analysis of the relationship between the perceptions of early childhood students with special needs and the perceived effectiveness of cultural integration in Social Studies in Delta State.**

Variable	N	Mean	STD.D	df	R	P-Value	Remarks
Perception of students cultural integration in Social Studies	200	16.39	2.224	604	0.606	0.000*	Sig
	200	17.31	2.093				

**Source:** Author's Survey, 2024

*\* denotes significant relationship at 0.05 level of significant*

The results in Table 3 show a positive and statistically significant relationship between students' perceptions of cultural integration in Social Studies and its perceived effectiveness for early childhood students with special needs. The correlation coefficient of 0.606 indicates a moderate to strong relationship, meaning as students' perceptions of cultural integration improve, their views on its effectiveness also become more favorable. The mean score for students' perceptions of cultural integration is 16.39 (STD.D = 2.224), while the mean score for the perceived effectiveness of cultural integration is 17.31 (STD.D = 2.093). With a P-value of 0.000, which is less than the significance level of 0.05, the null hypothesis is rejected. This indicates a significant relationship between students' perceptions of cultural integration and its perceived effectiveness in Social Studies for students with special needs, highlighting the role of positive perceptions in enhancing its effectiveness.

### Discussion of Findings

The results in table 1 revealed a positive and significant relationship between the integration of cultural elements in Social Studies and the academic performance of early childhood students with special needs ( $r = 0.405$ ,  $p = 0.000$ ). This moderate positive relationship suggests that culturally integrated teaching practices enhance the academic engagement and outcomes of these students. The rejection of the null hypothesis underscores the role of culturally relevant pedagogy in creating a supportive learning environment. This finding is in agreement with Ohanyere and Ohanyere (2022) who stressed the importance of culturally responsive teaching in improving students' academic outcomes, emphasizing that aligning educational content with students' cultural backgrounds fosters better understanding and performance. In the same vein, Eliyahu & Ganz (2023) argues that cultural integration in teaching practices motivates and boost academic performance of students; and also bridges gaps between their home and school environments. It is required that educators should prioritize culturally responsive pedagogy to improve academic outcomes.

The findings from Table 2 indicate that the calculated Chi-square value of 19.547 is significantly greater than the critical Chi-square value of 7.815 at a 0.05 level of significance with 3 degrees of freedom. As a result, the null hypothesis, which suggests that cultural integration does not significantly impact the social and emotional development of early childhood students with special needs in Social Studies, is rejected. This significant result suggests that the integration of culture into Social Studies positively influences the social and emotional development of early childhood students with special needs. The Chi-square analysis confirms that cultural integration in the curriculum is not just a trivial or incidental factor, but a key contributor to enhancing students' social skills and emotional well-being. The results suggest that incorporating cultural elements fosters inclusivity, empathy, and emotional stability among students. This finding is in line with the of Sakti et.al (2024) who emphasized the role of sociocultural factors in shaping emotional and social development, stating that cultural



practices in education strengthen interpersonal and intrapersonal growth. Corroborating this finding Eden et.al (2024) supports the idea that cultural integration in educational settings promotes collaborative learning and social competence that cognitive development is more strongly influenced by collaborative exploration and external cultural elements embedded in school activities. This study demonstrates that Social and emotional growth can be enhanced through culturally inclusive practices.

The correlation analysis in Table 3 shows a significant positive relationship between early childhood students' perceptions of cultural integration in Social Studies and their views on its effectiveness for students with special needs. With a correlation coefficient of 0.606, the relationship is moderate to strong, indicating that as students' perceptions of cultural integration improve, they are more likely to view its effectiveness in enhancing their learning outcomes. The mean score for students' perceptions of cultural integration is 16.39, while the perceived effectiveness score is slightly higher at 17.31, suggesting general belief in its effectiveness with some variability in responses. The P-value of 0.000, which is less than the 0.05 significance level, indicates that the relationship is statistically significant, leading to the rejection of the null hypothesis. This finding highlights the importance of fostering positive perceptions of cultural integration among early childhood students with special needs, as these perceptions significantly contribute to its perceived effectiveness in Social Studies instruction. This finding aligns with Bise (2022) argument that motivated students are more likely to adapt and engage with inclusive strategies, emphasizing the pivotal role of students' attitudes toward cultural education in its success. Additionally, Tuncel (2017) supports this view, asserting that students' cultural competence directly influences their ability to contribute to an inclusive classroom environment. Therefore, fostering positive perceptions and supporting students' cultural competence are essential for the effective implementation of cultural integration in Social Studies.

## **Conclusion**

From the discourse, this study underscores the significant role that cultural integration in Social Studies plays in enhancing the academic, social, and emotional development of early childhood students with special needs. The findings reveal a positive and moderate to strong relationship between cultural integration and academic performance, as well as its impact on students' social and emotional development. Additionally, the study demonstrates that students' positive perceptions of cultural integration contribute significantly to its perceived effectiveness in Social Studies, further reinforcing the necessity of integrating cultural elements into the curriculum. The implications of these findings are far-reaching for both educational practice and policy. It is clear that culturally integrated teaching practices not only enhance academic performance but also support students' social and emotional growth, making it a vital tool for inclusive education. Students' cultural competence and positive perceptions are essential for ensuring the effective engagement with cultural integration in Social Studies. By fostering positive perceptions and supporting students in recognizing the value of cultural integration, an inclusive learning environment can be created that addresses the diverse needs of students with special needs. This study advocates for a continued focus on culturally responsive teaching methods to improve both the academic and holistic development of early childhood students with special needs in Social Studies education.

## **Recommendations**

Based on the findings, the following recommendations are made:

1. Educators should prioritize integrating cultural elements into Social Studies curricula to enhance academic engagement and outcomes for early childhood students with special needs.

2. Schools should organize workshops and training programs to improve teachers' cultural competence, enabling them to implement inclusive teaching strategies effectively.
3. Administrators should create environments that motivate teachers and promote positive attitudes toward the integration of cultural elements in education.
4. Schools should include activities that reflect students' cultural backgrounds to strengthen their emotional and social development.
5. Teachers should work with families to bridge cultural gaps between home and school environments, creating a more cohesive support system for students.

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## **Comparative Analysis of Infrastructural Provision for Basic Education between Urban and Rural Areas in Senatorial Districts of Oyo State**

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### **Abstract**

The study compared the Infrastructural provision for Basic Education in urban and rural areas, highlighting the disparities in access to educational facilities. The study was guided by two research hypotheses and adopted quasi-experimental design, combined with sample of 185 head-teachers, comprising of 38 males and 147 females. A self-developed instrument of 15 items called Pupils School Head-teachers Questionnaire (PSHQ,  $r = 0.75$ ) was employed to collect data from the respondents. The results showed that there exist statistical significant difference in the distribution of infrastructure among schools in the urban and rural areas ( $t_{(-2.391)}$ ,  $df = 183$ ,  $p < .05$ ) in favour of rural areas. Similar trend was obtained on Senatorial Districts basis, that there is a statistical significant difference ( $F_{(2,182)} = 6.249$ ,  $p_{(0.002)} < .05$ ) in the distribution of infrastructure for basic education among the three Senatorial Districts. It is then concluded that the provision of basic infrastructure in schools had positive impact on school's enrollment. Nonetheless, there is still need to improve more on infrastructural provision based on the findings. It is recommended that government should increase her commitment towards provision of infrastructural facilities in rural areas where most schools are located and further study on whether provision contribute to pupils' academic achievement should be carried out.

**Keywords:** Basic Education, Infrastructural provision, rural and urban

### **Introduction**

Western education was introduced by the missionaries and colonial masters in the 17<sup>th</sup> century in Nigeria with the aim and objectives of developing lower and middle class workers for mission works. This education later transformed into Basic education and Nigerian citizens began to accept it. Hence, it began to witness series of challenges ranging from overcrowding of the classroom, shortage of qualified teachers, insufficient furniture, shortage of instructional materials, to mention but a few. In order to find solutions to these challenges, Nigerian education sector witnessed educational reforms, in Western Region with Universal Primary Education of 1955. Ever since then various education reforms had been taking place until recently. This include; Universal Primary Education of 1977-1978, National Primary Education Commission of 1988, re-establishment of National

Primary Education Commission of 1993, Universal Basic Education of 1999, Education for All of 2015 and Better Education Service Delivery for All of 2017. The Federal Republic of Nigeria, National Policy on Education (FRN, NPE, 2014) defined education as a process of transferring culture and dissemination of knowledge either to ensure social control or to guarantee rational direction of the society or both. Asodike and Ikpitibo (2014) noted that education is perceived in four ways viz: means to economic prosperity, solution to unemployment, key to scientific technological advancement and source of social equity. Opoh, Okou and Ilang (2015) referred to education as tool and knowledge acquired by individuals to function effectively in the society. With all these definitions of education, it can be seen as a means of acquiring skills, values, knowledge, attitudes etc in order to be acceptable and useful members of the society. So, as education equips the individuals with these fundamental lifelines for survival in the society, it can be aptly described as Basic Education.

The issue of Basic Education dates back to 1952 in Western Region of Nigeria. The region comprised the eight provinces namely Ibadan, Oyo, Ijebu, Abeokuta, Ondo, Lagos (Colony), Edo and Delta. The Premier of the Region His Excellency Late Chief Jeremiah Obafemi Awolowo proposed the Universal Primary Education Scheme to the Regional House of Assembly. This was ratified and the Scheme took off in 1955. The Universal Primary Education was free and compulsory then, with the aim of developing human beings for future economic growth and development (Ajayi, 2014). It started in the Western region in 1955 and continued till 1966, when the military took over the Nigerian government. He stressed further that, other regions (Eastern and Northern) embraced the free Primary Education, but it crashed because its take off was not adequately planned like that of the Western Region (Awokoya, 1952). Meanwhile, Alase (2017) observed poor strategic planning, poor implementation of education reform and mismanagement of education system as problems of UPE in Nigeria.

Along the line, Nigeria soon realized that the British system of Education did not fit-in into her culture and system. By 1973, a seminar to restructure the inherited British colonial education policy was launched by the National Education Research and Development Council (NERDC) and this gave birth to an indigenous system of education under the National Policy on Education (1976-1977). The Universal Primary Education (UPE) was launched in 1977 at the Federal level by Gen. Olusegun Obasanjo, with six years Basic Education Policy (FRN, NPE, 1977). This was reviewed in 1981 and 1990 to support national government development goals. Constant as the overhauling of the national education policy was, it wouldn't have been a problem if the stakeholders in education had closely monitored the sector to achieve the desired result. Mgbodili (2013) observed that education policies are not the problem of education system in Nigeria, for the fact that series of good education policies had been planned, set-up and executed in Nigeria without meaningful results.

Inappropriate and inadequate planning to sustain the policies had been the major problem. The infrastructural facilities in the schools affect school attendance and interest of the pupils. The infrastructural facilities in Nigerian schools before the intervention of Universal Basic Education Commission was pathetic ranging from poor furniture, non-functional toilets, absence perimeter fence in schools and poor learning equipment to mention but a few. Their deplorable and terrible situations were due to poor maintenance culture until they completely collapsed and were devastated. Infrastructural facilities are so important in determining the quality of teaching and learning. Allen et al. (2022) observed supply side interventions as educational inputs that targeted infrastructural provision of teaching materials, physical structure, sport facilities, re-training of teachers and hiring of extra teachers for schools. The actual supply of quantity and quality of resources for

educational institutions depend largely on financial capability of a nation. Even, when all inputs were supplied, thorough supervision and monitoring of these resources also necessary to have better results.

Meanwhile, these facilities were wallowing in neglect and deplorable decadence as they did not receive attention from government and other concerned stakeholders. Nugroho and Wibowo (2019) observed that school infrastructure as a mean to foster academic achievement of students through increasing students infrastructure in school, such as toilets, portable water, library, computer lab, school playing ground, classrooms are likely to affect quality of Basic Education in Nigeria. UNESCO (2015) ascertained that educational infrastructure such as libraries, toilets, furniture, buildings are inadequate and in dilapidated condition in Nigeria. The lingering issue now is to ascertain the situation of school infrastructure in relation to their availability to both urban and rural areas of Nigeria.

Salisu (2016) noted that the impact of infrastructure in national development, such as dilapidated and inadequate infrastructure cannot be overlooked and will jeopardize any nation's development and progress, education inclusive. Alkadri, Ningrum, Santoso and Afriansyah (2017) ascertained poor and insufficient infrastructure as a threat to quality education. Though UBEC is clamouring for quality education, this cannot be achieved unless the quality inputs for education are available in the right locations. Okoye (2016) and Sholihah (2019) were in agreement that schools have to put in place quality infrastructure such as furniture, laboratory, classrooms, libraries, play grounds etc to provide quality education.

Asodike and Ikpitibo (2014) reporting on school infrastructure noted that the component of infrastructure will ensure successful teaching and learning, which will eventually improve Primary Education in Nigeria. In Oyo State, before the intervention of SUBEB on infrastructural facilities, quite a number of schools were in a deplorable state, as a good number of public Primary School building roofs had been blown off by wind. Some were battling with poor furniture; some operated in thatch roofs, one-half-wall structures, classroom demarcated with plywoods; majority of schools were not fenced with no gates; many did not have electricity supplies, some that had electrical fittings had been vandalized by hoodlums. Many schools were not supplied with furniture for both pupils and teachers. In this kind of situation, how could meaningful learning take place? Meanwhile, Conolly and Lampe (2016), Barrelet, Treves, Shmis, Ambasz and Ustinova (2019) and Marmoah, Adela and Frauziah (2019) affirmed that high quality infrastructure such as good classrooms with furniture, well stocked library and well equipped laboratory facilities, improved pupils outcomes and reduced dropout rates. Good building, electricity, modern toilet, good and quality furniture are facilities expected in school setting to attain better and quality education (Amsterdam, 2013; Herwan, Aswandi and Chair, 2018; Alam and Kanako, 2019 and Eton, 2021). Furthermore, Radhika (2019) ascertained that school infrastructures increase students' enrolment and enable individuals to be productive in their working environment.

The chairman of Oyo SUBEB (Dr Adeniran Nureni) revealed the stand of the State government on upward review of education budgetary allocation in order to improve education sector in the State. By 2019, education budget was raised from three (3) percent to ten (10) percent; 2020 budgetary allocation was 22 percent, while that of 2021 was 21 percent. This avails the State an opportunity to pay the counterpart fund to UBEC, in order to access the UBE fund. With accessibility of this fund, Oyo SUBEB had been paying attention to improvement of State's basic educational infrastructure (in the three Senatorial Districts) which include construction, re-construction and renovation of over seven hundred classrooms and toilets, perimeter fencing of schools, provisions of modern boreholes, solar installation, ICT room, furniture for pupils and teachers among

others (<https://subeb.oyostate.gov.ng> >oyo). A good school infrastructure enable children to study hard, improve their attendance, arouse pupils' interest and improve their academic performance (Premium Times). The challenges with infrastructure in our schools are real and the concerned stakeholders UBEC and SUBEB are trying to ensure that the best is achieved for the education of Nigerian children by providing infrastructure in schools for academic and non-academic activities. Burde and Linden (2013) supported construction of schools in rural communities that schools built in those communities would be a succour to pupils from rural areas, because they would no longer be travelling long distances to attend schools in urban centers.

All the UBEC programmes are implemented through close collaboration partnerships between UBEC and State Universal Basic Education Board (SUBEBs), Local Government Universal Basic Education Authority (LGUBEAs) and Basic Education stakeholders at all levels, though the UBEC is at the forefront of Basic Educational national intervention but also welcomes full involvement of individuals, corporate entities, civil societies and community groups to achieve education for ALL (EFA). Then, Education for All should be the responsibility of all, the stakeholders in education cannot be left out on the issue of infrastructure intervention programmes. They are to be provided with relevant information about their roles and core responsibilities in achieving the goals of UBE on intervention programmes. Hence, the development of any nation could be directly traced to her schools products.

### **Statement of the Problem**

The basic education in Nigeria all awhile had been neglected until about two decades ago when federal government launched UBE. The major concern of the then administration was to revamped Basic education by attending to the state of infrastructure in our schools, absence of functional libraries, inadequate furniture, prevalence of absence/non-equipped school laboratories and many other flagrant process abuses such as locating projects in wrong places, misappropriation of fund etc. This prompted UBEC to put in place series of intervention programmes, ranging from renovations and construction of modern classrooms, provision of furniture, recruitment of Federal Scheme Teachers, provision of textbooks for teachers and pupils, sinking of boreholes to mentioned but a few, aimed at checkmating the observed decadence in other to provide the qualitative and quantitative Basic Education for Nigerians. The issue of locating school infrastructure where they were not mostly needed attracted the interest of this researcher, thereby this study compared the basic schools infrastructure distribution between urban and rural areas.

### **Purpose of the Study**

The main objective of this study was to compare the provision of infrastructure for Basic Education between urban and rural areas in Oyo State. Specifically, the study:

1. Verified the distribution of infrastructures among the three Senatorial Districts
2. Ascertain the difference in infrastructural distribution within rural and urban areas

### **Hypotheses**

Two hypotheses were tested at 0.05 level of significance in this study;

1. There is no significant difference in the distribution of infrastructure for basic education among the three Senatorial Districts.
2. There is no significant difference in the distribution of infrastructure provision between rural and urban areas

## **Methods**

The study adopted a descriptive survey research design. This design was appropriate for the conditions/events already present and data collected were used to investigate a possible relationship between the observed events. Therefore data collected from heterogeneous groups were analysed to make inferences and generalizations on the entire population at the same time. The target population for this study comprised of all Head Teachers under Oyo State Universal Basic Education. Oyo State has three Senatorial districts namely Oyo South, Oyo Central and Oyo North with 9 LGAs, 11 LGAs and 13 LGAs respectively. The head teachers were considered appropriate as respondents for the study because they were the heads/administrators in public basic schools. The researcher used multi stage random sampling technique in the selection of sample for this study. The first stage involved the selection of four (4) Local Government Areas from each of the three (3) Senatorial Districts by simple random sampling which produced a total of twelve (12) Local Government Areas using the hat and draw method. Each of the names of the Local Government in each Senatorial District was written on a piece of paper, folded and put in a tray. After shuffling and reshuffling, four Local Governments (Egbeda, Lagelu, Oluyole and Oyo west) were picked by the researcher from the Oyo Central Senatorial Districts. The same sampling technique was repeated to select Irepo, Iseyin, Itesiwaju and Olorunsogo Local Government Areas from Oyo North Senatorial Districts, while Ibadan North, Ibadan South East, Ibadan South West and Ibarapa Central were selected from Oyo South Senatorial District. For the second stage, stratified random sampling technique was used to select rural-urban schools, schools selected from rural areas were from villages, hamlets and remote areas while urban ones were selected in towns and cities and for the final stage, simple random technique was used to proportionately select 20% (185) head teachers as respondents for the study.

The Basic School Head Teachers` Questionnaire was designed by the researcher to gather relevant information from the head teachers. The instrument has two sections. Section A was on demographic information of the respondents and Section B consisted 15 items on matters relating to infrastructure facilities, and infrastructural distribution. The response format was four points likert type scale ranging from Strongly Disagree (SD), Disagree (D), Agree (A) and Strongly Agree (SA). The content validity method was adopted as it is most suitable to review, critique and adjust questionnaire items. Two experts in items construction from the Evaluation Department of Tai Solarin University of Education, Ijagun assisted in reviewing the items, as they thoroughly read through the items of the instrument and relate them carefully to the research objectives and research hypotheses. A pilot study was conducted on independent respondents in Afijio Local Government Area of Oyo State to test the reliability of the instruments. Thirty (30) Basic School Head Teachers Questionnaire (BSHTQ) were administered. The completed and returned questionnaires were analysed using Cronbach Alpha to determine the reliability of the instrument. The result of the reliability coefficient of Basic School Head-teacher Questionnaire (BSHTQ) was 0.75. The obtained reliability coefficient was high and there by the instrument was suitable and reliable for the study. A letter of introduction was collected from the Oyo State Universal Basic Education Commission Headquarters (The State SUBEB Chairman), to collect data from Department of Planning, Research and Statistics. Sampled Local Government Universal Basic Education Authorities (LGUBEAs) were visited and obtained permission from their Education Secretaries to used schools head-teachers under their supervision for the study. The researcher sought the permission of the Head teachers of the sampled Public Basic Schools in the selected Local Governments to assist in filling BSHTQ. The instrument was personally administered to the respondents in the field. They were briefed on the content and that the data collected would



be used for research purpose only. The researcher promptly retrieved the copies of the questionnaire to ensure security of the document. The state SUBEB Chairman, concerns Education Secretaries and all respondents were appreciated for their cooperation. The data collected from the respondents were subjected to both descriptive and inferential statistics. The descriptive statistics of mean and standard deviation were used to present infrastructural facilities on each senatorial district, while the two research hypotheses were tested at 0.05 level of significance using Analysis of Variance (ANOVA) and t-test.

## Results

**Hypothesis One:** There is no significant difference in the distribution of infrastructure for basic education among the three Senatorial Districts. This hypothesis was tested with Analysis of Variance (ANOVA) and descriptive statistics and the Tables are shown below;

**Table 1: Analysis of Variance (ANOVA) showing the difference in the distribution of infrastructure facilities across the three Senatorial Districts**

Source of variation	Sum of square	df	Mean square	F	p-value
Between groups	456.993	2	228.496	6.249	0.002
Within groups	6655.094	182	36.566		
Total	7112.086	184			

Table 1: showed that there is a statistical significant difference ( $F_{(2,182)} = 6.249$ ,  $p_{(0.002)} < .05$ ) in the distribution of infrastructure for basic education among the three Senatorial Districts. Hence, there are differences in the distribution of infrastructure facilities for Basic Education among the Senatorial Districts in the study. The null hypothesis is therefore rejected.

**Table 2: Descriptive statistics of infrastructural facilities based on the Senatorial Districts**

Senatorial Districts	No. of Head Teachers	Mean	Std. Deviation
Oyo Central	62	31.72	5.59
Oyo North	66	28.20	6.09
Oyo South	57	28.68	6.46
Total	185	29.53	6.22

Table 2: showed the descriptive statistics of infrastructural facilities based on the three senatorial districts. The distribution varies across the Senatorial districts thus, Oyo Central ( $M = 31.73$ ) receives most of the infrastructural facilities, followed by Oyo South ( $M = 28.68$ ) and lastly by Oyo North ( $M = 28.19$ ) respectively.

**Hypothesis Two:** There is no significant difference in the distribution of infrastructure provision between urban and rural areas. This hypothesis was tested with t-test and the Table is shown below;

**Table 3: Summary of t-test showing the difference in the distribution of infrastructure facilities between urban and rural areas**

Variable	Location	N	Mean	s.d	df	t-cal.
Distribution of infrastructure facilities	Urban	122	28.75	6.12	183	-2.319
	Rural	63	31.03	6.17		

Table 3: shows that there is a statistically significant difference ( $t_{(-2.391)}$  df = 183) in the distribution of infrastructure between urban and rural areas. Hence from the mean score ( $M = 31.0317$ ), schools in the rural areas

had a higher distribution of infrastructure facilities compared to those in urban areas in the study. The null hypothesis is therefore rejected.

### **Discussion of Findings**

The major findings from the data analysed and interpreted in this research are discussed below. The distribution of infrastructure for basic education among the three Senatorial Districts is statistically significant. This finding is consistent with the finding of Deinne (2021) who asserted that infrastructure distribution varies across Senatorial Districts. He stressed the reasons for uneven infrastructure distribution as poor access roads, poor housing and poor quality of life in coastal communities. All these hinder access for locating and provision of school infrastructure. In the view of Obed-Chukwuka and Rowell (2020) inequality in the distribution of infrastructural facilities in all government primary schools across the District is significant because politicians are fond of influencing the distribution of school infrastructure in favour of their Districts. Though their Districts may not qualify to possess such infrastructure or may not even need such, but for the fact that they had a say in the government, they locate the facilities in their domain. Wazzan (2017) linked the uneven education facilities to land size, population and distance between communities. The area with small land size and less population tends to have less numbers of schools with relative small amount of infrastructural located in such area. Hence the significant difference in the distribution of educational infrastructure. Alabi (2017) in her study in a Senatorial District disclosed the re-distribution of school infrastructure such as textbooks, chairs and desks, renovation of laboratories, etc. within the Senatorial District to improve students` performance and enhance educational standards across the Senatorial District. Furthermore, Shown (2019) reported that there is no significant relationship between school location and the provision and distribution of educational resources in the Senatorial District. He explained further that some schools have enough facilities without students while there were some schools with many students but no adequate resources, therefore essential planning tool is the way out to overcome the possibility of District inequalities in the provision and distribution of educational infrastructure.

Additionally, for distribution of infrastructural facilities between rural and urban areas, the result showed a statistically significant difference. The finding was in line with Mohan et al. (2017) who established the slightly significant difference in the distribution of infrastructural facilities between rural and urban areas and the variation depends on the professional development needs of teachers in either urban or rural areas. For instance, modern structure (building) of multi classrooms, ICT facilities, boreholes etc. were located in urban areas while building of three (3) to six (6) classrooms, wells, solar energy, and generators were located in rural communities. Alonge et al. (2021) found that rural areas were severely deprived of infrastructure especially schools, to the extent that communicable diseases then spread easily among school children because of poor sanitation, and lack of potable water. This challenge could have been avoided and prevented if school infrastructure were equidistributed between rural and urban. Xu et al. (2022) noticed even distribution of infrastructure among primary and middle schools while it was uneven in kindergarten between rural and urban areas. This therefore affirmed the significant difference in infrastructural distribution between urban and rural areas. Also Wood (2023) observed a wider gap of urban to rural infrastructure facilities distribution and the uneven distribution is limiting rural students to compete academically with their urban counterparts though they may have the capabilities to do so. While it corroborates that of Xu et al. (2022) and Wood (2023) Pandey et al. (2022) identified inequalities of infrastructural facilities available between urban and rural areas and that economic level and geographical dimension were the reasons that favored the urban in terms of the infrastructure distribution. More so, Aprajita (2021) posited that the

infrastructure distribution gap between urban and rural schools, the fact that quality, better, and more infrastructural facilities were possessed by urban schools when compared to schools in rural areas. He stressed further that, the reasons for preference for urban schools in the areas of infrastructure distribution were not given but this may not be unconnected with the socio-economic background and status of people living in urban centers.

## Conclusion

It could be concluded that UBEC had provided infrastructural facilities for Basic schools in Nigeria in order to maintain high quality standard education. The timely intervention on infrastructural provision in rural basic schools had encouraged the pupils on their academic pursuit.

## Recommendations

In view of the above, it is recommended that there is need for government through UBEC to further provide infrastructure for schools in rural areas and where it is necessary in urban. Also NGOs and philanthropists should be encouraged to assist on school intervention programmes.

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## **Science Education Students' Response on Emerging Technologies in Tertiary Institutions in Akwa Ibom State, Nigeria.**

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### **Abstract**

The study investigated science education students' response on emerging technologies in tertiary institutions and its influence on students' academic achievement in Akwa Ibom State, Nigeria. To guide the study, two research questions were formulated and one null hypothesis was stated for the study. A descriptive survey research design was employed for the study with a targeted population of 639 first degree and NCE 300 level science education students. Four hundred and forty seven (447) form the sample size for the study using accidental sampling technique. The instrument for data collection was Students Usage of Emerging Technology Questionnaire (SUETQ). The instrument was validated and tested for reliability using Cronbach Alpha reliability estimate which yield a reliability coefficient of 0.77. The instrument was administered to the selected students in their class settings program by program by the researchers. All rated items from the subject where retrieved for data collection. Data generated from the study where analyzed using mean, standard deviation, and independent t-test statistics. The results revealed that science education students where conversant with emerging digital technologies except tracking of lost items, cyber security and quantum computation in problem solving. There was statistical significant difference in the mean response scores of male and female science education students. Based on the findings it was recommended among others that science education students whether first degree or NCE be exposed to cyber security, tracking processes and quantum computation in science problem solving.

**Keywords:** Emerging Technologies, Artificial Intelligent and Academic Achievement

### **Introduction**

In the last two decades, different technologies have become more available and accessible for teachers and students. This new digital tools and resources have been developed to support teaching and learning. Consequently, government initiative and training programs around the world have presented to facilitate introduction of technology in education and to encourage the process of digitalization in schools (Lifelong learning Strategy in Estonia 2020, the School Reform in Italy 2015). Akpan, Atim and Umoh (2022) opined that for the students to take advantage of technology, and for our educational system to remain relevant in this digital world the teachers, have to play a key role not just as imparters of knowledge, but also as facilitators be aware of the innovative technological skills demanded by the changes in the learning needs of the students. Thokozani, e. Sylvia, T and Moses, O. (2019) stated that the digital world is increasingly penetrating the education space, with digital technology gradually being used as a vehicle to deliver educational knowledge and skills in new and innovative ways. The need for students' development in using digital resources as a means to bridge the knowledge gap learning is to be emphasized in these modern times. Similarly, technology and innovation have brought tremendous change in the way the students learn; with a global network, newer avenues are created. According to Eady and Lockyer (2013), students use digital resources for a variety of purposes and in many ways, include accessing different information, personal leaning among other.

Despite, the availability of hardware and software for education, the use of digital tools in the teaching learning process, as well as digital competence in general is still uneven among students. The use of these digital tools in teaching/learning process, as well as digital competence in general, is still uneven among student. The consistent poor performance in ICT related courses raise a lot of concern on what will have been the factors militating against the use of technology education. Prominent among these challenges are lack of qualified professional ICT teachers, non-use of appropriate instructional strategy, large class size, limited programs for updating teachers knowledge , overcrowded classroom, students negative attitude, undue emphasis on the coverage of course outline at the expense of meaning learning, inadequate ICT tools and resources in our schools to mention but a few. This catalogue of challenges neither does not create conducive. Environment ICT related courses to thrive in this country. In order for STEM to take its firm root in our society, the poor state of Science, Technology, Engineering and Mathematics must be addressed. The international computer and information literacy study (2018) documented that less than 50% of teachers used technologies in their teaching (Fraillon 2019). The results of the 2018 OECD Teaching and learning international survey revealed that teachers reported a high need of training for technology-related skills and that only 43% of teachers felt prepared to use technology in teaching (OECD 2019)

Most studies have revealed multiple factors interplaying at different levels, such as educational systems, schools, teachers (Akpan, Akpan and Umoh, 2023). These also includes, self-beliefs level, the availability of and access to digital tools (e.g.; school infrastructure, computers for instruction, and internet access , and the quality of the digital infrastructure are necessary prerequisite, but they are not sufficient conditions alone to lead teachers and student towards using technology in their classrooms (Okeke, Iwara, Archibong 2020). Other is attitudes, motivations and perceived self –efficacy, skills and attitudes in technology (Bingimlas 2009). In a contemporary reality, learning also takes place using digital devices, connected to wireless communication networks, sensors, and geo location mechanisms, allowing forming virtual networks between people, object, and situations. Against this background, making use of technology for teaching and learning and extending it to informal and non-formal environments implies having the necessary skills and being digitally fluent. Given this reality, digital competence has gained a strong prominence in the educational context in recent times (Tejada & Pozos, 2018). The use of technology has become an everyday occurrence; on the other hand, because the professional development of many citizens depends largely and increasingly on an efficient and appropriate use of ICT.

In this regard, Cabero (2020) opined that digital competence is one of the key competencies that Nigerian citizens generally and teachers specifically must master in the society of the future. In fact, in Spain the recent National Plan of Digital Competencies (MINECO, 2021) identifies the acquisition of Teacher Digital Competencies (TDC) at all educational levels, including the University as one of its main strategic axes, which is aimed at promoting sustainable and inclusive economic growth. The teacher is a key in such process of integrating technologies and plays a crucial role in the adoption and implementation of technologies in classroom, since the transformation and improvement of education depend on the teachers. Therefore it implies that teachers must have effective digital competencies that allow them to integrate and use technologies in a pedagogical way.

European Union defines digital competence as; the safe, critical and reportable use of and interaction with digital technologies for learning, at work and for participating in the society and cyber security related skills, intellectual property issues, problem solving and crucial thinking (Council of the European Union 2018) the use of emerging technologies, educational portals, social media in instruction, research and communication with

students, colleagues and peers has become central in the provision of education in many parts of the world. The use of technology in education has progressed from print to the web/ internet and has become the strategy agent for empowerment and transformation. The uptake of technology in teaching and learning skill has some obstacles in Nigeria and other developing countries of the world. Modern technologies have become a broad-based knowledge for the emerging learning society. The pervasive use of emerging technologies has resulted in mass instruction through Open and Distance learning (ODL), Open Education Resources (OER) and Massive Open Online Course (MOOC) - a situation in which a web-based course of study is made available without charge to unlimited numbers of learners. The disruption has led to what is labeled as the inevitability of instability which leads to continuous transformation of the learning landscape world-wide. The use of emerging technologies in all levels of education implies that teaching and learning will continue to be redefined, learners will take increasing control of their learning and the curriculum must change from what we know it to be.

New technology now allow us to understand the varied background goals, and learning styles of our students so as to provide instructional material customized to their unique needs. It has become possible to deliver instruction to learners via on demand platforms that allowed them to study whenever, wherever, and whatever they desired, instead of requiring them to conform to the time- table schedule of today's educational model. Today, the economies of scale available from digital delivery is allowing us to radically lower the price of our educational resources, create opportunities for learners previously excluded from finely manicured quads, a wealth of talented individual with valuable contributions to make who just didn't fit into the rigid strait jackets of our old model.

### **Purpose of the Study**

The main purpose of this study is to investigate on science education students' response on emerging technologies in tertiary institutions in Akwa Ibom State. Specifically, the study sought to:

1. Determine the mean rating response of first degree and NCE science education students' on emerging digital technologies in tertiary institutions in Akwa Ibom State.
2. Ascertain the difference in the mean rating response of male and female first degree and NCE science education students' on emerging digital technology.

### **Research Questions**

1. To what extent are first degree and NCE science education students' response on emerging digital technologies in tertiary institutions in Akwa Ibom State?
2. What differences exist between the mean rating response of male and female first degree and NCE science education students' on emerging digital technology in tertiary institutions in Akwa Ibom State?

### **Hypothesis**

1. There is no significant difference between the mean rating response of male and female first degree and NCE science education students' on emerging digital technology in tertiary institutions in Akwa Ibom State.

### **Methods**

The study employed survey research design. This is concern with the mode of gathering raw fact or data for the study (Carmen, 2013). This design has proven to be one of the most effective and quantitative method of collecting information and analysis of data. The population of this study consisted of 639 first degree and NCE 300 level science education students. Four hundred and forty seven (447) form the sample size for the study using

accidental sampling technique. A structured questionnaire titled Students Usage of Emerging Technology Questionnaire (SUETQ) was used for data collection. The questionnaire was validated by experts in test and measurements and two lecturers in the Department of Science Education who made some necessary corrections as well as approved it to be used for the study. The researchers adopted Cronbach Alpha reliability method to determine the reliability of the instrument which yielded a reliability index of 0.77. The instrument consisted of two parts: Part A consisted of demographic information of the science education students, Part B find out rating response of first degree and NCE science education students on emerging digital technology in tertiary institutions in Akwa Ibom State. The questionnaire was designed in a four point likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The instrument was administered to selected students in the School of Science College of Education, Afaha Nsit, and Department of Science Education, Akwa Ibom State University Ikot Akpaden, Mkpato Enin LGA of Akwa Ibom State. All rated items from the subject were retrieved for data collation. Data generated from the study were analyzed using mean, standard deviation and independent t-test statistics.

## Results

### Research Questions

To what extent are first degree and NCE science education students' response on emerging digital technologies in tertiary institutions in Akwa Ibom State?

**Table 1: Mean Rating Responses of First Degree and NCE Science Education Students on Emerging Digital Technology in Akwa Ibom State.**

S/N	ITEM	X	SD
1	I am conversant with Artificial Intelligent (AI)	3.11	.737
2	I use Artificial Intelligent to carry out my assignment	3.78	.413
3	Artificial Intelligent help me to discuss difficult concept in my subject area	4.00	.000
4	Artificial intelligent help me to have good explanation of some difficult concept in my subject area	4.00	.000
5	I have an improve grade in my subject because I utilized Artificial Intelligent after lectures	3.78	.414
6	I am able to communicate in other institutions because of the availability of internet in our schools.	3.33	.847
7	When studying with peers through internet I have a fare understanding of every concept learnt.	3.01	1.108
8	Some difficulty concepts in my subject area are now things of the past because of the interaction with friends in other schools through interest.	3.57	1.580
9	Internet facilities enhances zoom lectures	4.00	.000
10	All my school credentials can now be preserved in the cloud because of internet facility.	3.60	1.480
11	I can now pay my fees and sundry fees through inter-facility in the school.	3.50	.742
12	I checked my semesters result online through my phone	3.98	.124
13	I can stay at the comfort of my house to have online lectures	2.66	1.153
14	I can stay at the comfort of my home and submit assignment to lecturers	1.37	.569
15	Science was difficult because of mathematics involvement, but now I can use quantum computation to solve such at ease	1.85	1.159
16	A step by step understanding of mathematical solution in science is made easy using Quantum computation.	4.00	.000
17	I am conversant with cyber-crime and hence guided against it.	2.43	.676
18	My internet gadget is protected from all form of cyber-crime.	2.34	.661
19	I can use my phone to track any of the missing item at ease	1.20	.926
20	Because of my knowledge of cyber security all my assignment lesson are kept without being tempered with by other student.	1.90	.936



Table 1 revealed the rating responses of First degree and NCE science education students on emerging digital technology in tertiary institutions in Akwa Ibom State. From the table, science education students irrespective whether First degree or NCE responded positively on items 1,2,3,4,5,6,7,8,9,10,11,12, 13 and 16 dealing with the global digital technologies which focuses on the utilization of Artificial intelligent (AI), with respect to using AI to carry out assignment, solve difficult concept, good knowledge on how to explain difficult concept in science, improve communication skills and achievement scores in examinations was high. Conversely the mean responses on items 15, 17, 18, 19 and 20 falls below the average mean of 2.50. This implies that the students were not very conversant on those items as listed in the questionnaire, such as quantum computation in scientific mathematics problems and cyber security crime. At the same time science education students lack the knowledge of tracking of lost items.

### Research Question 2.

What differences exist between the mean rating response of male and female first degree and NCE science education students' on emerging digital technology in tertiary institutions in Akwa Ibom State?

**Table 2:** Mean and standard deviation of gender difference of science education students' responses on emerging digital technology in tertiary institutions in Akwa Ibom State.

Gender	N	X	SD	Mean Difference
Male	227	48.70	19.40	3.10
Female	220	45.60	22.02	

Table 2 revealed the mean and standard deviation of both First degree and NCE science education students. The mean and standard deviation of 48.70 and 19.40 for male yielded slightly higher mean than the female with mean and standard deviation of 45.60 and 22.02 respectively. Comparing the mean responses for the male and female students, it indicates that the male students had a higher mean response than their female counterparts. However the slight differences in the mean of male students indicated that male students seem to utilize global digital technologies more than female.

**Hypothesis:** There is no significant difference between the mean rating response of male and female first degree and NCE science education students' on emerging digital technology in tertiary institutions in Akwa Ibom State.

**Table 3:** Independent t-test analysis between male and female students on emerging digital technology

Variable	N	X	SD	df	t-cal	t-cit	decision
Male	227	48.70	19.40	445	2.79*	1.96	S
Female	220	45.60	22.02				

\*significant @ 0.05 level of significance

In Table 3, the calculated t-value for the main effect of gender at  $df = 445$  was 2.79 while the critical t-value was 1.96. This significant level is less than 0.05 in which the decision is based, indicating that the main effect of gender on emerging digital technology was statistically significant. With this observation, the null hypothesis was rejected.

### Discussion of Findings

The result in table 1 shows the rating responses of First degree and NCE science education students on emerging digital technology in Akwa Ibom State. The findings revealed that students response bordering on AI and internet were positive and high indicating that first degree and NCE students actually make use of the items in their daily activities in their schools. This is a very good development and a serious departure from the findings

of Udofia and Sambo (2019) on student's satisfaction on 14.0 technologies which reported students' poor utilization of 14.0 technologies in tertiary institutions in Akwa Ibom State tertiary institutions. This may not be unconnected with the fact that from 2020, the advent of COVID 19 actually turns things around. Every person including the students were moving fast toward online learning which the researchers perceived may be the cause of present findings in the study. Conversely it is interesting to note that there are some new technologies that are not utilized by the students such as utilization of quantum computation in their learning processes as well as cyber security. Students are not aware that their work is not secured. This is in line with Charles (2012) who examined factors influencing the integration of ICT into teaching and lesson delivery.

Sequel to the results obtained with regards to the main effect of gender on students responses on emerging technology, the findings shows that there was a statistical difference between male and female students. This result came across as a plus for the male students. Therefore the null hypothesis which stated: There is no significant difference between First degree and NCE science education students rating responses on emerging digital technology in tertiary institution in Akwa Ibom State by gender was rejected.

## **Conclusion**

Based on the findings of this study, tertiary education students both first degree and NCE have a good knowledge of the global digital technologies. But however they are yet to utilize to a greater extent quantum computation in solving mathematical problems in sciences, tracking of lost items and knowledge of cyber security.

## **Recommendations**

Cyber security and tracking processes should be in the curriculum and taught to help check insecurity.

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## **Influence of Sexual Behaviour among Secondary School Students in Ondo Metropolis, Ondo State**

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### **Abstract**

The study examined correlates of sexual behaviour among secondary school students. Descriptive survey research design was used in the study. The population consisted of 19,294 senior secondary school students in Ondo metropolis. The sample comprised 300 students randomly selected from six secondary schools in the metropolis. The instrument used to collect data for the study was a structured questionnaire titled “Questionnaire on sexual behaviour among secondary school students (QSBSSS). Reliability of the instrument was ascertained using Cronbach’s Alpha statistics which yielded a coefficient of 0.82. Data collected was analysed using t-test and ANOVA. The results showed that gender of secondary students has significant influence on their sexual behaviour ( $t = 7.153, P < 0.05$ ). It was also found that age has significant influence on sexual behaviour of secondary school students ( $F = 3.107, P < 0.05$ ). It was therefore recommended that girls should be enlightened on dangers of staying alone with opposite sex who are found to be more sexually active than them. Girls should avoid lonely places in order not to become victim of rape. Boys should be given sex education on how to avoid early sexual initiation in order to concentrate on more profitable endeavour that could help them become great achievers. Comprehensive sexual and reproductive health education should be incorporated into secondary school curriculum. Girls should be trained to be assertive in their relationship with opposite sex.

**Keywords:** Sexual behaviour, Gender, Reproductive health, Age and Sexual debut.

### **Introduction**

Students are known to be full of energy, they are very adventurous and always want to experiment regardless of consequences, which most often compromise the young person’s sexual and reproductive health. The desire of the adolescents to be with and be regarded as being a man or woman is responsible for most adolescents indulging in risky sexual behaviour. Many adults have difficulty in acknowledging adolescents as sexual being and therefore see adolescents’ sexuality as something that must be controlled and restrained. Whereas adolescents nature or characteristics of sexual behaviour are very obvious in their heterosexual relationship. Due to the biological or physiological changes in the adolescence period as characterized by hormonal changes, it is natural for adolescents to become curious about making choices around sexual activities. Thus, the adolescents engage in various kinds of sexual behaviour like sexual intercourse, dating, masturbation, oral sex, anal sex, homosexuality and many other sexual activities. A lot of problems are associated with adolescent sexual behaviour and some of these problems are related to the reproductive health. Such problems include pre-marital sex, sexually transmitted diseases, unplanned pregnancy, sexual violence, multiple sexual partners and other related issues.

According to World Health Organization (2004), by 13 years, 5% of girls and 20% of boys have had their sexual debut. By age 16 years, 30% of girls and 75% of boys report having sexual intercourse. Knowledge

of risks of pregnancy, sexual transmitted infections (STIs) and AIDs do not consistently control behaviour. Young people's sexual behaviour have been noted to be influenced by a number of factors which include peers, exposure to information and gender (Okpani & Okpani, 2001). Pengpid and Peltzer (2021) found in their study that more than half (57.4%) of the students ever has sex, 68.4% among boys and 45.8% among girls. Among students who ever had sex, 41% had early sexual debut (less than 14 years), 57.9% had multiple sexual partners. Djamba (2004) reported that there is a declining age of first sexual debut, increasing number of sexually active adolescents and high risk sexual behaviour among adolescents. Fortunately, in recent years, researchers have brought unusual focus on the age at which adolescent boys and girls initiate sexual activity. One notable factor discussed in literature which affects sexual behaviour of young people is the issue of age.

Akwara, Mundise and Hinde (2003) found that age of a person is a factor which may influence sexual behaviour and risk of HIV infections and sexual problem. Hulton, Cullen and Khalokho (2000) opined that young people in their teens are at high risk when it comes to sexual behaviour. Duru, Ubajaka, Nnebue and Okoro (2010) in their study of 384 in-school adolescents in Anambra State, Nigeria found that 120 adolescents (34.3%) have had their first sexual exposure and are sexually active. Seventy eight (65.0%) were males while 42 (35.0%) were females. The mean, modal and youngest ages of initiation into sexual activity were 15.08 + 0.2, 15+ 0.2 and 10 + 0.2 years respectively.

Age is a significant factor influencing the sexual behaviour of young people, as it intersects with biological, psychological, and social dimensions of development. Adolescence, typically defined as the period between 10 and 19 years of age, marks a critical stage where hormonal changes drive physical and sexual maturation (Blakemore & Mills, 2014). During this phase, young people begin to experience heightened sexual curiosity and attraction, often leading to their first sexual experiences. Studies have shown that the average age of sexual debut varies by region, with many adolescents in sub-Saharan Africa initiating sexual activity by age 15, while in Western societies, it is often closer to 17 or 18 (UNICEF, 2021). These variations underscore the role of cultural norms and socioeconomic factors in shaping how age influences sexual behaviour. Kushal, Yahia, Amin, Reza, Hossain and Shawon (2022) investigated the regional and sex differences in the prevalence of early sexual initiation and its correlates among school going adolescents in 50 countries. Overall, 14.2% of adolescents aged 12-15 years had early sexual initiation, with boys reporting much higher than girls (19.7%, 16.9-22.5 vs. 8.9%, 7.6-10.3). The prevalence of early sexual initiation was the highest in the region of the Americans (18.4%, 15.2-21.5) and the lowest in the South-East Asia region (5.3%, 2.6-8.0).

As young people transition into their late teens and early twenties, their sexual behaviour often evolves with increased autonomy and exposure to diverse social environments. This stage of development is characterized by exploratory behaviours, which may include casual relationships or experimentation with different forms of intimacy (Arnett, 2015). However, early initiation of sexual activity, particularly before the age of 16, has been linked to adverse outcomes such as a higher likelihood of sexually transmitted infections (STIs) and unintended pregnancies (Kaestle et al., 2020). Conversely, delayed sexual initiation is often associated with healthier sexual practices and better outcomes, including consistent condom use and fewer sexual partners (Santelli et al., 2017). Thus, the timing of sexual debut plays a pivotal role in shaping the long-term sexual health of young individuals.

Cultural and societal expectations also influence how age impacts the sexual behaviour of young people. For instance, in conservative societies, strict norms around sexual abstinence can delay sexual initiation, while liberal societies may promote open discussions about sexuality and access to contraceptives, reducing risky behaviours

(Powers et al., 2021). Moreover, the developmental stage at which young people are introduced to comprehensive sex education significantly affects their sexual decision-making. Research has highlighted that when adolescents receive age-appropriate, evidence-based sexual education, they are more likely to delay sexual initiation and adopt safer sexual practices (Kirby, 2019). Recognizing the interplay between age, culture, and education is essential for developing policies and interventions aimed at fostering healthy sexual behaviours among young people.

Regarding the issue of gender, Ojong, Ojong-Alasia and Samjon-Akpan (2014) reported that gender significantly influences reproductive health knowledge, girls were more aware of reproductive health than boys, girls were more vulnerable than males to reproductive health problem. Majority of the males were exposed to social expectations which have a strong influence on their sexual family life and reproduction. Laddunuri (2013) equally found that a male student is 1.46 times more likely to have intercourse than a female. For boys, testosterone levels had a very strong relationship to sexual activity than girls with estrogen hormone. Contrary to this, Kingori and Kingori (2016) in their study, found no major gender difference in the sexual behaviours of male and female adolescents. They only differed in their interpretation of the reactions of their sexual partners, especially girls, to sexual advances. Both gender viewed boy-girl relationship as socially acceptable and normal. Thus, encouraging them to initiate and engage in sexual relationship with members of the apposite gender.

### **Statement of the Problem**

Today, adolescents engaged in so many activities that demonstrate sexual pleasure. Some of these activities are undoubtedly harmless but portend danger since they lessen the prohibition on premarital sexual activities. More importantly, teenagers and young people progressively engaged in them because of the permissive attitudes of the society towards these sexual practices. The danger inherent in these practices is based on the suspicions that most adolescents move through the less harmful practices to those that can affect them negatively. They begin sexual practices starting with embracing and kissing, moving through petting or fondling breasts and sex organs to end with intercourse. Gender and age have been noted to be important factors influencing adolescent sexual behaviour. Considering the consequences of these practices on adolescent sexual health, there is a need to investigate how gender and age can influence sexual behaviour among secondary school students, in a bid to curb their excesses.

### **Purposes of the Study**

The main purpose of this study is to investigate on the influence of sexual behaviour among secondary school students in Ondo metropolis, Ondo State. Specifically, it sought to:

1. Investigate the difference in the sexual behaviour of male and female secondary school students.
2. Determine the influence of age on the sexual behaviour of secondary school students.

### **Hypotheses**

To guide the conduct of the study, the following hypotheses were stated:

1. There is no significant difference in the sexual behaviour of male and female secondary school students.
2. There is no significant influence of age on the sexual behaviour of secondary school students.

### **Methods**

Descriptive survey research design was adopted for the study. The population consisted of 19,294 senior secondary school students in Ondo metropolis. Stratified random sampling technique was used to select fifty (50) students each from six secondary schools (i.e one boys' school, one girls' school, two mixed and two private

schools), making a total of three hundred (300) students as sample for the study. The instrument used for the study was a structured questionnaire titled “Questionnaire on Sexual Behaviour among Secondary School Students (QSBSSS)”. The questionnaire was divided into two sections (A and B). Section A was on personal data of the respondents while section B consisted of items on students sexual behaviour on a four Likert type scale of strongly agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). Reliability of the instrument was ascertained using Cronbach’s Alpha statistics which yielded a coefficient of 0.82. Data collected was analyzed using t-test and Analysis of Variance (ANOVA) statistics.

## Results

**Hypothesis one:** There is no significant difference in the sexual behaviour of male and female secondary school students.

In testing this hypothesis, the respondents were grouped based on their gender (i.e male and female) and scores on sexual behaviour were analyzed using t-test. The results are presented in Table 1.

**Table 1:** Independent t-test summary of the difference between the sexual behaviour of male and female students

Variable	Gender	N	$\bar{X}$	S.D	df	t	Sig
Sexual behaviour	Male	122	30.61	9.047	298	7.153*	.000
	Female	178	26.20	5.271			

\*significant @ 0.05 level of significance

From Table 1, male subjects have a mean score of 30.61 and a standard deviation of 9.047 while female subjects have a mean score of 26.20 and standard deviation of 5.271. A t-test analysis of these values yielded a t-value of 7.153, which is significant at 0.05 level. This implies that gender of secondary school students has significant influence on their sexual behaviour. Therefore, the null hypothesis is rejected.

**Hypothesis Two:** There is no significant influence of age on the sexual behaviour of secondary school students.

In testing this hypothesis, the respondents were classified into three groups based on their age and scores on sexual behaviour were analyzed using ANOVA. The results are presented in Table 2.

**Table 2:** Summary of ANOVA on the influence of age on the sexual behaviour of students

Source variance	N	$\bar{X}$	St.D	df	SS	MS	F	Sig
13-15years	174	11.20	3.669	2	295.824	147.912	3.107*	0.04
16-18years	92	18.01	3.255	297	14138.336	47.604		
19-21years	34	23.20	4.104					
TOTAL	300	17.47	3.68	299	14434.16			

\*significant @ 0.05 level of significance

From Table 2, the mean squares between groups and within groups are 295.824 and 141.38.336 respectively. These yielded F-value of 3.107 which is significant at 0.05 level. This implies that age has significant influence on sexual behaviour of secondary school students. Hence the null hypothesis is rejected.

## Discussion of Findings

The results of the study showed that gender of secondary school students has significant influence on their sexual behaviour. Male students are more sexually active than their female counterparts. This is supported

by Pengpid and Peltzer (2021), who found that boys were more sexually active than girls. Ojong, Ojong- Alasia and Samson –Akpan (2014) also reported that there was a significant influence of gender on sexual behaviours as female students do not involve in actual sexual act as their male counterparts. Contrary to this, Kingori and Kingori (2016) found that gender differences had no great influence on the sexual behaviours and activities of the adolescents.

The study also revealed that age has significant influence on sexual behaviour of secondary school students with 19 – 21 years showing the highest level of sexual behaviour, followed by 16-18 years and 13-15 years having the least. This is corroborated by Pengpid and Peltzer (2021) who reported that adolescents above 14 years engage in sexual risk behaviour. Kingori and Kingori (2016) found that majority of the adolescent boys and girls had their first sexual encounter at the peak of their early adolescence stage (11-15 years) and in their middle adolescence (16 -18 years). Kushal et al (2022) also reported that adolescents aged 14-15 years had much higher odds of having early sexual initiation than adolescents aged 12 -13 years.

## **Conclusion**

Gender and age have significant influence on sexual behaviour of secondary school students with boys more sexually active than girls and adolescents above 14 years having early sexual initiation more than those below 14 years of age.

## **Recommendations**

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

1. Girls should be enlightened on dangers of staying alone with opposite sex who are found to be more sexually active than them
2. Girls should avoid lonely places in order not to become victim of rape.
3. Boys should be given sex education on how to avoid early sexual initiation in order to concentrate on more profitable endeavours that could help them become great achievers.
4. There is a need for Ministry of Education at all levels to incorporate comprehensive sexual and reproductive health education into secondary school curriculum.
5. Peer-led programmes should be organized by school counsellors for the sake of emphasis and deeper understanding of sexual risk behaviours.
6. More rigorous effort should be put on enlightening older adolescents of dangers inherent in sexual risk behaviours.
7. Girls should be trained to be assertive in their relationship with opposite sex.

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## **Impact of Child Abuse on Delinquent Behaviors in Uyo Local Ggovernment Area, Akwa Ibom State**

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### **Abstract**

This study explored the impact of child abuse on delinquent behaviours in Uyo local Ggovernment Area, Akwa Ibom State. The study adopted the cross-sectional research design. Four specific objectives and four research questions with corresponding hypothesis guided this study. The target population was all young children aged 12-18 and young adults aged 18-25 who have experienced different degrees of child abuse in the study area. The stratified sampling technique was utilized to ensure a diverse participant pool, representing various socioeconomic status, urban and rural settings, and family structures. The sample size was 300 participants who have experienced at least one form of child abuse. The Adverse Childhood Experiences Questionnaire was used for data collection. Pearson Product Moment Correlation Statistics was used to test the hypotheses at 0.05 alpha level. The results of the four hypotheses tested in this study showed that child abuse in the forms of physical abuse, emotional abuse, sexual abuse and child neglect significantly relate to the probability of exhibiting delinquent behaviors in teenage years. In conclusion, it is imperative to implement comprehensive initiatives that involve families, educational institutions, community organizations and the justice system in order to effectively control child abuse and avoid delinquency in teenage years. It was recommended among others that parents, guardians and caregivers should manage their emotions and stress so as not to physically abuse children but create a safe and stable environment for children.

**Keywords:** Child abuse, physical abuse, emotional abuse, sexual abuse, delinquent behaviours

### **Introduction**

Child abuse, encompassing physical, emotional, and sexual abuse, as well as neglect, is a significant public health concern that can profoundly impact psychological development and behavioural patterns. Unaldi (2023) defined child abuse as a form of maltreatment that can be physical, emotional, sexual, or involve neglect and exploitation. This abuse can cause actual or potential harm to a child's health, development, or dignity. Azuka and Patrick (2019) expanded on this definition by outlining specific types of child abuse in Nigeria, which include child labour, physical abuse, neglect, child marriage, female genital mutilation, molestation, and emotional and psychological abuse. Additionally, Oladosu, Abiodun and Tunde-Ayinmode (2021) highlighted the prevalence of physical abuse against children in Nigeria. Child abuse is a widespread social issue with profound implications that go beyond the physical and emotional harm suffered by victims. The aftermath of such trauma can resonate in a person's life, affecting their mental growth, social connections, and general behaviour.

Physical abuse is a complex and devastating form of child maltreatment that requires improved understanding and prevention efforts (Palusci, 2022). It refers to any intentional act that causes physical harm or injury to a child. This includes actions such as hitting, kicking, burning, or inflicting pain and physical trauma in other ways. While physical abuse is often associated with visible signs like bruises, fractures, or other injuries, it can also occur without obvious physical evidence. The consequences of physical abuse can be severe, affecting not only the child's physical health but also their psychological well-being and development.

Emotional abuse is a form of child maltreatment that is strongly linked to various mental and behavioral health problems, with psychopathology being the most common outcome (Korolevskaia & Yampolskaya, 2022). Psychological abuse, which is the most prevalent type of child maltreatment, consists of non-physical interactions by a caregiver that can put a child at risk for emotional harm (Kimber & MacMillan, 2017). Emotional abuse also referred to as psychological abuse, includes behaviors that damage a child's self-worth and emotional well-being. Emotional abuse is a form of mistreatment that manifests through various damaging behaviors directed at a child. This can include verbal insults, where a caregiver belittles or demeans the child, as well as constant criticism that undermines the child's sense of self-worth. Labeling children as witches in Akwa-Ibom State, Nigeria, leads to physical, verbal, psychological, and sexual abuse, with capital accumulation as the main reason for abuse (Isioma, 2019). Threats may be used to instil fear and control, while rejection can involve ignoring the child or making them feel unwanted. Humiliation, often executed in front of others, can further exacerbate a child's feelings of inadequacy.

Additionally, emotional abuse often entails the withholding of essential love, support, or affection. When caregivers fail to provide warmth and validation, children may internalize feelings of unworthiness and insecurity, leading to profound impacts on their emotional development. Although the scars of emotional abuse are not visible like those from physical abuse, they can be deeply entrenched and long-lasting. These negative experiences can significantly affect a child's mental health, leading to issues such as chronic anxiety, persistent feelings of sadness or depression, and challenges in forming healthy relationships later in life. Children who endure emotional abuse may struggle with self-image, finding it difficult to see themselves as deserving of love and respect. Over time, these effects can permeate various aspects of life, influencing not just emotional well-being but also social interactions and overall quality of life.

Sexual abuse plays a significant role in the development of borderline personality disorder, particularly among women. It is associated with more severe clinical presentations and poorer prognoses. According to Ferreira, Pereira, Benevides and Melo (2018), child sexual abuse is a major public health issue with high rates of under-reporting. Additionally, Ajaegbu, Madubuike, Ezeonwu, Uchendu, Obidike & Ajaegbu (2023) noted that sexual molestation, including rape and incest, is on the rise, often committed by close neighbors, uncles, pastors, imams, teachers and fathers. Sexual abuse occurs when a child is involved in sexual activities that they do not fully understand, are unable to consent to, or that violate social taboos or laws. This type of abuse can include acts such as fondling, rape, or exposing a child to inappropriate sexual content or behavior. Sexual abuse may also encompass exploitation, such as child trafficking or child pornography. The impact of sexual abuse on a child's development is profound, often leading to trauma, trust issues, and significant long-term mental health challenges.

Child neglect and juvenile delinquency in Nigeria have similar prevalence of parental separation, family transition, and exposure to traumatic events, but differ in neurological disorders and anthropometric profiles (Atilola, 2012). Child neglect is a complex interaction of risk factors in children and their care environment, leading to long-term health, cognitive, emotional, and social consequences (Avdibegović & Brkić, 2020). Neglect is the failure of a caregiver to meet a child's basic needs, including adequate food, shelter, clothing, education, medical care, and emotional nurturing. It is the most common form of child maltreatment and can have serious consequences for the child's physical and emotional development. Neglect can take many forms, including physical, supervisory, emotional, educational, or psychological (Maguire & Naughton, 2016). Neglect, which

could be, withholding affection and support, healthcare and education from a growing child, can lead to developmental delays, social withdrawal, and an increased risk of mental health issues.

Delinquent behaviour may be associated with factors such as parents' financial status, cultural practices, and levels of parental literacy. Adeleke (2019) reported that child delinquency affected by communal conflict in south-western Nigeria is significantly linked to various factors, including family communication gaps, deficiencies in regulation and control mechanisms, institutional and social failures, excessive drug abuse, and economic hardship. Delinquent behaviour which is an indicator of future adult criminal behaviour, encompasses a range of actions that violate established social norms or legal standards, particularly among minors, typically defined as individuals under the age of 18. But proper upbringing can correct causes of juvenile delinquency, such as anti-social attitudes, values, low educational and professional skills, and innate tendencies to aggression, according to Huzik (2021). Delinquent behaviour is classified into two categories, status and delinquent acts. According to Jaros (2019), status offenses are juveniles who commit noncriminal acts considered law violations due to their minor status, such as truancy, ungovernability and curfew violations. While delinquent acts are more serious crimes that would be considered offenses regardless of the individual's age, such as theft, assault, or drug-related crimes.

Several theories explain the pathways from childhood experiences that lead to delinquent behaviours. Social learning theory, a general framework for understanding human behavior, emphasizing cognitive and information-processing capacities. Bandura's social learning theory suggests that people learn by observing others' behavior, attitudes, and outcomes, using observation, imitation, and modelling. These children who are exposed to violence or criminal behaviour in their respective homes or neighbourhoods, learn and imitate such behaviour as a way to handle conflicts or achieve goals. Attachment theory plays a crucial role in understanding and promoting psychological development and wellbeing in children and adults, with a focus on assessing attachment patterns and providing close, intense and emotional therapeutic relationships.

According to attachment theory, individual differences in the availability and responsiveness of close relationship partners, beginning in infancy, and the resulting formation of stable attachment orientations are crucial for understanding the ways people experience and regulate emotions. These insecure or corrupt attachments as a result of neglect or abuse can impair a child's ability to form healthy relationships and trust others, often leading to withdrawal or aggression. This involves investigating how early life events shape an individual's psychological and behavioural development, which in turn influences their inclination towards engaging in delinquent behaviors.

Research repeatedly points out that negative or traumatic incidents in childhood, such as abuse, neglect, or exposure to violence, can significantly boost the probability of engaging in delinquent behavior in adolescence and adulthood. Emotional traumas, such as early abuse and neglect, can lead to problems in emotional regulation and alter the structure and function of the prefrontal cortex (Giotakos, 2020). A study by Cross, Fani, Powers & Bradley (2017) concluded that child abuse can negatively impact executive function, emotion regulation, and dissociation, increasing the risk for depression. Fava, Meldrum, Villar, Zucker & Trucco (2022) argued that adverse childhood experiences contribute to later delinquency through indirect mechanisms of sleep problems and low self-control in early and middle adolescence. Animasahun & Aremu (2015), in a study, stated that age, family warmth, and school connectedness have a significant relationship with juvenile delinquency among secondary school adolescents. Aliyu & Mburza (2018) in another study, submitted that children's education level, age and gender significantly contribute to juvenile delinquency. Persistent communal conflicts in Nigeria are significantly

related to child delinquency due to factors like family communication gaps, regulation deficiency and social lapses, according to Adeleke (2019). Esiri & Ejechi (2021) on their study claimed that juvenile delinquency is predated by child labor, which can lead to criminal behavior and jeopardize the future of the child and the nation.

The effect of child abuse goes further to affect the way a child processes information and interprets social cues, oftentimes, leading to misjudgements and misinterpretations, always leading to violent, behaviours. Others are seen indulging in substance in order to cope with the pain of past trauma, leading to delinquent behaviours. A study on development pathways from abusive parenting to delinquency by You and Lim (2015) concluded that parental abuse and neglect significantly impact children's aggression and depression. These factors, in turn, mediate the relationship between abusive parenting and delinquent behaviours. Thus, it is crucial to explore the connection between child abuse and delinquent behaviour. Understanding this relationship is essential as it involves multiple fields, including psychology, criminology, and social policy. Research indicates that children who experience abuse often face various challenges that can lead to the development of delinquent behaviours later in life.

These challenges can appear in different forms, such as emotional trauma, difficulty in establishing healthy relationships, and issues with impulse control. Such negative experiences can create a cycle of behaviour where the child may struggle with aggression, substance abuse, or even criminal activity as a way to cope or seek attention. By thoroughly analysing both the direct consequences of early abuse such as the undeniable effects of violence and neglect and the indirect repercussions, including the significant impact on mental health and social functioning, one can confidently grasp the profound and lasting effects these experiences can have. This comprehensive understanding is essential for crafting impactful interventions and policies that effectively prevent delinquency and provide robust support for at-risk children. With this knowledge, we are well-equipped to foster healthier environments where vulnerable children can truly thrive. The formative years of childhood are crucial for an individual's cognitive, emotional, and social development. If these years are affected by abuse, be it physical, emotional, sexual, or through neglect the developing brain may experience chronic stress. This stress can disrupt emotional regulation, hinder the ability to form attachments, and impact decision-making processes.

Disruptions in emotional or social functioning can result in maladaptive behaviors, which are responses that are counterproductive or harmful. These behaviors often include impulsivity, where individuals act without considering the consequences, and aggression, which can manifest as verbal or physical confrontation. Additionally, there may be a noticeable decline in the capacity for empathy, making it difficult for individuals to understand or relate to the feelings of others. As time progresses, these maladaptive behaviours can solidify into established patterns that may be associated with delinquent conduct. This delinquency can manifest in various ways, ranging from minor infractions, such as petty theft or vandalism, to more serious issues like substance abuse or involvement in criminal activities. Ultimately, this evolution reflects a growing disconnect from societal norms and an increasing tendency to engage in behaviours that can have detrimental effects on both the individual and the community.

The effects of child abuse on subsequent delinquency are observable not only in behavioral outcomes but also in the structural and functional alterations in the brain, which contribute to an increased risk of maladaptive coping mechanisms. Socioeconomic, environmental, and familial factors can further intensify these risks, thereby creating a complex landscape that illustrates how early trauma can predispose individuals to deviate from social norms and legal standards. While not all children exposed to abuse will follow this trajectory, those

who do frequently experience a cycle of repeated offenses, involvement with the justice system, and additional victimization, thus perpetuating a continuous cycle of trauma and criminal behaviour.

Research in this field emphasizes the critical significance of early intervention and comprehensive support systems designed to alleviate the enduring effects of child abuse. Initiatives that focus on trauma-informed care aim to provide nurturing environments, foster community engagement, and offer specialized psychological services. These programs have shown promise in decreasing the likelihood that victims of abuse will later engage in delinquent behaviours. Moreover, it is essential to explore the factors that contribute to resilience in individuals, enabling some to navigate and overcome the profound challenges posed by early traumatic experiences. By identifying these resilience factors, targeted policies and interventions that not only address immediate needs but also promote long-term healing and rehabilitation, ultimately breaking the cycle of trauma and reinforcing positive outcomes for affected individuals may be developed.

There is need to comprehensively explore the complex relationship between child abuse and delinquent behavior. It is important to delve into the specific mechanisms by which childhood trauma can impact an individual's actions later in life. This includes examining psychological factors such as attachment issues, emotional dysregulation, and the development of maladaptive coping strategies that may stem from adverse childhood experiences. Hence, this study examined impact of child abuse on delinquent behavior in Uyo Local Government Area, Akwa Ibom State.

### **Statement of the Problem**

In Uyo LGA, the capital city of Akwa Ibom State, research has highlighted the significant and lasting effects of childhood trauma, which encompasses physical, emotional, and sexual abuse, as well as neglect. Numerous studies have established a connection between adverse childhood experiences and their detrimental impacts on mental health, emotional regulation, and behavioral outcomes. Despite this understanding, there remains a notable gap in the research regarding how these abusive experiences specifically contribute to the development of delinquent behavior, especially within diverse populations with varying socioeconomic backgrounds. This underscores the need for further investigation into the relationship between child abuse and delinquency among these groups.

Despite the increasing recognition of the relationship between child abuse and delinquency, existing interventions and policy frameworks frequently fail to comprehensively address the underlying trauma that predisposes youth to engage in delinquent behaviour. This oversight often results in a cycle of punitive measures that do not confront the root causes of the issue, thereby perpetuating recidivism and obstructing affected individuals from achieving rehabilitation and resilience. Moreover, the absence of trauma-informed practices within the justice system exacerbates the challenges faced by young individuals with a history of trauma, leading to outcomes that are misaligned with effective treatment and prevention approaches. This study aimed to address the existing knowledge gap by examining the relationship between child abuse and delinquent behaviour in Uyo Local Government Area, Akwa Ibom State.

### **Purpose of the Study**

The main purpose of this study was to examine the relationship between child abuse and delinquent behaviour in Uyo Local Government Area, Akwa Ibom State. The specific objectives of the study were to:

1. Assess the relationship between physical abuse and the probability of exhibiting delinquent behaviors in teenage years.
2. Determine the relationship between emotional abuse and the probability of exhibiting delinquent behaviors in teenage years.
3. Ascertain the relationship between sexual abuse and the probability of exhibiting delinquent behaviors in teenage years.
4. Assess the relationship between child neglect and the probability of exhibiting delinquent behaviors in teenage years.

### **Research Hypotheses**

1. There is no significant relationship between physical abuse and the probability of exhibiting delinquent behaviors in teenage years.
2. There is no significant relationship between emotional abuse and the probability of exhibiting delinquent behaviors in teenage years.
3. There is no significant relationship between sexual abuse and the probability of exhibiting delinquent behaviors in teenage years.
4. There is no significant relationship between child neglect and the probability of exhibiting delinquent behaviors in teenage years.

### **Methods**

The research adopted the cross-sectional design. This design facilitated the identification of associations between child abuse. The target population was young children aged 12-18 and young adults aged 18-25 who have experienced different degrees of child abuse in the study area. The stratified sampling technique was utilized to ensure a diverse participant pool, representing various socioeconomic statuses, urban and rural settings, and family structures. The sample size was 300 participants who have experienced at least one form of child abuse. The Adverse Childhood Experiences Questionnaire was employed for data collection. Pearson Product Moment Correlation was conducted to examine the relationship between child abuse and delinquent behavior. The resulting analysis was used to test hypothesis at 0.05 alpha level. The magnitudes of coefficient of correlation put forward by Udoh (2019) was used to explain the nexus between the independent variables and the dependent variable, which are .00 to .20 (very low relationship), .21 to .40 (low relationship), .41 to .60 (moderate relationship), .61 to .80 (high relationship) and .81 to 0.99 (very high relationship). The Statistical Package for the Social Sciences was the software used for analysis.

### **Results**

#### **Hypothesis one**

There is no significant relationship between physical abuse and the probability of exhibiting delinquent behaviors in teenage years.

In order to test hypothesis one, Pearson Product Moment Correlation was used and the result is presented in Table

**Table 1: Pearson Product Moment Correlation of physical abuse and the probability of exhibiting delinquent behaviors in teenage years**

		Physical abuse	Probability of exhibiting delinquent behaviors
Physical abuse	Pearson Correlation	1	.732**
	Sig. (2-tailed)		.000
	n	300	300
Probability of exhibiting delinquent behaviors	Pearson Correlation	.732**	1
	Sig. (2-tailed)	.000	
	n	300	300

\* Significant at  $P < 0.05$

The result in Table 1 indicates a positive and strong relationship between physical abuse and the probability of exhibiting delinquent behaviors in teenage years with a coefficient of correlation of .732. This result means that physical abuse strongly contributes to probability of exhibiting delinquent behaviors in teenage years. The result further reveals that p-value of .000 is significant at  $p < 0.05$  alpha level, which means that physical abuse significantly relates to probability of exhibiting delinquent behaviors in teenage years.

### Hypothesis two

There is no significant relationship between emotional abuse and the probability of exhibiting delinquent behaviors in teenage years.

In order to test hypothesis two, Pearson Product Moment Correlation was used and the result is presented in Table 2.

**Table 2: Pearson Product Moment Correlation of emotional abuse and the probability of exhibiting delinquent behaviors in teenage years**

		Emotional abuse	Probability of exhibiting delinquent behaviors
Emotional abuse	Pearson Correlation	1	.715**
	Sig. (2-tailed)		.000
	N	300	300
Probability of exhibiting delinquent behaviors	Pearson Correlation	.715**	1
	Sig. (2-tailed)	.000	
	N	300	300

\* Significant at  $P < 0.05$

The result in Table 2 indicates a positive and strong relationship between emotional abuse and the probability of exhibiting delinquent behaviors in teenage years with a coefficient of correlation of .715. This result means that emotional abuse strongly contributes to probability of exhibiting delinquent behaviors in teenage years. The result further reveals that p-value of .000 is significant at  $p < 0.05$  alpha level, which means that emotional abuse significantly relates to probability of exhibiting delinquent behaviors in teenage years.

### Hypothesis three

There is no significant relationship between sexual abuse the probability of exhibiting delinquent behaviors in teenage years.

In order to test hypothesis three, Pearson Product Moment Correlation was used and the result is presented in Table 3.

**Table 3: Pearson Product Moment Correlation of sexual abuse and the probability of exhibiting delinquent behaviors in teenage years**

		Sexual abuse	Probability of exhibiting delinquent behaviors
Sexual abuse	Pearson Correlation	1	.706**
	Sig. (2-tailed)		.000
	N	300	300
Probability of exhibiting delinquent behaviors	Pearson Correlation	.706**	1
	Sig. (2-tailed)	.000	
	N	300	300

\* Significant at  $P < 0.05$

The result in Table 3 indicates a positive and strong relationship between sexual abuse and the probability of exhibiting delinquent behaviors in teenage years with a coefficient of correlation of .706. This result means that sexual abuse strongly contributes to probability of exhibiting delinquent behaviors in teenage years. The result further reveals that p-value of .000 is significant at  $p < 0.05$  alpha level, which means that sexual abuse significantly relates to probability of exhibiting delinquent behaviors in teenage years.

#### **Hypothesis four**

There is no significant relationship between child neglect and the probability of exhibiting delinquent behaviors in teenage years.

In order to test hypothesis four, Pearson Product Moment Correlation was used and the result is presented in Table 4.

**Table 4: Pearson Product Moment Correlation of child neglect and the probability of exhibiting delinquent behaviors in teenage years**

		Child neglect	Probability of exhibiting delinquent behaviors
Child neglect	Pearson Correlation	1	.799**
	Sig. (2-tailed)		.000
	N	300	300
Probability of exhibiting delinquent behaviors	Pearson Correlation	.799**	1
	Sig. (2-tailed)	.000	
	N	300	300

\* Significant at  $P < 0.05$

The result in Table 4 indicates a positive and strong relationship between child neglect and the probability of exhibiting delinquent behaviors in teenage years with a coefficient of correlation of .799. This result means that child neglect strongly contributes to probability of exhibiting delinquent behaviors in teenage years. The result further reveals that p-value of .000 is significant at  $p < 0.05$  alpha level, which means that child neglect significantly relates to probability of exhibiting delinquent behaviors in teenage years.

#### **Discussion of Findings**

The results of the four hypotheses tested in this study showed that child abuse in the forms of physical abuse, emotional abuse, sexual abuse and child neglect significantly relate to the probability of exhibiting delinquent behaviors in teenage years. The findings reveal a compelling connection between child abuse and a marked increase in delinquent behaviour among children and adolescents. This finding is in agreement with that



of Palusci (2022) who reported that physical abuse makes a child to be a bully and disrespectful. Child abuse and neglect appear to influence the course of development by altering many elements of biological, cognitive, psychosocial, and behavioral development; in other words, child abuse and neglect “get under the skin” to have a profound and often lasting impact on development. Brain development is affected, as is the ability to make decisions as carefully as one's peers, or executive functioning; the ability to regulate physiology, behavior, and emotions is impaired; and the trajectory toward more problematic outcomes is impacted. Effects are seen across domains, with the interplay across brain and behavioral systems being particularly striking. Risk and protective factors across multiple levels of a child's ecology interact to influence outcomes related to child abuse and neglect. Factors that influence resilience across these domains are important to an understanding of how to protect children from the adverse outcomes discussed in this chapter.

This finding agrees with that of Kimber and MacMillan (2017) who found that child abuse affects the emotional and psychological well-being of a child. Evidence suggests that the timing, chronicity, and severity of the abuse or neglect matter in terms of outcomes. The more times children experience abuse or neglect, the worse are the outcomes. It is not enough to know whether an event happened; one must also know how ongoing the problem is. The committee sees as hopeful the evidence that changing environments can change brain development, health, and behavioral outcomes. There is a window of opportunity, with developmental tasks becoming increasingly more challenging to negotiate with continued abuse and neglect over time. Without effective coping strategies and a reliable support system, these individuals are more likely to experience repeated encounters with the justice system, perpetuating a cycle of trauma and systemic involvement.

This finding also supports that of Ajaebu et al. (2023) who reported that sexual abuse influences children development. The insights gained from these findings can provide a comprehensive understanding of how children perceive and navigate their abuse. It may become evident that the presence of positive coping mechanisms, such as resilience, adaptive problem-solving, and healthy emotional expression combined with access to supportive networks like family, friends, mentors, and community resources can serve as significant protective factors against negative outcomes, including involvement in delinquent behaviors in the society. Similarly, this finding is in line with that of Avdibegović and Brkić (2020) who found that child neglect leads to children misbehaviours in the society. Young people who do not have these supportive elements in their lives may experience heightened abusive responses, leading to increased emotional distress and behavioral issues. This highlights the critical importance of fostering both positive coping strategies and robust support networks to mitigate the impacts of abuse on children. The findings highlight the pressing need for proactive early intervention strategies and underscores the vital role of protective factors, such as nurturing relationships and accessible community resources. These elements are essential in alleviating the harmful effects of child abuse and fostering resilience in young individuals facing adversity.

## **Conclusion**

This research has highlighted the strong relationship that exists between child abuse (such as physical abuse, emotional abuse, sexual abuse and child neglect) and probability of exhibiting delinquent behaviors in teenage years. Controlling child abuse requires a multi-faceted approach that involves individuals, families, communities, organizations and governments so as to avoid children exhibiting delinquent behaviors in teenage years. It is imperative to implement comprehensive initiatives that involve families, educational institutions,

community organizations, and the justice system in order to effectively disrupt the connection between child abuse and delinquency. By prioritizing early detection, providing holistic support, and enacting systemic reforms, society can significantly enhance its capacity to support at-risk youth, decrease recidivism rates, and promote healthier developmental trajectories.

## Recommendations

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

1. Parents, guardians and caregivers should manage their emotions and stress so as not to physically abuse children but create a safe and stable environment for children.
2. Parents, guardians and caregivers should develop healthy parenting skills, such as active listening, empathy and positive reinforcement as these skills will guide against emotional abuse of children.
3. Parents, guardians and caregivers should ensure adequate supervision of children at all times, especially in public places or online so that children will not be sexually abuse. Parents, guardians and caregivers too should not abuse children sexually.
4. Parents, guardians and caregivers should model healthy and responsible parenting behaviours, such as providing basic needs, emotional support and supervision. These behaviors will make children to be trained appropriately without neglect.

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## **An Examination of Work Related Stress and Job Performance among Secondary School Principals**

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### **Abstract**

The study investigated work-related stress and job-performance of secondary school principals in Delta State. the design was the expost facto. Population consisted of public secondary schools principals and teachers. The total number of the public secondary school are four hundred and sixty-two (462) and all principals were the sample used for the study but three hundred and thirteen (313) were randomly selected from the twenty-five local government areas of Delta state. Questionnaire was the instrument for the study which was validated for content and language Reliability for two instrument yield a reliability co-efficient of .82 and .70 using the spearman Brown product moment formula by employing split reliability method. The data was analyzed using frequency, percentages and person product moment correlation, testing for significance at 0.5. The findings revealed that most of the secondary school principals experienced moderate and high stress. The job performance levels of the principals were of good and very good levels. There was a significant relationship between the work-related stress level and job performance of the school principals. The study recommended appropriate policy changes by the Ministry Education to alleviate work-related stress. Organising workshops and seminars on stress management for secondary school principal. There should be regular transfer for principals. This will help in reducing stress that could be inherent in one environment and improve performance since changes sometimes have positive effects.

**Keywords:** Work-related stress, job performance, secondary school, principals, public schools.

### **Introduction**

Secondary education is the next level of education after the foundational level of primary education. This level of education is the preparation stage of education that guide every child into his carrier prospect in the future. Secondary education level in Nigeria is a critical stage in the country's education system, preparing students for post-secondary education or the work-force. The chief administrator and academic leader of a secondary is referred to as a principal. The principal is responsible for the daily school operations, academic programmes and managing the staff and students.

Secondary school Principals play a pivotal role in shaping the educational landscape in supervising of the students. Also the school principal is involved in the lives of the teachers and the broader school community. The school principals have the overall responsibility of the schools in ensuring good balance academic programmes staff and students' progress and discipline, adequate and proper supervision of work as well as effective leadership.

The school principals operates in environment that are bedeviled by a multitude of problems; a few of which include overcrowding of students beyond normal capacities, problems with school plans, un-equipped and inadequate teachers to cope with the workload, students with poor academic background, poor funding that affects management, students negative attitude towards learning and parental ambivalence towards the educational well-being of their children. Other problems include poor attitude of teachers towards work and the school principals' personal problems, role conflicts, societal problems and pressures, domestic worries and so on. As opened by

(Alasomuka (2019) a conducive working environment can be created by principal and be enjoyed by students, teaching and non-teaching staff. But on the other hand, un-conducive school environment may cause stress to the school principals as stated by Alasomuka (2019). A school administrator can experience stress if the environment is not conducive therefore school environment must be well organized and made conducive for the school principals to perform the daily work as it relate to teachers, students and visitors to the school.

School principals have a lot of responsibilities placed on them. These expectations are many and they vary. As school managers, they are at least regarded as those supervising the delivery lines and activities of individuals within the school system. The school administrator must ensure that teachers get the appropriate professional development According to Kalkan (2020) the school administrator must give recognition in ensuring human capital development by providing support for teachers. These are the roles the school administrator play in curriculum and instructional practices. Thessin and Louis (2020) stated that the school principals' role is to continue to evolve and be well versed in curriculum and instructional practices.

In recent times, there are changes in other school, which has increased complexity and dimension for the school principals. The school principals is involved in collaborating with other stakeholders such as the community to access resources from the immediate environment and school culture (Nurdick et al, 2019). Furthermore, the school principals are seen as those whole examples transcend their precepts at work and play inside the office/school. They show example in patience, amiability, kindness, considerations and genuineness of interest in the problems of staff and students. The multiple roles played by secondary school principals from administrative duties, to running and controlling students and staff affairs, managing of facilities, supervision of instructions and classroom management and communicating educational policies.

All these can be viewed against the background that roles of the school principals have changed overtime. It has be charged and overloaded with expectations to the point at which if the school principals were to meet them all, they would risk the burn out which is affecting so many. As Ajayi (1995) pointed out, makes the school administrator valuable to stress which could be mild or major depending on environmental factors as well as the personality of the individual executive. This then is termed work-related stress of the school administrator.

Stress has been defined by various authors and in several perspectives and as it relates to work. Stress occurs when the demands of a situation are seen to be greater than the individual's ability to cope with such demands. Stress is the adverse reactions which could be psychological and physical which occurs in an individual as a result of not be able to cope whit the demand on him or her (Cole 2016). When an individual is under pressure and the inability to deal with such pressure and reactions to the pressure is said to be stress as opined (Khan & Khan, 2015). How an individual reacts or perceive a situation will determine where the situation is stress producing or a threat to his ability to cope. Stress has become a serious issue to contemporary school principals due to frequent changes in the administrative responsibilities. In adjusting to new responsibilities in a changing environment, the job performance of school principals could be affected. Stress can be either helpful or harmful to job performance depending upon the amount of it. It should be noted that manageable level of stress is needed for job performance. As observed by Zizinga (2012). Stress could positively affect the performance of professionals at work. Pressures of heavy workloads and deadlines act as positive pressure which enhances the quality of their work and the satisfaction professionals get from job performance, Decroon et al (2014) in the findings of their study noted that moderate level of stress lead to higher employees' performance. In the early stage, job stress can 'rev-up' the body and enhance performance in workplace. However if this condition is allowed

to unchecked and the body is revved up further, this performance ultimately declines. Stress affects job performance positively enhancing the individual performance but too much stress decreases performance and may have harmful effect to the individual. They have been good number of researches and job-stress and job performance relationship. Sulliran and Bhagut (2016) reported that moderated level of stress stimulate the body and increase the ability of individual which lead to better performance of their tasks and more intensely and more rapidly.

The administration of schools in Nigeria in the early years of educational development was not as complex as they are now. Since the expansion of education in Nigeria, the administration of school has assumed wider responsibilities and managerial complexity. The rapid expansion of the school population in a rapidly development country like Nigeria has increased the school principals administrative task of student personnel, staff personnel, physical facilities finance and business management, school and community. On daily basis, the school administrative are involved with managing the activities of the school. These includes student continual staff control and effective executive of professional duties, effective utilization of available human and material resources. All these could improve administrative demand on the principal.

Considering the unique position occupied by the school administrator and implication of work-related stress for employees work performance through employees dissatisfaction lowered productivity and lowered emotional and physical health of the employees, thus this research become necessary. Hence the problem of this study is to what extent is work-related stress affecting the job performance of secondary school principals in Delta State.

### **Purpose of the study**

The main purpose of the study was to find out the relationship between the work-related stress and job performance of secondary school principals in Delta State. Specifically, the study:

1. Investigated the sources of stress that influenced the secondary school principals' job performance.
2. Investigated the levels of secondary school principals work related stress
3. Investigated the levels of job performance of secondary school principals.
4. Investigated the relationship between work-related stress levels of secondary school principals.

### **Research Questions**

The following research question were raised to guide this study.

1. What are the sources of work related stress that influence secondary school principal's job performance?
2. What are the work related stress levels that influence principal's Job performance?
3. What are the job-performance levels of secondary school principals in secondary schools?
4. What is the summary of work-related stress and job performance levels of secondary school principals?
5. What is the relationship between work-related stress and job performance of level secondary school principals?

### **Hypothesis**

1. There is no significant relationship between the stress levels and job performance levels among secondary school principals in Delta State.

## Methods

The design of the study was Expost-Facto. Expost-facto research design involves trying to work backward to establish causes after the fact. According to (Flick 2018) expost-facto design more explicitly as a research in which independent variables or variables have already occurred and the independent variable or variables are studied in retrospect for their possible relationships to and effect on dependent variable or variables. Populations of the study consisted of four hundred and six-two (462) secondary school principals and teachers in Delta State in the public secondary schools. The sample of three hundred and fifty eight was got through stratified random sampling using a list obtain school list of Delta State (deltastatemobse.net). The researcher used two sets of structured questionnaire titled:

- a. School Principals' stress questionnaire (SASQ) made up of forty-two items
- b. Teachers' assessment of school Principals' job performance questionnaire (TASAJ PQ) made up of twenty-eight items.

The questionnaire was administered on respondents with the help of trained research assistants. The questionnaire comprised of two parts 'A' and 'B' section A addressed the demographic information of the respondents while section B sought to obtain information on work-related stress of school administrator and the other on assessment of job-performance answered by teachers. The research instrument was validated by specialist in the area of educational management. The test re-test technique of assessing reliability of instrument was used. The two instrument yielded a reliability co-efficient of 88 and 70 respectively which was found to be reliable and adequate to conduct the investigation. The data was analyzed by the use of frequency, simple percentages and Pearson Product Moment Correlation statistics.

## Results

### Research question one

What are the sources of work-related stress that influence the secondary school administrators' job performance? In order to answer the above research question, a list of specific sources of stress were provided and the respondents were requested to indicate on four point scale, the number that best reflected the degree to which the particular statement was a source of stress at work.

Rating Scale

Not Stressful = 1

Mildly Stressful = 2

Moderately Stressful = 3

Highly Stressful = 4

Frequency and Percentage were used to analyze the data. Item in which more than 59% or above 151 of the respondents indicated not stressful was considered as not a source of stress. Any item where more than 50% of respondents indicate it as mildly stressful, moderately stressful and highly stressful was considered as a source of stress.

S/N	School Administrators' possible sources/causes of work - related stress.	2	3	4	'		Rank Order
	Shortage of funds to run the school	69(22%)	145(46%)	93(30%)	309	98	1 <sup>st</sup>
2	Inadequate school infrastructure facilities	49(15%)	125(40%)	130(42%)	304	97	2 <sup>nd</sup>
3	Attitude of staff towards their official duties	56(18%)	116(37%)	132(42%)	304	97	2 <sup>nd</sup>

4	Lack of instructional materials for effective teaching and learning	80(26%)	137(34%)	92(28%)	301	96	4 <sup>th</sup>
5	Hectic and difficult tasks	92(28%)	148(47%)	59(19%)	300	95	5 <sup>th</sup>
6	Heavy work load	94(30%)	117(37%)	89(28%)	300	95	5 <sup>th</sup>
7	Economic and financial problems	72(23%)	150(47%)	78(25%)	300	95	5 <sup>th</sup>
8	The burden of supervisory school activities	96(30%)	143(46%)	60(19%)	299	95	5 <sup>th</sup>
9	Non-availability of subvention to maintain /renovate existing facilities	126(40%)	120 (38%)	52(16%)	298	94	9 <sup>th</sup>
10	Pressure from teachers	67(21%)	138(44%)	92(29%)	297	94	9 <sup>th</sup>
11	Student's poor attitude to work	78(25%)	136(43%)	82(26%)	296	94	9 <sup>th</sup>
12	Having to manage understaffed school	98(31%)	143(46%)	52(17%)	294	94	9 <sup>th</sup>
13	The level of indiscipline among staff	84(27%)	136(43%)	74(24%)	294	94	9 <sup>th</sup>
14	Lack of tables/chairs offices/ for teachers	101 (32%)	101(32%)	91(21%)	293	93	14 <sup>th</sup>
15	Long working hours	106(34%)	130(41%)	56(18%)	292		14 <sup>th</sup>
16	Inconsistency in the educational policies	94(30%)	126(40%)	72(23%)	292	93	14 <sup>th</sup>
17	Work with deadline from superiors	75(24%)	139(44%)	78(25%)	292	93	14 <sup>th</sup>
18	Inability to meet the demands of students	71(23%)	108(34%)	111(35%)	290	92	18 <sup>th</sup>
19	Students' poor performance external examination in	87(28%)	144(46%)	58(18%)	289	92	18 <sup>th</sup>
20	Lack of office accommodation/staffroom for teachers	122(39%)	117(37%)	47(15%)	286	91	20 <sup>th</sup>
21	Unhealthy work environment	82(20%)	127(41%)	77(24%)	286	91	20 <sup>th</sup>
22	Administrative routine	92(29%)	121(39%)	72(24%)	285	91	20 <sup>th</sup>
23	Keeping other official records	135(43%)	105(34%)	45 (14%)	285	91	20 <sup>th</sup>
24	Conflicting demand/roles between work and family,	97(31%)	145(46%)	41(13%)	283	90	24 <sup>th</sup>
25	The problem of examination malpractice among students	79(25%)	96(31%)	107(34%)	282	90	24 <sup>th</sup>
26	Poor social image	107(34%)	122(39%)	52(16%)	281	89	26 <sup>th</sup>
27	Problems of curriculum implementation	109(35%)	123 (39%)	47(15%)	279	89	26 <sup>th</sup>
28	Visit to school by inspectors and supervisors from Ministry of Education	94(30%)	135(43%)	51 (16%)	279	89	26 <sup>th</sup>
29	Visit of the Commissioner of Education to your school	81(26%)	128(41%)	70(22%)	279	89	26 <sup>th</sup>
30	Poor promotion opportunities for teachers	80(26%)	120(38%)	78(25%)	278	88	30 <sup>th</sup>
31	The impression that the school academic unsatisfactory achievements are	99(32%)	108(34%)	70(22%)	277	88	30 <sup>th</sup>
32	Administrative duties conflicting with family responsibility	90(29%)	117(37%)	70(22%)	277	88	30 <sup>th</sup>
33	The expectation of rendering proper accountability	94(31%)	133(43%)	46(15%)	277	88	30 <sup>th</sup>
34	Changes in school system	104(33%)	118(38%)	53(17%)	275	88	30 <sup>th</sup>
35	Conducting of external examination	77(24%)	115(37%)	81(26%)	274	87	35 <sup>th</sup>
36	Irregular payment of salary/allowances	116(37%)	99(31%)	50(16%)	265	8-1	36 <sup>th</sup>
37	Problems of staff involvement in examination malpractice	64(20%)	104(33%)	97(31%)	265	84	36 <sup>th</sup>
38	Time for receiving visitors	89(28%)	127(40%)	49(16%)	265	84	36 <sup>th</sup>
39	Conducting of internal examination	104(33%)	112(36%)	46(15%)	264	84	36 <sup>th</sup>
40	Holding P.T.A. meetings	114(36%)	91(29%)	58(18%)	263	83	40 <sup>th</sup>
41	Holding staff meetings	127(40%)	85(27%)	43(14%)	255	81	41 <sup>th</sup>
42	Attending meetings, seminars/ conferences	82(26%)	118(37%)	53(17%)	253	80	42 <sup>nd</sup>



To answer this question, the various tasks which are sources of stress to the school administrators were analysed using frequency, percentages and put in rank order, to show the various tasks and their stress level. The result revealed that the stressor of shortage of fund to run the school ranked the highest with percentage of 98. This was followed by inadequate school infrastructure/facilities and attitude of staff towards their official duties with 97%. Following closely is the lack of instructional materials for effective teaching and learning. At the bottom of the rank order, as source of stress in the 42nd position, is the attending of meetings, seminars and conference with 80%.

### **Research question two**

What are the work-related producing stress levels that influence the secondary school administrator's job performance?

In order to answer the above research question, a list of specific sources of stress were provided and the respondents were requested to indicate on four point scale the number that best reflected the degree to which the particular statement was a source of stress at work. Rating scale:

Not stressful = 1

Mildly stressful = 2

Moderately stressful = 3

Highly stressful = 4

Frequency and percentage were used to analyze the data as presented in table one.

**Table 2: Frequency and percentages of school Principal's work-related stress levels**

<b>Work-Related Stress Levels</b>	<b>Frequency</b>	<b>Valid Percentage</b>	<b>Cumulative</b>
Not stressful	9	2.9	2.9
Mildly stressful	49	15.9	18.6
Moderately stressful	125	40.9	58.5
Highly stressful	130	41.5	100
Total	313	100	

Table 2 reported frequency and percentage of school Principals' stress levels. The table showed that nine (9) school Principals were not stressed representing 2.9%. Mildly stressed school Principals were 49(15.7%), 125(40.9%) were moderately stressed while the highest number of 130 (41.5%) were highly stressed.

### **Research question three**

What are the levels of job performance of secondary school Principals?

To answer the above research question a list of specific jobs performed by school principals were provided and the respondents were requested to indicate on four point scale the number that best reflected the degree to which the particular statement described the job performance of the school principal Rating scale:

Poor performance = 1

Fair performance = 2

Good performance = 3

Very good performance = 4

Frequencies and percentages were employed to analyze the data as presented on table 3.

**Table 3: Frequency and Percentages of School principals Job Performance levels.**

Job Performance quality	Frequency	Valid percentage	Cumulative percentage
Poor performance	23	7.3	7.3
Fair performance	71	22.7	30.3
Good performance	108	34.5	64.5
Very good performance	111	35.5	100
Total	313	100	

Presented on table 3 are the frequencies and percentages of school Principals jobs performance had the lowest frequency of 23 (7.3%), 71 school principals had fair performance which represented (22.7%), 108(34.5%) were of good performance while the highest frequency of 111 (35.5%) had very good performance.

#### **Research question four**

What is the summary of work-related stress and job-performance levels of secondary school Principals?

**Table 4: Summary of work-related stress and job performance of secondary school principals.**

Levels		Not stressful	Mildly stressful	Moderately stressful	Highly stressful	Total
Poor	Count	2	7	10	4	23
	% within job performance	8.7%	30.4%	43.5%	17.4%	100%
	% with work-related stress	22.2%	14.3%	8.0%	31.1%	7.3%
Fair	Count	1	18	33	19	71
	% within job performance	1.4%	25.4%	46.5%	26.8%	100%
	% with work-related stress	11.1%	36.7%	26.4%	14.6%	22.7%
Good	Count	1	17	38	52	108
	% within job performance	9%	15.7%	35.2%	49.5%	100%
	% with work-related stress	11.1%	34.5%	30.4%	40.0%	34.5%
Very good	Count	5	7	44	55	111
	% within job performance	4.5%	6.3%	39.6%	49.5%	100%
	% with work-related stress	55.6%	14.3%	35.2%	42.3%	34.5%
Total	Count	9	49	125	130	313
	% within job performance	2.9%	15.7%	39.7%	41.5%	100%
	% with work-related stress	100%	100%	100%	100%	100%

Table 4 shows a summary of how work-related stress levels influenced the job performance of school principals in secondary schools giving the counts and percentages of the work-related stress and the job performance levels.

#### **Hypothesis one**

There is no significant relationship between work related stress and job performance levels of secondary school principals.

**Table 4: Relationship between work-related stress and job performance of secondary school principals.**

Variables	X	SD	Calculated value	Critical Value
Work related stress	115.01	19.13		
			0.151	.113
Job Performance	91.17	11.7		

$P < .05$ ;  $df = 113$

Table 4 shows the Pearson Product Moment Correlation between work related stress and job performance of secondary school principals. The mean scores for work related stress is 115.01 and the mean score for job

performance is 91.17. The calculated **P** is 0.151 and the critical **P** is .113. The critical **P** is less than the calculated **P**, therefore there is a significant relationship between work related stress and job performance of secondary school principals.

### **Discussion of Findings**

Research questions two sought to find out the levels of stress experienced by school principals in the course of their job performance. A total of forty two sources of stress were identified which pointed out to the fact that the sources of stress are numerous. Frequency and percentage statistics were employed to identify the levels of the stress of school principals. The study revealed that nine (9) representing 2.9% of the school principals worked without experiencing stress in the performance of their work, forty-nine (49) 15.9% and one hundred and 25 (125) 40.9% experienced mild and moderate stress in the performance of their administrative duty as school principals. This finding agrees with the report of Decroon *et al* (2014) who reported that moderate level of stress lead to higher employee performance. Also, Sullian and Bhaght (2016) reported that moderate level of stress stimulate the body and increases their ability and lead to better performance of their tasks more intensely and more rapidly. One hundred and thirty (130) 41.5% school principals experienced high stress in the performance of their administrative duties. The study also revealed that the level of work-related stress experienced by secondary school principals in their job performance to be a high and moderate stress. This finding is in agreement with Alasomuka (2019) that school Principals in Rivers state experience high level of stress which were physical, tiredness, emotional strain, and mental fatigue.

Research question three determined the job performance levels of secondary school principals. This study revealed that about 70% of the secondary school principals had good and very quality job performance. This further showed that stress did not interfere with the quality of their job performance. Despite the high level of stress, their job performance was still high. Only 7.3% of the school administrator had poor performance. This is buttressed by Zizinga (2012) who stated that stress could positively affect the job performance of professionals at work. In his opinion, the positive effect of pressures in some cases may result in pressures and demands that may cause stress which introduces positive performance. Another example to him is where deadlines are used to motivate people who seem bored or unmotivated. This example is very ideal in school situations where school principals are given deadlines in enrollment of students in examinations, sending assessment report and other reports to the board or Ministry of Education.

Research question four and hypothesis one sought to find out the relationship between work related stress and job performance of secondary school principals. The analysis of data revealed that there was a significant relationship between work related stress and job performance of secondary school principals. This finding is in agreement with the study of Alasomuka (2019) which revealed that stress in appropriate amount is necessary to maximize productivity, though he reported that school principals were of the view that too much stress could affect their administrative duty output.

The result of the hypothesis showed that there was a significant between work related stress and job performance levels among secondary school principals. The result revealed that few school principals fell within the No-Stress and Mild-Stress levels. The same goes for job performance among school principals. It is observed that majority of the school principals fell within moderate and high stress levels and at the same time majority of the school principals fell within good and very good performance quality.

The findings of this study agrees with Decroon *et al* (2014) and Sullivan & Bhaght (2016) that moderate stress help people to do their best in their job performance and stress has positive effect on job performance.

It may not be possible to have a stress free environment, but it could be possible to work towards attaining a comfortable relationship with the available or prevailing stress in the work environment. There is absolutely no doubt that the enormity of the task and professional responsibility of school principals gives them stress. One would expect school principals to experience more stress because of great diversity and variability, both human and material associated with their job. This situation notwithstanding the secondary school principals could perform his duties effectively and efficiently.

## **Conclusion**

The purpose of this study was to investigate how work-related stress influence the job performance of secondary school principals in the Delta State of Nigeria. The study revealed that secondary school principals experience stress in the course of their job performance. Most of the school principals experience moderate and high stress. The school principals performed well in their jobs despite their levels of stress. The school principals had good and very good job performance and it could be said that the level of stress contributed to better job performance.

## **Recommendations**

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

1. Evidence from the study showed that a high proportion of the school principals experienced very high stress level, therefore it is important that decision makers be aware of the alarming situation and the implications for job performance. Work related stress could be ameliorated through appropriate policy changes. In line with appropriate changes, work-related stress could be alienated if the ministry of Education of Education could shift the locus of control away from central office to school and local level in order to enhance school based decision making process.
2. School principals should be empowered to create a supportive and enabling school environment, which minimizes stress and fosters supportive relationships for themselves and teachers.
3. Furthermore, steps should be taken to alleviate administrative stress by manipulating factors in the work environment so that a good person environment fit can be established. Hence, there should be a comprehensive program which provides training in stress management and prevention at school.
4. The Ministry of Education should organize workshops and seminars for school principals on a regular basis. The workshop and seminars should include ways of managing stress both at individual and school levels.
5. School principals should be transferred on regular basis. This will help in reducing stress that could be inherent in one environment and boost their performance since change sometimes have positive effects.

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**GUIDED INQUIRY AND DEMONSTRATION APPROACHES ON STUDENTS'  
ACHIEVEMENT ON THE CONCEPT OF EQUILIBRIUM OF FORCES, IN IKOT  
EKPENE LOCAL GOVERNMENT AREA, AKWA IBOM STATE.**

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**ABSTRACT**

This study examines the effect of guided inquiry and demonstration approaches on Senior Secondary students' achievement in Physics in Ikot Ekpene Local Government Area of Akwa Ibom State, Nigeria. Three hypotheses guided the study. The study adopted quasi-experimental using pretest and post-test group design. The population comprises all the Senior Secondary two Physics students of 2024/2025 session in co-educational Public Secondary School in Ikot Ekpene Local Government Area. The study sample comprised 130 physics students in two intact classes in the two schools in the study using purposive sampling technique. Physics Achievement Test on Equilibrium of Forces (PATEF) and adopted Cognitive Ability Test (CAT) with a reliability indices of 0.80 and 0.80 were instruments used for data collection. The instrument (PATEF) was validated by experts consisting of one senior academic staff from the Department of Science Education, Akwa Ibom State University, Ikot Akpaden, one senior academic staff in measure and evaluation University of Uyo and one experience Physics teacher within the selected schools for the study. The data were analyzed using descriptive statistics, while research hypotheses were tested at 0.05 level of significance using Analysis of Covariance (ANCOVA). The findings showed a significant difference between the mean achievement scores of Physics students when taught equilibrium of forces using guided inquiry and demonstration approaches, respectively in favour of demonstration approach. Similarly there was no significant difference between mean academic achievement scores of male and female Physics students' on the concept of equilibrium of forces when taught using guided-inquiry and demonstration approaches. Also there exists no significant difference among mean academic achievement scores of high, average and low students' abilities when taught the concept of equilibrium of forces using guided-inquiry and demonstration approaches. Based on the findings, demonstration approach was recommended for teaching of equilibrium of forces.

**Keywords:** demonstration, guided-inquiry, academic achievement, equilibrium of forces.

## **Introduction**

Science is a body of empirical, theoretical and physical knowledge about the natural world produced by consistent and cumulative process which emphasize on observation, explanation and production of real-world phenomena using experimentation. According to Akpokinovo (2022), science is a systematic investigation of nature with a view to harnessing it to serve human needs. Science in secondary school level in Nigeria is offered in subjects like physics, biology and chemistry.

Physics is an aspect of science dealing with the basic questions on the structure of matter and the interactions of the element constituents of nature that owe susceptible to experimentations (Akinbobola, 2015). It is a core science subject of senior secondary school level in Nigeria and it is a requirement for entry into higher institutions in Nigeria for further study of science, engineering, aviation, astronomy and medicine. Despite the importance of physics to national development, it appears that most physics students perceive a number of physics concepts as difficult. Physics concepts are considered difficult when an academically average student performs poorly when evaluated especially when the teacher has put in his best in a series of instructional delivery (Omiko, 2017). According to Iji, Ogbole and Uka (2016), students perceive that teaching which emphasizes more on solving problems was a major or source of difficulty for them. The concept of equilibrium of forces is however perceived as being difficult (Taagahar and Okwori, 2022, Obafemi and Onwioduokit, 2013). This difficulty is attributed to many factors including talk and chalk method, gender and cognitive ability (Iji, Ogbole and Uka, 2016).

Talk and chalk method is a verbal presentation of ideas, concepts, generalization and facts by the teachers who dominate the learning situation (Ogbodo, Etuk and Afangideh 2018). The teacher is seen as an expert and students are expected to contribute little to nothing to the learning process. According to Aboh (2021), it is predominantly characterized by listening, copying of notes and memorizing of concepts which cannot give the desired results on student's performance. This method of teaching fails to sufficiently develop learners' understanding of physics concepts thus promotes gender disequilibrium.

According to Ohia (2018), gender is a sociocultural division between males and females, qualities associated with men and women that are socially than biologically determined. Gender has remained a burning issue and has also remained relevant in education because it has been linked to performance and participation in certain profession (Olufunke, 2022). Bebenimibo (2022) observed that female students performed better than male students in Basic Science while Zenbari and Blume (2013) report that boys perform better than girls in Mathematics and Science related courses while girls exhibited higher verbal ability. Olufunke (2022) showed that there is a significant gender difference in students' performances in science in favour of females. Studies on gender are inconclusive and conflicting thus affect students' cognitive ability.

Cognitive ability is a mental capacity that involves the ability to reason, plan, solve problems, think abstractly and learn from experience (Etukakpan, 2022). It is a brain-based skills that are needed in the acquisition of knowledge, the manipulation of information and reasoning. According to Etokakpan (2022), the cognitive ability is categorized into three levels, namely high, average, and low. These categories happened when students are deficient of

memory, attention, processing and sequencing which are necessary for optimal learning. When students are affected in one or more of these essential cognitive tools, learning and acquisition of problems will occur.

These factors affect the performance of candidates in physics examination conducted by West African Examinations Council (WAEC) which is usually not encouraging as reports often showed (WAEC Chief Examiners Report CERs, 2014 -2022 ) fluctuating failures rate in physics over the years. For example, the failures rate in physics in 2014 was 54.7% while in 2015 and 2016 it fluctuates to 63.4% and 55.2% respectively. For the period 2014-2022 reported, the highest failure rate was recorded in 2022 with 65.29% of students' failure in the examination. In order to improve on these failure percentages and guarantee quality instruction in physics, emphasis has been on the use of appropriate teaching strategies that can enhance effective classroom interaction capable of giving equitable changes for students to acquire qualitative and right knowledge of subject matter (Aboh, 2021). For this reason, it is recommended that the use of demonstration and guided inquiry teaching approaches that takes students perception of difficult concepts into consideration be used (Akpokinovo 2022, Ekomaye 2019, Inyang, Uboh and Utibe, 2022 and Aluku and Odubanjo 2020). So, the use of demonstration and guided-inquiry approaches were therefore adopted in this study.

The Demonstration approach is a teaching approach in which the teacher performs the experiment to the students and encourages them to watch to deduce understanding. This approach encourages understanding and makes physics more interesting and less difficult to students. It is a method of teaching concepts, principles of real things by combining explanation with handling or manipulation of real things, materials or equipment (Akinbobola, 2015).

Guided-inquiry is an instructional method of teaching for teachers to act as a guide to enable students gets useful information to what is to be discovered in a topic. Guided inquiry approach is a teaching technique that is students-centered and activity oriented, thereby giving learners the opportunity to discover facts about a particular problem. Uwak and Stephene (2020) found a significant difference in the achievement of physics students when taught waves using guided inquiry and demonstration approaches, respectively. The reference to students' perception of equilibrium of forces as a contributory factor to their poor performance calls for urgent attention. It is on this note that this work sets to address the difficulties in the concept of equilibrium of forces.

### **Purpose of the Study**

The study is specifically set out to:

1. compare the mean academic achievement scores of physics students on the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches, respectively.
2. Compare the mean academic achievement scores of male and female physics students on the concept of equilibrium of forces when taught using guided-Inquiry and demonstration approaches, respectively.
3. Determine the differences in the mean academic achievement scores of students of high, average and low cognitive abilities when taught the concept of equilibrium of forces using Guided-Inquiry and Demonstration approaches, respectively.



### **Research Question**

The following research questions were raised for this study

1. What is the mean academic achievement score of physics students on the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches?
2. What is the mean academic achievement scores of male and female physics students' on the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches?
3. What are the mean academic achievement scores of students of high, average and low cognitive abilities when taught the concept of equilibrium of forces using guided inquiry and demonstration approaches?

### **Research Hypotheses**

The following null hypotheses were tested at 0.5 level of significance.

1. There is no significant difference between the mean academic achievement scores of physics students on the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches.
2. There is no significant difference in the mean academic achievement scores of male and female physics students on the concept of equilibrium of forces using guided inquiry and demonstration approaches.
3. There is no significant difference among the mean academic scores of students of high, average and low cognitive abilities when taught the concept of equilibrium of forces using guided inquiry and demonstration approaches.

### **Method**

A quasi-experimental research design with a non-randomized pre-test, post-test group was adopted in the study. The study is described as non-randomized since intact classes from selected schools were used. A total of 130 SS2 physics students were selected by purposive sampling technique based on the following criteria; schools that have qualified professional physics teachers with at least 5 years of teaching experience as subject teacher in SS2 classes, schools that have well equipped and functional physics laboratories, schools that are currently presenting candidates for West Africa Senior School Certificate Examination (WASSCE), public co-educational government schools and schools that have trained laboratory assistant. From the survey of the schools. All schools were found to have met the criteria. Two schools among all that met the criteria were selected by random sampling technique. One intact class per school were randomly selected. Intact classes were signed to experimental group one (guided-inquiry, male 32 and female 38) and experimental group two (demonstration, male 21 and female 29) by simple random sampling technique. Two researcher- made instruments were used in the study for data collection namely: Physics Achievement Test on Equilibrium of Forces (PATEF) and adopted Cognitive Ability Test (CAT). PATEF is made up of multiple choice objective test consisting of forty items (A, B, C and D) with only one correct answer and three distracters. Each right option carried score of one mark while distracter carried zero mark.

CAT: Usendia (2018) CAT was adopted for the study. It was used to categorize students' into different ability levels of high, average and low. A three man team of experts consisting of one senior academic staff from the department of science education, Akwa Ibom

State University, Ikot Akpaden, one senior academic staff who is an expert in measure and evaluation from the University of Uyo and one experience physics teacher from the study area faced validated the instrument. The instrument was faced validated in terms of clarity of instruments; correct wording of items and appropriateness and adequacy of the items in addressing the purpose and problems of the study. The critical appraisal and comments of the experts were used for reformed in items. Based on their critical appraisal and comments, the 60 items in the draft of PATEF reduced to 40 items.

Validation of PATEF was done by a three man team of experts consisting of one senior academic staff from the department of science education, Akwa Ibom State University, Ikot Akpaden, one senior academic staff who is an expert in measurement and evaluation from the University of Uyo and one experience physics teacher from the study area. Kuder Richardson, 20 formula method was used to estimate the internal reliability coefficient ( $r$ ) of PATEF in the study. A trial test was administered once to forty students in the school in the study area which was not part of the main study. Data obtained from PATEF were subjected to Kuder Richardson, 20 formula. The result yielded an internal consistency value of 0.80.

The following procedures were followed during the training and administration of the instrument. Week one, relevant permission were obtained from the principals of the two schools and research assistants and students informed of the purpose. Week two, research assistants were trained and undertook mock teaching. Those whose performance were found satisfactory were used as research assistants in the two selected schools for the conduct of the study. Thereafter, pretest was administered to the students (Intact class) at the end of mock teaching by their research assistants of the two schools selected. Week three, treatment by the research assistants using a prepared lesson note by the researchers under the following headings; resultant and equilibrium of forces, parallel forces and moment of a force (torque). Week four, treatment under the following headings; centre of gravity and equilibrium of bodies in liquid. Week five, treatment under the following headings; Archimedes' principle and law of floatation. Week six, administration of posttest (reshuffled PATEF), collation and collection of marking and returned of the data to the Researchers. The data generated in the study were analyzed using mean, standard deviation, and Analysis of Covariance (ANCOVA) statistic. mean, standard deviation were used for answering the research questions, while ANCOVA was used in testing the three research hypotheses formulated. All the hypotheses were tested at .05 level of significance. Pretest were used as covariate.

## Results

**Table 1: Summary of the mean and standard deviation of academic achievement score of Physics Students on concept of equilibrium of forces when taught using guided inquiry and demonstration approaches.**

Teaching Approaches	Pre-test		Post- test		Difference	
	N	Mean	SD	Mean	SD	
Guided -Inquiry	70	22.52	4.01	41.12	5.47	18.60
Demonstration	60	18.14	3.24	38.18	3.58	20.04

Table 1 shows the mean achievement scores of students taught equilibrium of forces using Guided-Inquiry and Demonstration approaches, respectively. The result indicates

that students taught equilibrium of forces using Demonstration approach (20.14) had higher mean achievement difference than Guided-Inquiry approach (18.60). The post-test standard deviation scores, 3.58 for Demonstration method shows that the mean scores clustered around the mean than Guided-Inquiry approach (5.47).

**Table 2: Summary of mean and standard deviation of academic achievement scores of males and females Physics students**

Teaching Approaches	Gender	n	Pretest		Post Test		Difference
			Mean	SD	Mean	SD	
Guided-Inquiry	Male	32	21.72	6.52	43.85	6.31	22.10
	Female	38	20.31	5.99	41.32	4.15	21.01
Demonstration	Male	21	20.74	5.53	43.18	5.26	22.44
	Female	29	24.21	5.21	41.32	4.15	17.11

Table 2 shows the mean achievement scores of male students taught equilibrium of forces using Guided-Inquiry and Demonstration approaches, respectively. The result indicates that male students taught equilibrium of forces using Demonstration approach (22.44) had higher mean achievement difference than Guided-Inquiry approach (22.10). The post-test standard deviation scores, 5.26 for Demonstration method shows that the mean scores clustered around the mean than Guided-Inquiry approach (6.31).

Table 2 also shows the mean achievement scores of female students taught equilibrium of forces using Guided-Inquiry and Demonstration approaches, respectively. The result indicates that female students taught equilibrium of forces using Guided-Inquiry (21.01) had higher mean achievement difference than Demonstration approach (17.11). The post-test standard deviation scores, 3.15 for Demonstration method shows that the mean scores clustered around the mean than Guided-Inquiry approach (4.13).

**Table 3: Summary of mean and standard deviation of academic achievement scores of high, average and low cognitive ability of students**

Teaching Approaches	Cognitive Levels	n	Pre-test		Post- test		Difference
			Mean	SD	Mean	SD	
Guided-Inquiry	High	13	21.45	6.03	43.53	6.08	22.08
	Average	24	18.43	5.42	39.45	5.02	21.02
	Low	33	16.52	5.54	36.85	6.27	20.33
Demonstration	High	12	22.28	5.36	41.26	6.43	18.98
	Average	20	20.78	5.99	37.91	6.28	17.13
	Low	28	18.22	5.03	34.11	5.54	15.89

Table 3 shows the mean achievement scores of students of high cognitive ability taught equilibrium of forces using Guided-Inquiry and Demonstration approaches, respectively. The result indicates that students of high cognitive ability taught equilibrium of forces using Guided-Inquiry approach (22.08) had higher mean achievement difference than Demonstration approach (18.98). The post-test standard deviation scores, 6.08 for Guided-Inquiry shows that the mean scores clustered around the mean than Demonstration approach (6.43).

Table 3 also shows the mean achievement scores of students of average cognitive ability taught equilibrium of forces using Guided-Inquiry and Demonstration approaches,

respectively. The result indicates that students of average cognitive ability taught equilibrium of forces using Guided-Inquiry method (21.02) had higher mean achievement difference than Demonstration approach (17.13). The post-test standard deviation scores, 5.02 for Guided-Inquiry shows that the mean scores clustered around the mean than Demonstration approach (6.28).

Table 3 further shows the mean achievement scores of students of low cognitive ability taught equilibrium of forces using Guided-Inquiry and Demonstration approaches, respectively. The result indicates that students of low cognitive ability taught equilibrium of forces using Guided-Inquiry method (20.33) had higher mean achievement difference than Demonstration approach (15.89). The post-test standard deviation scores, 5.54 for Demonstration approach shows that the mean scores clustered around the mean than Guided-Inquiry (6.27).

**Table 4: ANCOVA summary of the difference between the mean academic achievement scores of physics students on concept of equilibrium of forces using pretest as covariate**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	883.805 <sup>a</sup>	3	294.602	0.742	0.528
Intercept	86353.098	1	86353.098	217.607	0.000
Pretest	245.975	1	245.975	0.620	0.432
Group	650.497	2	325.249	0.820	0.004
Error	61111.847	123	396.830		
Total	508259.000	130			
Corrected Total	61995.652	129			

a. R Squared = 0.014 (Adjusted R Squared = -0.005)

Result in the analysis in table 4 showed that the calculated F-value of .820 in respect of the treatment as main effect has a probability value of 0.004 and therefore significant at 0.05 level of significance. Therefore the null hypothesis stating no significant difference between the mean achievement scores of physics students on the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches, respectively is rejected. This implies there is a significant difference between the mean achievement scores of physics students on the concept of equilibrium of forces taught using guided inquiry and demonstration approaches, respectively in Ikot Ekpene Local Government Area, Akwa Ibom State.

**Table 5: ANCOVA summary of the difference between mean academic achievement scores of male and female Physics students on the concept of equilibrium of forces using pretest as covariate**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4791.553 <sup>a</sup>	3	798.592	2.016	0.067
Intercept	76766.766	1	76766.766	193.799	0.000
Pretest	20.059	1	20.059	0.051	0.822
Group	1739.126	2	869.563	2.195	0.115

Gender	238.028	1	238.028	0.601	0.439
Group * Gender	1733.912	2	866.956	2.189	0.116
Error	59813.308	120	396.115		
Total	538384.000	130			
Corrected Total	64604.861	129			

Result in the analysis in table 5 showed that the calculated F-value of 0.601 in respect of the treatment as main effect has a probability value of 0.439 and therefore not significant at 0.05 level of significance. Therefore the null hypothesis stating no significant difference between the mean achievement scores of male and female physics students on the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches, respectively is retained. This implies no significant difference between the mean achievement scores of male and female in the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches, respectively in Ikot Ekpene Local Government Area, Akwa Ibom State.

**Table 6 : ANCOVA summary of the difference among mean academic achievement scores of high, average and low cognitive abilities when taught the concept of equilibrium of forces using pretest as covariate.**

Source	Type III Sum of Squares	df	Mean Square	F	Sig
Corrected Model	11564.428 <sup>a</sup>	8	1445.554	3.945	0.000
Intercept	25872.058	1	25872.058	70.614	0.000
Pretest	4384.914	1	4384.914	11.968	0.001
Group	2264.398	2	1132.199	3.090	0.048
Cognitive_Level	2808.863	2	1404.432	3.833	0.024
Group * Cognitive_Level	920.926	3	306.975	0.838	0.003
Error	54591.648	113	366.387		
Total	500070.000	130			
Corrected Total	64845.523	129			

Result in the analysis in table 6 showed that the calculated F-value of 3.833 in respect of the treatment as main effect has a probability value of 0.024 and therefore not significant at 0.05 level of significance. Therefore the null hypothesis stating no significant difference among the mean achievement scores of students of high, average and low abilities on the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches, respectively is retained. This implies no significant difference among the mean achievement scores of students of high, average and low abilities on the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches, respectively in Ikot Ekpene Local Government Area, Akwa Ibom State.

### Discussion of Findings

The result in table 4 showed a significant difference existed between the mean academic achievement scores of Physics Students' on the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches, respectively in favour of demonstration approach. The findings indicated that when students observed their teacher demonstrates live experiment in the concept of equilibrium of forces, it sparks curiosity, encouraged active

participation and students achievement improved than the approach which will expect the students to discover facts by guiding. The study is in line with Uwak and Stephene (2020) who found a significant difference in the achievement of physics students when taught waves using guided inquiry and demonstration approaches, respectively in favour of demonstration approach.

Findings on gender showed that gender was not statistically significant when students were taught using guided inquiry and demonstration approaches, respectively. This observation indicates that gender is not a strong determinant of students' academic achievement. The no statistically significant of gender observed in the study agrees with assertion made by Akinbobola (2015) that male and female students do not differ in academic achievement when taught using guided inquiry and demonstration approaches, respectively.

Table 6 also showed cognitive ability not statistically significant on the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches, respectively. In other word, students' cognitive ability is not a strong determinant of students' academic achievement in the concept of equilibrium of forces when taught using guided inquiry and demonstration approaches, respectively. The findings of the study is in agreement with the submission made by Etokakpan (2022) that the cognitive ability of students is not a major determinant of academic achievement.

### **Conclusion**

It was concluded that demonstration approach should be adopted to enhance academic achievement of students regardless of gender and cognitive ability especially in the concept of equilibrium of forces in Ikot Ekpene Local Government Area of Akwa Ibom State.

### **Recommendations**

- 1.) Teachers should utilize demonstration approach for the teaching of male and female students as the approach engages all learners equally and reduce gender stereotype.
- 2.) Teachers should embrace the use of demonstration approach for teaching equilibrium of forces to improve academic achievement of students regardless of their cognitive abilities.
- 3.) Government should regularly organize and monitor workshops, seminars and conferences for teachers on the use of demonstration to enhance teachers' expertise.

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