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GLOBAL ISSUES IN
EDUCATION &
SUSTAINABLE
DEVELOPMENT

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BASSEY ANAM & VERONICA BABAJIDE ET-AL

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GLOBAL ISSUES IN EDUCATION AND SUSTAINABLE DEVELOPMENT

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Dedication

Dedicated to the International Institute for Policy Review & Development Strategies for providing a platform and supporting Institutional and Collaborative Research and Sustainable Development.

Acknowledgment

Preface

I am privileged to write the introduction to the Book titled: **Global Issues in Education and Sustainable Development.** This book is an offspring of the Directorate of Arts and Education; one of the four Directorates in the International Institute of Policy Review and Development Strategies (IIPRDS) which was established at the stake holders meeting held in Lagos State University, Ojo, Lagos State, Nigeria in March 2017. These Directorates are coordinated by the African Research Council on Sustainable Development (ARCSD) with project offices in University of Ibadan, Nigeria; University of Ghana Business School; and Kenyatta University Nairobi.

The Directorate of Arts and Education is blessed with erudite scholars and research experts of international repute whose founding members are my humble self, Dr. Veronica Folasade Titilayo Babajide, being Director; while Mr. Okonkwo Dyke Remigius Secretary of the Directorate. The other members are: Rev. Sr. Prof. Eze Mary Noelle, Esv. Dr. Okoronkwo Chikezie, Dr. Osakpa David Utsu, Dr. Odebode Oluwatoyin, Dr. Tolulope Gbadamosi, and Dr. Akai Kelvin Polycarp. These research experts organized a maiden workshop for the training of teachers on 21st century skills at Teachers House, NUT Secretariats, Owerri, Imo State on the 25th of October, 2018. As part of its achievement and growth, the Directorate was able to get an accreditation from the Teachers Registration Council of Nigeria for the continuous development of Teachers in Nigeria. Also, there is an increase in the number of members from eight (8) to twenty-one (21).

The mandate of the Directorate of Arts and Education is to explore and monitor the processes of education in order to identify challenges so as to

proffer solutions to such challenges for effective teaching and learning, which is a development in education and the sustainability of this development. The title of this Book is very relevant, timely and suitable to the mandate of the Directorate.

This Book is arranged into ten chapters. Chapter one explores the role of society education in curbing the scourges of contemporary social problems such as religious intolerance, kidnapping, cattle rustling, Boko Haram insurgency and election violence in Nigeria. Chapter Two contains a critical analyzes of the barriers confronting girls' education in Nigeria. It vividly looks into out of school girls in Sub-Saharan Africa and Nigeria to be precise. Chapter Three examines issues around University management and globalization for sustainable development in Nigeria. Chapter Four is a review of the importance of water management in educational and leadership policy direction from the Enugu State Water Corporation perspective and focused on the management structure and the fundamental issues at stake. Chapter five discusses the challenges of traditional African art in contemporary Nigeria. It examined the current state of traditional arts in Nigeria focusing on religious, political, social and economy system of the country. Chapter Six critically examines strategies proactive strategies for security enhancing educational development.

Chapter seven is an exploration of teachers' and students' perceptions on measurement using a cross sectional research design in addressing issues surrounding the teaching and learning of Economics. Chapter Eight focused on the enhancement of student researchers' attitude towards the use and application of educational research paradigm theories in research studies in Nigeria. Chapter nine is a review of the role of science education in good governance, peace education and national security in Nigeria specifically looking at science education as a potent tool for developing and promoting good governance, peace and national security. Chapter ten considers e-learning system as a mode of teaching and learning process, the relevance of its usage and the challenges that hinder most students from using it in the learning process.

The purpose of sustainable development in education is to meet the educational needs of students without compromising the educational needs

of the future. The goal of sustainable development is to achieve a better and more sustainable future for all, a goal which can only be achieved if the content of this Book is read and engaged in the overflowing spring of intellection.

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Introduction

Education and Sustainable Development: Empowering Learners to Take Informed Decisions and Responsible Actions

Dr. Bassey Anam
Editor
Interactive Knowledge

Education is fundamental to any meaningful development process. Education is a lifelong learning process which seeks to transform the individual and human society. No country can achieve sustainable economic development without substantial investment in human capital. Education enriches people's understanding of themselves and the world. It improves the quality of their lives and leads to broad social benefits to individuals and society. Education raises people's productivity and creativity and promotes entrepreneurship and technological advances. In addition, it plays a very crucial role in securing economic and social progress and improving income distribution[1].

Education for Sustainable Development (ESD) is recognized as a key element of quality education and a crucial enabler for sustainable development. The Sustainable Development Goals (SDGs) adopted by the global community

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[1] Ozturk, Ilhan, 2001. "The role of education in economic development: a theoretical perspective," MPRA Paper9023, University Library of Munich, Germany.

recognize the importance of education in achieving their targets by 2030. Target 4.7 of SDG 4 on education specifically addresses ESD and related approaches. According to the United Nations Educational Scientific and Cultural Organisation (UNESCO), the objectives of ESD include,

1. **Learning content**: Integrating critical issues, such as climate change, biodiversity, disaster risk reduction (DRR), and sustainable consumption and production (SCP), into the curriculum.

2. **Pedagogy and learning environments**: Designing teaching and learning in an interactive, learner-centred way that enables exploratory, action-oriented and transformative learning. Rethinking learning environments
   a. Physical as well as virtual and online
   b. To inspire learners to act for sustainability.

3. **Societal transformation**: Empowering learners of any age, in any education setting, to transform themselves and the society they live in.
   a. Enabling a transition to greener economies and societies.
   b. Equipping learners with skills for 'green jobs'.
   c. Motivating people to adopt sustainable lifestyles.

   Empowering people to be 'global citizens' who engage and assume active roles, both locally and globally, to face and to resolve global challenges and ultimately to become proactive contributors to creating a more just, peaceful, tolerant, inclusive, secure and sustainable world.

4. **Learning outcomes**: Stimulating learning and promoting core competencies, such as critical and systemic thinking, collaborative decision-making, and taking responsibility for the present and future generations.

The Global Action Programme (GAP) on ESD, the follow- up programme to the Decade of ESD (2005-2014), seeks to generate and scale-up ESD and to accelerate progress towards sustainable development. The GAP aims to contribute substantially to the 2030 agenda, through two objectives:

1. Reorienting education and learning so that everyone has the opportunity to acquire the knowledge, skills, values and attitudes that empower them to contribute to a sustainable future.

2. Strengthening education and learning in all agendas, programmes and activities that promote sustainable development.

In strengthening the education for sustainable development framework, UNESCO has identified the kinds of education, teaching and learning policy and practice that appear to be required if the world is working on ensuring social, economic and ecological viability and well-being, now and into the long-term future. UNESCO roadmap for implementing its 'Global Action Plan' on education for sustainable development includes a considerable challenge to the higher education sector to develop 'whole institution approaches' reflecting the reorientation of teaching and the curriculum as well as campus and facilities management in line with the principles of sustainable development.

[2]The International Alliance of Research Universities, or IARU, launched a comprehensive Green Guide for Universities, echoing UNESCO's call and reflecting the trend that sustainability is moving from the margins to the mainstream. For him, given existing realities, achieving the goals of education is still a long journey. Some of the key points from the paper follow:

1. The quality of the human and biospheric future depends on our collective capacity and ability to learn and change.
2. Sustainable development is not itself sustainable (that is, lasting and secured) unless relevant learning among all stakeholders is central to the process.
3. While sustainable development can be promoted through policy instruments, these tends to be effective for only as long as they are applied.
4. Education can enhance the effectiveness of each of these instruments through developing informed engagement, agency and empowerment among all affected stakeholders. Further, education can build lasting change – that is, sustainable change, because it is owned by the learner and reaches hearts and minds.

Yet in the sustainable development debate, the key role of education in realising sustainable development is often ignored, downplayed and

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[2]Ozturk, Ilhan, 2001. "The role of education in economic development: a theoretical perspective," MPRA Paper9023, University Library of Munich, Germany.

underestimated – or viewed in isolation from the other instruments of change. In this debate, education is rarely regarded as a major factor in making the world more sustainable, and its potential is overlooked. Thus, despite the successes of the United Nations Decade of Education for Sustainable Development, we are in an undesirable situation where much sustainable development discourse and policy underplays the role of education, whereas much education discourse and policy underplays or ignores sustainable development.

Education for sustainable development means and implies far more than those working outside the field often perceive it to mean. It offers a renewed vision for educational policy and practice fully in tune with the needs and issues of the 21st century. The fundamental challenge is this: how can education more strongly impact on sustainable development and sustainable development be embedded at the heart of education and learning so that there is both mutual benefit and accelerated positive effect, sufficient to win breakthrough towards an economically secure, ecologically stable and socially just world, way into the future?

These issues define the objective of the theme of this Edition of Interactive Knowledge, "Education for Sustainable Development". The position of the scholars centers on the conviction that education is central in achieving the goals of sustainable development as it empowers people to change the way they think and work towards a sustainable future. The policy recommendations which follows each discussion aims to improve access to quality education on sustainable development at all levels and in all social contexts, to transform society by reorienting education and help people develop knowledge, skills, values and behaviours needed for sustainable development. It is about creative teaching and learning. It is about ensuring a comprehensive and inclusive educational curriculum which include sustainable development issues, such as climate change and biodiversity into teaching and learning. It centers on teaching individuals to be responsible actors who resolve challenges, respect cultural diversity and contribute to creating a more sustainable world.

Chapter **1**

The Roles of Sociology Education in Curbing the Scourges of Contemporary Social Problems in Nigeria and Way Forward for Sustainable National Development and Modernization

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Abstract

As a developing country of the world, Nigeria is excruciatingly plagued by a plethora of seeming social problems which are continuously hindering the development of the country as a nation. The paper discusses vividly about The Roles of Sociology of Education in Curbing the Scourges of Contemporary Social Problems in Nigeria and Way Forward for Sustainable National Development and Modernization. Some of the major social problems that were critically examined in the paper comprised religious intolerance, kidnapping, cattle rustling, Boko Haram insurgency and election violence. It was strongly recommended in the paper that the religious, traditional and political leaders should mobilize the masses on better understanding of religious tolerance in Nigeria; the government should remain undaunted in intensifying efforts to fight Boko Haram insurgency; political education should be highly strengthened to mobilize the masses on the dangers of election violence; the agents of social control such as the police, civil defence

etc. should be adequately reinforced by the government and lastly, strong punitive measures should be decisively imposed on the perpetrators of cattle rustling in the affected areas of the country.

Keywords: Sociology of Education, Social Problems, Sustainable National Development, Modernization, Suggested Recommendations.

Background to the Study

As a monumentally indispensable area of study, education generally, is basically concerned with a process of teaching, training and learning which fundamentally aid the members of the society to acquire useful knowledge and skills that will ginger them to be socially responsible thereby contributing beautifully and tremendously to the development of their societies. Each and every society of the world today, experiences one social problem and the other and the total goals of a society or nation is to struggle tirelessly in rectifying the problems for sustainable national development and modernization. As a developing nation of the world today, Nigeria is severely besieged by numerous social problems which are unfavourably deterring the unity of the corporate existence of the country. The problems comprise interalia, religious intolerance, Boko Haram insurgency, election violence, kidnapping and cattle rustling. The solutions to all the aforementioned social problems are highly anticipated for sustainable national development and modernization. However, this actually calls for the intervention and affirmative response of Sociology of Education in mitigating the problems for the future development of Nigeria.

In the words of Ogunbameru and Rotimi (2006), education and the Sociology of Education generally, is the deliberate and organized transmission of values and skills and for this to be made possible, the schools are established to give formal learning to people in the contemporary times. In addition, the formal learning complements the informal education which the human being received at home and the formal learning has been useful in meeting the requirements of this modern industrial age. The scholars mentioned also indicated that in Nigeria, it was Chief Obafemi Awolowo who started the state-supported system of mass schooling in the western part of Nigeria with the introduction of Universal Primary Programme around the year 1955 which as a result of that, many people substantially benefitted in the

southwest. As of today, the southwestern part of Nigeria comprises six (6) states which are Oyo, Osun, Ondo, Ogun, Ekiti and Lagos states. In the Northern part of Nigeria, for example, some important personalities such as Sir Ahmadu Bello Sardauna of Sokoto made huge strides in the development of education at the primary, secondary and tertiary levels. The central message of this paper, therefore, is: The Roles of Sociology of Education in Curbing the Scourges of Contemporary Social Problems in Nigeria and Way Forward for Sustainable Development and Modernization. The author of this paper has one thing in mind. He firmly believes that the practical teaching and application of the knowledge of Sociology of education can help tremendously in curbing the scourges of the contemporary social problems which are adversely bedeviling the development of northern Nigeria particularly the north-eastern states such as Borno, Yobe and Adamawa and also some parts of the north-western states such as Sokoto, Zamfara, Kaduna and Katsina. The knowledge, skills and the right values of discipline, respect and the spirit of societal development which the children and adults acquire in the schools can aid in no small measure in alleviating the contemporary social problems of religious intolerance, election violence, kidnapping, Boko Haram insurgency and cattle rustling. This means that when the problems are alleviated or possibly eradicated in our Nigerian societies, it is hopefully anticipated that sustainable socio-economic and political development can be attained in country.

Statement of the Problem

As it has been highlighted in the paper, Nigeria and the north in particular is currently besieged by so many problems which adversely hinder the smooth progress and development of the region despite the efforts that the Federal Government of Nigeria, State, Local Government and even the Non-Governmental Organizations (NGOs) are making to remedy the situation. There is no any existing geo-political zone of northern Nigeria that does not experience one social problem and the other. In the north-east, for example, of Borno, Yobe, Adamawa, etc. there is the problem of Boko Haram insurgency; in the north central part of the country especially in Jos, Plateau state, the religious/ethnic conflicts are very prevalent and lastly, in the north western part of the country, there are social problems such as kidnapping and cattle rustling in the areas of Zamfara, Katsina and later on, some parts of Sokoto State such as Rabah, Goronyo, Isa and Sabon Birni Local Government Areas. It

is very disheartening and worrisome to note that the social problems stated claimed the lives and valuable properties of many innocent Nigerians especially in the north.

However, the concern of this study is that, why is it that the social problems pointed out continuously exist despite the huge efforts and sacrifices made and what are the strategies that can be employed to rectify them. There is therefore, the need of the intervention and the intensification of the teaching and the practical application of the good norms, values, customs and traditions of sociology of education in the Nigerian schools so as to enhance the socio-economic and political sustainable development and modernization of the country.

Research Objective

Considering the fact that there are so many social problems which bedevil the northern part of Nigeria, the main objective of this study is on how the knowledge and the practical teaching of sociology of education can help in curbing the scourges of social problems so that the sustainable development and modernization can be achieved in Nigeria.

Methodology

The context of the study is the northern part of Nigeria and the study is basically concerned with the social problems which are adversely affecting the development of region and the major problems discussed were religious intolerance, Boko Haram insurgency, election violence, kidnapping and cattle rustling. The population of the study was the people living in the northern part of the country. Since the study was entirely qualitative, the researcher did not make use of any sample. With regard to the method of data collection, the researcher heavily relied on the use of content analysis or the secondary data from textbooks, pamphlets, journals and other relevant materials concerning the topic of the research which is The Roles of Sociology of Education in Curbing the Scourges of Contemporary Social Problems in Nigeria and Way Forward for Sustainable National Development and Modernization.

Conceptual Review of Literature

In order to gain a clearer and an encyclopaedic understanding of the paper, the conceptualizations of Sociology of Education, Social problems,

sustainable national development and modernization were provided and in addition, there are discussions on the contemporary social problems affecting the north.

a. Sociology of Education

According to Scott and Marshal (2005), the sociology of education is mostly concerned with schooling and especially the mass schooling systems of modern industrial societies, including the expansion of higher, further, adult and continuing education. They also averred that the systematic sociology of education can be traced to Durkheim's pioneering studies of moral education as a basis for 'organic solidarity' and Weber's analysis of the 'Chinese Literati' as an apparatus of political control. But the first major expansion of sociology of education after the Second World War was associated with technological functionalism in America, egalitarian reform of opportunity in Europe and human capital theory in economics. These also asserted a causal linkage between the amounts of schooling and the economic advancement of both individuals and societies. They implied that technologically educated labour progressively undermines class and other ascriptive system of stratification and that educational credentialism promotes social mobility.

In the analysis of Sociology of Education by Otite and Ogionwo (2006), it refers to the acquisition of knowledge and skills required to adapt to and exploit the social and physical environment in the process of development. It is the process of training and bringing up the young and also the old members of a society, morally and spiritually, and intellectually. The sociology of education may also involve systematic instruction such as we have currently in schools, colleges and universities or it may be non institutional training by which the essentials of a culture are transmitted from generation to generation, as occurs in many non-western societies. This is also corroborated by Ogunbameru and Rotimi (2006) that the sociology of education helps in preserving the culture by passing it from one generation to another; it encourages democratic participation by teaching students to think rationally and independently and also enrich the student's life by expanding intellectual and aesthetic horizons; it improves personal adjustment through personal counselling and through offering of courses in psychology, family living, drug abuse, sex education, etc. and lastly, the sociology of education produces citizens who understand their nation's history and who are dedicated to its future.

From the foregoing social analysis, it can be truly averred that the sociology of education is an indispensable drive that can rightly aid us to scrupulously understand our physical and social ecology with a view to address our contemporary social problems. Therefore, the contemporary social problems besieging the development of Nigeria such as religious intolerance, Boko Haram insurgency, election violence, kidnapping and cattle rustling can be eradicated or brought to the barest minimum through practical application and implementation of sociology of education.

b. Social Problems

According to Scott and Marshal (2005), Social problems are referred to as the range of conditions and aberrant behaviours which are held to be manifestations of social disorganization and to warrant changing via some means of social engineering. However, the problems also include many forms of deviant behavior (such as crime, juvenile delinquency, prostitution, mental illness, drug addiction, suicide, and of social conflict (ethnic tansions, domestic violence, industrial strife and so forth). The social problems are also the general issues, conditions or phenomena that adversely affect life situations that defy the norms and values of a given society, and which are often induced through social processes (Dantake, 2012). However, the social problems are varied from one society to another as in the case of for example, the social problems encountered by developed countries of the world such as U.S.A, Britain, Germany, Italy, Russia etc. are in sharp contrast with social problems experienced by developing countries such as Nigeria; the social problems of rural areas of Nigeria may not also be relevant to the social problems of urban areas of the country. Researches indicated that there were a vast array of examples of social problems which consist of the following: corruption, terrorism, war, armed robbery, cultism, examination malpractice, prostitution, homosexuality, rape, national conflicts, ethno-religious and inter-ethnic conflicts, suicide, delinquency, domestic violence (child abuse, labour and slavery, wife battery), drug abuse, drug and human trafficking, political thuggery and the most recent widespread and phenomenon of "area boys" which are crime and violence related social problems (Dantake, 2012).

Considering the above foregoing explanations, it is imperative to note that the social problems are essentially characterized by being very complex and are also bedeviling the development of societies in different nooks and crannies of

the world. In the context of this paper, the major specific contemporary social problems menacing Nigeria which were highlighted comprised religious intolerance, Boko Haram insurgency, election violence, kidnapping and cattle rustling and the goal of the paper is to proffer solutions for the socio-economic and political development of the country as a nation.

c. Sustainable National Development and Modernization

The concept of development generally is relative because what is socially constructed as a development in one society may not be a development in the other. Development involves gradual growth of some fundamental issues so that they become advanced and stronger. The Bruntland commission (1987), defined sustainable development as "the development that meets the needs of the present without compromising the ability of the future generalization to meet their own needs" Within the context of this paper, therefore, sustainable national development is a development that cuts across all the geopolitical zones and sectors of the economy of the country.

Modernization, on the other hand, is another fundamental concept that is lacking a universally accepted definition and it also goes hand in hand with development. Modernization can be perceived as the process of becoming modern or the development of modernity (Scott and Marshal, 2005). Modernization also connotes the process by which societies change from traditional to modern stage or from simple to complex stage; it is also a process of adopting views or ideas in the society.

It is worthy of note that the concept of sustainable national development and modernization are very much relevant in the sense that they are robustly interwoven and intertwine in bringing about fruitful results. All the giant steps towards the rectification of the contemporary social problems in Nigeria such as religious intolerance, Boko Haram insurgency, election violence, kidnapping and cattle rustling are the pathways for the attainment of sustainable national development and modernization in the country.

Theoretical Explanations

The theoretical perspective applied in the paper is the conflict theory which was propounded by scholars such as Marx (1948), Dahrendorf (1959) Collins (1975) etc. The central position of the theory is that the society is ever

composed of opposing groups of people with varied interests, competing for or against dominance by some and the desire to reverse dominance by others. The group in control of society's major institutions, and especially the economy, imposes its will on the others and utilizes the advantage to re-orientate all social institutions (education, economy, religion, political structures and processes, law and order, religion, etc.) as well as values and norms to reflect the interests of the ruling groups. At the centre of the struggle for or against dominance is access to or exclusion from resources which are vital to the survival of the individual or groups. The struggle is never ending, ever ongoing process and its resolution represents change (Baba, 2012).

Considering the wider coverage of the conflict theory, it will not be generally applied in the paper and for that reason attention was narrowed down to power and crime using the Marxian perspective. The fundamental assumption of the Marx is that, power is held by those who own and control the forces of production. The superstructure reflects the relationship between the powerful and relatively powerless, the ruling and subject classes. As part of the superstructure, the state, the agencies of social control, the law and definition of crimes, reflect and serve the ruling class interests and the basis of crime is the private ownership of the forces of production and all that that entails (Haralambos & Heald, 2008).

Furthermore, with regard to the application of the Marxian perspective of power and crime, to the Nigerian scenario, it can be critically observed that the genesis of most of the crimes committed by the masses emanated from the actions of the ruling classes who dominate and control the forces of production – land, labour and capital. The contemporary social problems threatening the development of the country such as religious intolerance, Boko Haram insurgency, election violence, kidnapping and cattle rustling were as a result of dismal failure of leadership. However, they are also criminal offences which attract punishment on the perpetrators and it is only a paradigm shift of change that aids in resolving issues for the development of the country.

Contemporary Social Problems in Nigeria
    I. **Religious Intolerance:** Religion generally, is one of the elastic concepts in the Humanities/Social Sciences which defies precision of

definition and also delicate to handle (Tikumah, 2009). Religion may be defined as the belief in supernatural and sacred beings (Otite & Ogionwo, 2006). On the other hand, the concept of religious intolerance may be broadly defined to mean offending someone because of his/her religion is different from one's own, or denying others their right to freely practice their religious beliefs (Tikuma, 2009). The religious intolerance has been a perennial social problem occurring in Nigeria. Many religious intolerances or conflicts occurred between Muslims and Christians in different parts of the country particularly the north whereby numerous lives and properties were preciously and valuably lost (Boyi 2017, Boyi 2018). Researches clearly demonstrated that there were various factors precipitating religious intolerance in Nigeria and they consisted for example, misrepresentation, restricted social relations the dominance of one religion over the other (Junaidu 2011, Okafor 2010, Poponoe 1997).

Furthermore, the other causes of religious intolerance in Nigeria were ignorance, charlatanism, ethnic/tribal tensions, political demagogy, poor political leadership, foreign influence, mischief and bigotry. However, the case studies of religious crises in Nigeria included the Fage Riots of 1982 in Kano State, the introduction of Shariah in 2000, the Kaduna crises of 2000 as well as the Miss World Pageant Riot of 2002. The socio-economic implications of religious intolerance in Nigeria are threat to peace and security, obstacles to economic development, social ills, threat to democracy and political stability, permanent state of mistrust and animosity (Tikumah, 2009).

ii. **Boko Haram Insurgency:** This is one of the contemporary social problems in Nigeria. Boko Haram insurgency simply connotes a name given to a group of people called Jama'at Ahlis Sunnah Lid-Da'awat that is committed to propagating the prophet's teachings and Jihad and In Nigeria, the Boko Haram is a combination of Hausa and Arabic language that literally translates that "Western Education" is forbidden. The group started as an Islamic Sect with a puritanical, conservative and literalist approach to Islamic Ideology in the year 2002 in Maiduguri, the north-eastern part of Nigeria (Shehu, 2011). Some of the major states which were heavily attacked by the activities of Boko Haram insurgents in the north-east were Borno, Yobe,

Adamawa and Bauchi. There were reported cases of tumultuous loss of lives, properties and the total displacement of people by making them to be refugees in different parts of the north-east and even in the other areas such as the Kano State attack of 2015 which was greeted with large scale confusions and pandemonium of heavy and merciless loss of lives and precious properties.

iii. **Election Violence:** It is very disheartening to note that the election violence is a formidable social problem of development in Nigeria's democratic dispensation. According to Igbuzi (2010), electoral violence is "any act of violence perpetuated in the course of political activities including pre, during and post election periods, and may include any of the following acts: thuggery, usage of force to disrupt political meetings or voting at polling stations, or the use of dangerous weapons to intimidate voters and other electoral process or to cause bodily harm or injury to any person connected with electoral process". It is glaring that the electoral activities in Nigeria have been characterized by several violence and crises, thereby hindering effective implementation of the state electoral process and democratic governance in Nigeria (Wilson, 2013). In the views of Fescher (2002) and IFES (2011), the electoral violence involves the violent activities of the political parties, party supporters, state and non- state security agents, electoral officers, electorates and political aspirants resulting in physical, psychological harm on the security of the state. However, the electoral violence is also associated with activities such as riots, demonstrations, party and personality class, political assassination and looting of properties during election process.

The analysis above, make it crystal clear that all the election violence is a social problem that can result in loss of lives and properties and also destabilize the democratic leadership of country. It has also been the ubiquitous feature of the Nigerian political landscape which seriously requires to be addressed for development.

iv. **Kidnapping:** This is also another social monster besieging the future of Nigeria. Basically, kidnapping is the taking away of people illegally and keep them as prisoners especially in order to get money or

something else for returning them. In the contemporary Nigerian situation, kidnapping is a social problem that is predominantly experienced in the northern part of the country especially in the northwest geopolitical zone. The Zamfara state and some tiny portions of Sokoto state are adversely affected. The lives of most of the people that were kidnapped used to be at risk in the sense that they could be attacked by treacherous animals in the bush such as snakes or even be killed by the kidnappers if the ransoms demanded were not paid. The 1980 Maitatsine Riots of Kano and the recent Boko Haram saga in Borno, Yobe, Adamawa and some parts of Bauchi state are also associated with cases of kidnapping (Boyi, 2018).

v. **Cattle Rustling:** This can be described as an act of stealing farm animals especially cattle. It is also one of the social problems that are bugging the minds of numerous pastoral nomadists and some Hausa farmers domiciling in the north-western states of Nigeria such as Zamfara, Sokoto and some portions of Katsina state (Boyi, 2018). Most of the cattle rustlers in those areas are armed robbers who normally come with the devilish desires of illegally attacking innocent people and take away their animals as well as their lives. Despite the giant stride efforts that the government for example, in Zamfara state is taking against the perpetrators, the scourges of cattle rustling are increasingly becoming rampant in the area.

Conclusion
In synopsis, it has been clearly understood that the paper attempted to critically examine The Roles of Sociology of Education in Curbing the Scourges of Contemporary Social Problems in Nigeria and the Way Forward for Sustainable National Development and Modernization. Really, the contemporary Social Problems discussed in the paper such as religious intolerance, Boko Haram insurgency, election violence, kidnapping and cattle rustling could be collectively addressed through the practical implementation of the teachings of sociology of education which is highly desired in our contemporary Nigerian situations. The efforts that the Federal Government of Nigeria has been making over the years towards attaining high level of development and modernization in the country have become a mirage but with the knowledge of sociology of education, the dreams of the Nigerian people can be truly actualized and the lives would flourish.

Recommendations

Based on the aims and objectives of Sociology of Education which comprise the development of attitudes of co-operation, participation, tolerance, open-mindedness, integrity, hard work, compassion for the less fortunate, trustworthiness, appreciation of dignity of man and liberty, self-confidence, resourcefulness, willingness to accept change etc. the following are the recommendations:

1. There is the need for a better understanding of religious teachings among the members of the Nigerian societies. This actually calls for the holistic intervention of the roles of political, traditional and religious leaders as well as other highly responsible stakeholders in addressing the challenges of religious intolerance in the country.
2. It is recommended that the Federal Government of Nigeria should continue to intensify efforts in addressing the scourges of Boko Haram insurgency especially in the north-east in order to make lives safer and productive.
3. The need for strengthening political education is highly anticipated in the current Nigeria's democratic dispensation. This is because of the fact that the political socialization plays an indispensable role in creating awareness that would aid the masses in reducing the waves of election violence in the country.
4. Another social problem of concern in the country is kidnapping especially in the north-west. The government of all levels should continue to adequately reinforce the agents of social control such as the military, police, civil defence, immigration, custom and other security personnel.
5. Strong punitive measures should be decisively imposed against the perpetrators of cattle rustling in the country. The government should inject more funds so that the perpetrators should be rehabilitated in such a manner that they can become socially responsible and productive.

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Chapter **2**

A Critical Analysis of Barriers to Girls' Education in Nigeria

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Abstract

Education remains a veritable tool for national development, without which the task of nation building would be an impossibility. In fact, there have been clamours to recognize education as a fundamental human rights by virtue of its cardinal importance. As such, every individual should have unhindered access to education irrespective of gender or status of life. Unfortunately, there exists a wide gap in the guest for education for all particularly among the female gender. The ratio of out-of-school girls compared to that of boys continues to widen due to certain barriers that have constituted a major hindrance to the attainment universal education for the girl-child in Sub-Saharan Africa and Nigeria to be precise. Some of these barriers are social, economic or political (due to government policy). The achievement of universal education for the girl-child is crucial to the attainment of gender parity. This Article seeks to critically analyse these barriers by identifying them towards proffering solutions through recommendations for necessary action.

Keynote: Education, Universal education, Girl-child

Background to the Study

Education which is an indispensable tool in nation building is a process of systematic training and instruction designed to transmit knowledge, acquisition of skill, potentials and abilities which will enable an individual to contribute efficiently to the growth and development of his society and nation. Education involves all round development of an individual physically, socially, morally, intellectually and mentally (Osakwe, 2009). A child who fails to acquire education may suffer emotionally, socially, intellectually and even physically. Therefore, for the effective and efficient unlocking and development of a child's latent abilities, attitudes and other forms of behavior of positive values in the society in which he or she lives, education becomes imperative (Barnard, 2001). Again, Civil Society Action Coalition on Education for All (CSACEFA, 2014) posited that education is recognized as a fundamental human right and therefore all children regardless of their social status, gender, physical or any other disability, should have access to quality education. Bridging the gap between boys and girls, children born with disabilities, the rich and the poor in education delivery is necessary if United Nations Education for all goals are to be achieved.

There are 57million out of school children globally and over 10million of them mostly girls are in Nigeria (CSACEFA, 2014). Action Aid Nigeria cited in Kiki (2010) highlighted the predicament of girl child specifically in Jega Local Government in Northern part of Nigeria where females are not allowed to go to school. Such deprivation only makes the girl child a dysfunctional member of the society (Michael, 2011). Again, UNICEF (2007) indicates that 65 million out of school children are girls with 80 percent of these girls' residents in sub-Saharan Africa including Nigeria. Ban Kin Moon (2011 cited in people's daily, 2014) opined that the world must work together to end violence against women and ensure that girls are empowered to reach their potential.

Nigeria could not attain the target of achieving gender parity set for 2015 and till date various factors still militate against girl's access to education - this means that MDGs goal 3 was not met by the year 2015. It is instructive to point out that while the girl-child dropout from school is prevalent in the Northern Nigeria, the boy-child drop-out syndrome is also prevalent in the Eastern region (Abiodun, 2013). The boys for economic reasons refuse to go to school and those who enter primary schools drop out prematurely. They refuse to

complete primary and secondary education because even the educated in the society struggle to get employed. Many children are therefore found in mechanic villages as apprentices to crafts masters in various types of businesses or in other engagements outside the school. However, despite various interventions, there generally still exists large gender gap between boys and girl's enrolment in school in Nigeria as a whole. Below are some statistics to support this assertion.

Table 1: Summary of primary school enrolment: 2006-2010

Public Private				
	M	**F**	M	**F**
2006	11895194	9822595	596897	547198
2007	11086997	9382398	596505	566169
2008	10252000	8728395	516742	495172
2009	10154860	8663684	637036	625396
2010	10215179	8826988	812507	80913

Source: Nigeria digest of education statistics 2006-2010

In Northern part of Nigeria, the number of children out of school is particularly high and the proportion of girls to boys in school ranges from 1 girl to 2 boys and even 1 to 3 in some states and these gender gaps persist. The baseline survey by CSACEFA in 6 states showed a wide gender disparity in favour of the boys. For example, in Zamfara state the gender gap is 43.56% while Kebbi had a gender gap of 31.32% in 2008 school enrolment (Source: CSACEFA review of basic education statistics in some Northern states 2008). This state of affair poses serious danger to the future of any country.

Barriers to Girls' Education
The following are barriers to girls' education in Nigeria:
  i. **Socio cultural issues;** gender stereotyping, early marriage &pregnancy, misinterpretation of religious doctrine and general discrimination
  ii. **School-base constraint;** Fees, insecurity, distance, low teacher motivation, lack of role model/female teachers, lack of basic infrastructures and sexual harassment.

iii. **Economic Impediments;** Parental Poverty, Household chores, child labour, commercial sex

iv. **Policy and Management Factors;** lack of pro-poor policy, political instability, lack of relevance of education to local needs, poor deployment of female teachers and inadequate planning, monitoring and evaluation.

Way Forward to the above Barriers

i. Access to free, compulsory and quality education for all.

ii. Provision of adequate funding to implement quality education for all from both National and international sources.

iii. Clear and unwavering commitment by government to improve the quality of education.

iv. Achievement of gender equity in access to education

v. Increase advocacy at all levels

vi. Proper monitoring and evaluation mechanism

vii. Women empowerment through vocational skills to promote girls education

viii. Provision of school facilities and infrastructure e.g. separate toilets for boys/girls, water, books etc.

ix. Deployment of female teachers to rural communities

x. Development of gender friendly curriculum

xi. Proper planning and management

xii. Increased partnership between various stakeholders e.g. government, NGOs, corporate agencies, donor bodies, traditional leaders etc.

Tackling the Barrier to Girl-Child Education through Recruitment of Quality and Quantity Teachers

All over the world, educational system is confronted with different challenges. The challenges confronting the developed countries differ from the ones confronting the developing countries (Subair & Talabi, 2015). In 2001, the secretary general of the United Nations reaffirmed the world's commitment to ensuring that every child has a right to the best possible start in life. He identified quality education as opportunity to develop the full potential of a child and an enabling environment for a child to make positive contribution to the society. There are a number of factors and obstacles that may contribute to a child's ability to attend school. But if we are able to one day succeed in getting

every child into a classroom, their ability to maintain attendance and learn effectively will depend on the teachers who mentor them — and the support those teachers receive.

The importance of teachers and the roles they play in any educational system cannot be over-emphasized. Teachers are usually linked to issues related to teaching-learning goals, learning achievement, organization of programmes, and the performance of the educational system which involves an analysis of the role of teachers, their behaviors, performance, remuneration, incentives, skills and how they are used by the system (FME cited in Onu & Obiozor, 2014). The revised National Policy on Education (2004) stated that "No education system can rise above the quality of its teacher". It is a shared view that the quality of any education system depends largely on the competence, commitment and motivation of the teachers (Mbanefoh, 2012). In the same vein, the 1993 summit of Nine High population developing countries held in New Delhi, India was emphatic about the relevance of qualitative teacher production in the success of Universal Basic Education. In line with the aforementioned, Ede (2013) opined that the success of any system of education depends to a large extent on the number of teachers and their quality, their devotion to duty and their effectiveness on the job. In his contribution to the role of teachers in the development of Africa, Fafunwa (in Ede, 2013) noted that of all the educational problems that beset the African countries today, none is as persistent or as compelling as the one relating to the training of competent teacher. Indeed, the overall problem of preparing the future citizens of Africa cannot be effectively accomplished without aid of competent teachers. In this regard, the responsibility of government on education according to National Policy on Education (2004) shall be to promote the training of qualified teachers in adequate number, contribute to the development of suitable curriculum, among others.

Sadly, lack of quality and quantity teachers continues to undermine or hinder the realization of education for all goal of United Nation in Nigeria. Analysis has shown that the poor performance of students at different levels of education could be attributed to the quality of teachers we have in our school system today. At the basic education level, the learning outcomes of students is on the decrease as students cannot read or write or solve simple arithmetic as expected at a given level. Recent analysis also showed that a good number

of the already employed teachers are not qualified. The case of a competency test written in Kaduna state suffices, this should be thought through again. Shamefully, the teachers failed a test meant for students in primary 4. In fact, the Kaduna state governor Nasir El rufai angered by this development sacked over 80% of primary and secondary school teachers in the state and conducted a new recruitment exercise. Although, such act attracted condemnation from Nigeria Labour Congress and other vested political interest across Nigeria.

The point is that the usual high rate of failures in the SSCE and NECO examinations can be attributed to high level of unqualified teachers in schools. Ademilola in TELL (2010) reported that the performance of students in West Africa Examination Council (WAEC) and NECO examinations has not been impressive. In 2009 NECO/GCE, only 1.8 percent of the 236,613 that sat for the examinations across 1,708 centers in the country had five credit passes, Mathematics and English inclusive. Whilst out of the 1,373,009 candidates that took the Senior Secondary Certificate Examinations, 25.99 percent of them had five credit passes in five subjects, Mathematics, and English inclusive. This dismal performance was also observed in May/June NECO results.

Ademilola stated emphatically that at the fore of these challenges facing educational sector in Nigeria is the poor quality of teachers. Similarly, Peter Okebukola, former executive secretary of National Universities Commission (NUC), in a report by Daily Sun Newspaper (2014) said many teachers are exceedingly weak in the subjects they teach. Besides, he further argued that very little is done to train and retrain teachers in the country and this takes its toll on the performances of teachers. Inarguably, the end result expected from a child at the completion of basic education which is to be able to realize full potentials and contribute to immediate environment is been defeated because of unqualified teachers and this poses a lot of concern to educationists and other key stakeholders on the future of our children. In Bauchi and Sokoto states of northern Nigeria, 4000 grade 3 students were assessed in Hausa, which is the language of instruction and the lingua franca as well as the mother tongue for the vast majority of students. Just 29% of students in Bauchi and 18% in Sokoto could read full words. These students were given a reading comprehension test: less than one-fifth of them achieved a score of 80% - accounting for only 6% of all students in Bauchi and 3% in Sokoto (Punch

Newspaper report, 2013). These shocking results have turned the spotlight on how teachers are trained, and the support they receive once they are in the classroom.

Again, in Akwa Ibom state, the governor directed all heads of schools to bring the best pupils from First School Leaving Certificate examination, one in each 31 local government areas of the state, to a designated school, where they were re-examined, at the end, it was realized that the child that scored 100 per cent could not score five per-cent (Etim Ekpima in Punch, 2013). Lamenting on this, the permanent secretary said that "The state government conducted an Aptitude Test using the same syllabus for the students to test the teachers; honestly 60 per-cent of the teachers were unable to pass the examinations."

In as much as we agree that there are many factors that hinders the learning achievement of pupils in school such as unfriendly environment, lack of basic infrastructures and school materials etc, the main factor is the issue of unqualified teachers. An unqualified teacher if given the best learning materials cannot impact any knowledge to the pupils as he/she has none. But a qualified, motivated and committed teacher in the midst of nothing, can innovate creative ways of impacting knowledge to the pupil.

As the outcry for poor performance of students in schools continue to increase, teachers' shortages especially at the rural areas remain a major obstacle towards the achievement of the MDGs 2 and EFA goals. According to projections by UNESCO Institute for Statistics (UIS), at least 1.7 million new teaching positions must be created to accommodate the growing demand for primary education. In addition, countries will have to recruit another 5.1 million new teachers to make up for attrition as teachers currently in the workforce retire or leave the profession. So in total, 6.8 million teachers should be recruited in order to provide the right education to school-age children especially the girl-child. These projections do not indicate what will happen but rather what governments should do in order to reach the EFA target. The report shows that developing countries face the greatest challenges in meeting the demand for primary teachers.

According to UNESCO Institute for Statistics (UIS) estimates, over one half of the world's countries (114 out of 208 countries representing 55%) need to

increase the size of their teaching workforces in primary education due to growing numbers of students whereas 94 countries (45%) can either maintain their current workforce or even reduce their size. Severe shortages are found across sub-Saharan Africa, which will need to create almost 1 million new primary teaching positions in just few short years. Some countries in the region will need to recruit more than 10% of their current teaching workforces in order to provide Universal Primary Education. The UIS (2011) in projecting the global demand for teachers for meeting the goal of Universal Primary Education by 2020 put the total recruitment needed for Nigeria at 687,000. This goes to show the extent of dearth of qualified teachers especially in basic education in Nigeria. Teachers are regarded as qualified only when they obtained a minimum of the National Certificate of Education (NCE). Estimates from UBEC indicate that, overall, only 60% of Primary School teachers are qualified and concentrated in the South and Urban areas. The North West and North East seriously lack qualified teachers (50%-53%) while the South West has above 80% of qualified teachers. In some states, such as Jigawa, Kano and Bauchi where about 90% or more of students are unable to read and write after finishing Primary school, only about 40-50 percent of Primary school teachers are qualified. When measured by students to qualified teacher ratio, the ratio is as high as 240:1 in Kano and Jigawa States (World Bank, 2008).

Pragmatic Solution to Poor Teachers' Quality in Nigeria
UNESCO's Education for All Global Monitoring Report shows that while school attendance in sub-Saharan Africa has increased, 175 million children remain illiterate. The inter-related reasons that children become absent from school include systemic poverty issues, illness, and the need to work to support their families. According to UIS data for the school year ending in 2013, 124 million children and young adolescents, roughly between the ages of 6 and 15 years, have either never started school or have dropped out, compared to 122 million in 2011. The global number of out-of-school children of primary school age rose by 2.4 million between 2010 and 2013, reaching a total of more than 59 million. This serves as a grim reminder that the world has yet to fulfil its original promise to provide every child with a primary education by 2015. The increase also marks a stark contrast to the progress achieved from the start of the century, when the international community pledged to achieve universal primary education. According to the data, 1 out

of 11 (or 9%) of children of primary school age (typically 6 to 11 years) continue to be denied the right to education.

A growing number of young adolescents are also out of school, with the global total reaching almost 65 million in 2013. Adolescents of lower secondary school age (typically 12 to 15 years) are almost twice as likely to be out of school as primary school-age children, with 1 out of 6 (17%) not enrolled. Efforts to reduce the gender gap have also faltered in recent years. While the gap is considerably smaller than in the early 2000s, UIS data show little improvement in recent years, despite the many campaigns and initiatives designed to break the barriers that keep girls out of school. Among children of primary school age, 1 out of 10 girls and 1 out of 12 boys were out of school in 2013. Sub-Saharan Africa is also the region with the largest gender disparities; here, girls account for 55% of all out-of-school children and 52% of all out-of-school adolescents (UNESCO Institute for Statistics, 2015).

If the above problems are to be tackled significantly in order to provide quality education for all children, then concrete/pragmatic measures must be taken. Varkey Foundation (2015) emphasized the need to improve teacher training quality and raise respect for teaching profession. This is because every child deserves a vibrant, stimulating, learning environment that awakens and supports their full potential. To achieve this requires the creation of programs that are relevant, culturally and linguistically appropriate, and adequately prepare teachers for the classroom. The training program should move away from a focus on memorization and repeated facts. Instead, teachers should be trained to create a culture of 'personalised learning' in the classroom with greater participation and exploration of ideas. Teachers should be trained to cater for different learning needs of Children.

There should be adequate funding of the education sector. While UNESCO recommended that 26% of the total budget be assigned to education, the successive Nigerian government continues to flout this important recommendation due to lack of value for education. It is seen as a deliberate ploy by the Nigerian elites whom most of their children are schooling abroad to prevent majority citizens from challenging the bad governance that runs through the political system. Because education is a tool for the liberation of human mind. Once the citizens are educated, they are likely to be empowered and be a position to interrogate the mal administration of the ruling elites.

The government should provide good working environment such as: provision of classrooms equipped with teaching aids, laboratories, well ventilated and furnished staff rooms, well equipped libraries with textbooks for students and teachers for effective teaching – learning process.

Relevant stakeholders should put pressure on government to develop improved salary scale and welfare packages for teachers. This would attract young and vibrant professionals with specialized skills who are presently trouping out of the universities and colleges into the teaching job. This will consequently help to retain them. Create incentives for teachers' in the rural areas and hard to reach populations. The government should endeavor to recruit adequate number of teachers. This will help the school administrators to reduce multiple assignments and responsibilities being given to the existing staff in the school. It will also help the school administrators in reducing the ratio of teachers to students, and stop the habit of relying on substitute teachers such as corps member and teaching practice students. In addition, recruitment of enough teachers will eliminate or minimize stress being experienced by school teachers.

Although, it would appear that the introduction of Universal Basic Education was a step in the right direction towards tackling the problem of girl-child education, it has not lived up to expectation. The reason is that it has not curbed chronic poverty which is one of the factors responsible for girl school dropout. There is need for government to come up with conditional cash scheme whereby parents of these female children will be provided with some financial assistance to enable them carter for their needs. This will make them release these female children for school.

Also, free and quality education for all should be embraced as provided under section 18 of the 1999 Nigerian constitution. Due to the poor economic condition of the country, very few parents can afford to educate their children by enrolling them in schools. Therefore, cost of acquiring qualitative education should be as low as possible to encourage such parents to enroll their children in schools. More so, if the education is free, this makes it easier for them to develop interest in it. This way, the rate at which children drop-out of school as a result of financial incapability will be reduced.

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Chapter **3**

University Education Management and Globalization for Sustainable Development in Nigeria

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Abstract

This paper examines University Management and Globalization for Sustainable Development in Nigeria. University Education as the most important level of education in the country provides stability in the various sectors of the economy through its key functions of teaching, learning, research and sustainable development. It is this level of education that assists in re-positioning the entire sectors of the economy through the provision of adequate manpower. The quality and quantity of human resources determine a nation's growth and development. It is the available manpower resources that mobilize other resources for sociological, political, economic scientific and technological development. The development of any society is, therefore hinged on the development of its manpower resources. Universities in Nigeria like any other part of the world have been established for the purpose of provision of manpower towards achieving sustainable development. In attempt to address this, issues such as, Historical Development of University Education in Nigeria, University Management in Nigeria, Problems of University Management in Nigeria, Internationalization of Nigerian Universities, Globalization and World-Class University were discussed. In

view of the above, this paper therefore, recommends that, Federal Government as a matter of urgency should increase funding of universities by allocating at least 30% of the budgetary allocation to Education, two percent (2%) Profit collection from Multi-cultural Companies in Nigeria for TETFund Intervention should be increased to four percent (4%) for the development of higher education in general and University Education in Nigeria, and finally, It is recommended that in order to make vision 20:20:20 a reality, international donor agencies, individual and corporate organizations should be motivated on the need for their contribution in order to make university to catch up with the current trend in global competitiveness.

Keywords: *Education Management, Globalization, Sustainable Development, University*

Background to the Study

University Education should be seen and posited as the most important level of education institution in the country that provides stability in the various sectors of the economy through its key functions of teaching, learning, research and community development. It is this level of education that assists in re-positioning the entire sectors of the economy through the provision of adequate manpower (National Policy on Education, 2004) for the attainment of national goals and objectives. Despite the role played by universities in ensuring growth and development in the country, very little progress has been recorded in Nigeria compared to other developing countries. This is largely due to the problems of infrastructure, academic instability, educational policies and most importantly inadequate funding of university education in Nigeria. These obstacles have limited the level of academic breakthrough in the various universities in the country (Olorunleke, 2013). University Education is the supreme light-giver, the breezy dawn after a night of suffocating darkness. It clears a path through the jungle and; it is the compass that takes man ashore from the rough and clueless waters. It is a mechanism through which the society generates the knowledge and skills required for its survival and sustenance. It enriches people's understanding of themselves and the world (Osundare, 2009). It improves the quality of their lives and leads to broad social benefits to individual and society at large (Kazeem & Ige, 2010). Human capital of a country theory emphasizes education as enhancing the productive capacities of individuals (Almendarez, 2011).

When citizens of a country are educated; they would think right, act right and bring about positive change for the development that will have immediate impact and future that envisage a sustainable socio-political future. This corroborates Fah al-Qudah (2006) cited in Ekpo and Is'hak (2014) thus:

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

Universities have been established to set standards, societal values, ethos and championing societal renewal via cultural creativity nourished by better knowledge and understanding of the cultural heritage, higher living standards, internal and international harmony and peace based on human rights, democracy, tolerance and mutual respect (UNESCO, 1998). Boulton (2010), while observing that Universities play increasingly important roles in Modern society, notes that:

> In the last two decades, Higher education worldwide has moved from the Periphery to the centre of governmental agendas in most countries. Universities are now seen as crucial national assets in addressing many policy priorities and as: sources of new knowledge and innovative thinking providers of skilled personnel and credible credentials; contributors to innovation; attractors of international talent and business Investment; agents of social justice and mobility; contributors to social and cultural lvirality; and determinants of health and well-being.

The need for higher education and its benefits to the society cannot be overemphasized. Addo (2010) stresses that, the need for higher education institutions in a developing country like Nigeria cannot be over-emphasized. According to him higher education plays a pivotal role in assisting the country in the achievement of her national developmental objectives. Among the other

level of education such as primary, secondary and tertiary levels; higher education institutions particularly universities vis-à-vis tertiary education institutions particularly universities contribute immensely in the area of capacity building and development of quality manpower in the various sectors of the country (Olorunleke, 2013). Higher education plays a crucial role in the supply of high level manpower for the socio-economic development of a nation. To this end, effective management of this sector through adequate funding becomes necessary (Ekundayo & Ajayi, 2009). Odukunle (2001) stressed that, education is widely accepted as a major instrument for promoting socio-economic, political and cultural development in Nigeria. According to the National Policy on Education (2004), Higher education is expected to:

a. Contribute to national development through high level relevant man power training;
b. Develop and inculcate proper values for the survival of the individuals and society;
c. Develop the intellectual capability of individuals to understand and appreciate their local and external environments;
d. Acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society;
e. Promote and encourage scholarship and community service;
f. Forge and cement national unity; and
g. Promote national and international understanding and interaction.

The National Policy on Education specified how Higher education in Nigeria should pursue these goals. According to the National Policy on Education (2013) University Education shall make contribution to national development by:

a. Intensifying and diversifying its programmes for the development of high level manpower within the context of the needs of the nation;
b. making professional course contents reflect our national requirements;
c. making all students part of a general programme or all round improvement in university education to offer general study contents such as history of ideas, philosophy of knowledge, nationalism and Information Technology (IT); and

    d. Making entrepreneurial skills acquisition a requirement for Nigerian universities.

University Education as the most important level of education in the country provides stability in the various sectors of the economy through its key functions of teaching, learning, research and community development. It is this level of education that assists in re-positioning the entire sectors of the economy through the provision of adequate manpower (National Policy on Education, 2004) for the attainment of national goals and objectives. Despite the role played by universities in ensuring growth and development in the country, very little progress has been recorded in Nigeria compared to other developing countries. This is largely due to the problems of infrastructure, academic instability, educational policies and most importantly inadequate funding of university education in Nigeria. These obstacles have limited the level of academic breakthrough in the various universities in the country (Olorunleke, 2013).

Historical Development of University Education in Nigeria
The history of university education in Nigeria started with the Elliot Commission of 1943, which moved the establishment of University College Ibadan (UCI) IN 1948. UCI was an affiliate of the University of London (Ike, 1976). According to Ibukun (1997), the UCI was saddled with a number of problems at inception ranging from rigid constitutional provisions, poor staffing, and low to high dropout rate. In April 1959, The Federal Government commissioned an inquiry (Ashby Commission) to advise it on the Higher education needs of the Country for its first two decades. Before the submission of the Report, the Eastern Region Government established its own university at Nsukka (University of Nigeria, Nsukka in 1960). The implementation of the Ashby Report led to the establishment of the University of Ife (Now Obafemi Awolowo University) in 1962 by the Western Region, Ahmadu Bello University, Zaria in 1962 by the Northern Region and University of Lagos (1962) by the Federal Government. On the history of university education in Nigeria Babalola, Jaiyeoba, and Okediran (2007), posited that the University College Ibadan became a full fledge University in 1962. This made UCI, Ibadan and University of Lagos became the first two Federal Universities in Nigeria while other three were regional. In 1970, the newly created mid-western region opted for a university known as University of Benin. The Six Universities

established during this period 1960-1970 are still referred to as first generation universities. Babalola, et al (2007) further remarked that, during this period, universities in Nigeria were closely under the surveillance of the Government. Appointments of lay members of Council and that of the Vice-chancellor were political.

In the Third-National Development Plan 1975-1980, the government established seven universities instead of the four proposed in the Plan and also took over the regional Universities in 1975. They were Universities of Calabar, Ilorin, Jos, Sokoto, Maiduguri, Port Harcourt and Bayero University Kano. All known as second generation universities. The third generation universities were established between 1980s and early 1990s.They are Federal University of Technology in Owerri, Makurdi, Yola, Akure and Bauchi. While State Universities were found in Imo, Ondo, Lagos, Akwa Ibom, Oyo, and Cross River states (Anyamele, 2004). The fourth generation universities are those ones established between 1991 to 2012. They include more universities, Nigerian Open University and Private Universities. According to Okojie (2007) there are 26 Federal, 30 state and 24 private universities. According to NUC (2015) Higher Institutions in Nigeria comprises at present 143 Universities (40 Federal, 43 states, 61 private), 71 Polytechnics, 47 Monotechnics and 79 Colleges of education. The uneven spread of these Institutions over the Country is obvious with the Southern part of the country having the highest concentration of these Institutions. According to him the uneven distribution of the Federal universities probably informed the establishment in one fell swoop of 9 universities by the Federal government in 2011 towards ensuring a federal university in each of the 36 states in the Federation.

University Management in Nigeria
Biobaku (nd) states that "university management is the management of men and women with the most highly developed and developing minds and intends…"
"Academic enterprise' differs from the army whose sole and simple object in conventional terms is the defeat of enemy. It differs from industrial firm whose aim is the production of goods and services subject to the overriding condition that it must make profits. It differs from these because its products is the work of a host of individuals minds, each teaching and investigating in his own

subject in his own way; their efforts can be laid alongside one another but they cannot be added together into a sum total of victory or defeat profit or loss… the active agents are the academic staff and students. The administrative structure serves to coordinate their activities. Biobaku quoted Grainoine Moodie and Eustance (1974) who labelled university as "Republican" and observed that its essentials may be summed up in two prepositions. The first is that decision on any issue should be taken by those who know most about it and the second is that those who know most will vary according to the nature of the issue. The then Registrar of the University of Ibadan (in 1975). Okudu also observes that "University administration requires bright men and women. Rev. Osinudu (nd), another Registrar of one of the universities pointed out that university management is the management of academic human resources. While Adebo (nd) observes that management of university is totally different from that of a civil service because the role of a civil service is to serve the management of the day to help them in making of policies and the execution of it. As observed by Bunza (1988). "The instrument of university governance in this country still remains the committee system.

There is visually a committee system for every aspect of the university function. Although the committee system is being seriously challenged, it remains an acceptable forum where all members of the university community have a stake in the welfare of the students on our university campus". The extent to which university administration is based on committee system was also pointed out by the 1991 commission set up by the federal government to review high education in Nigeria when it observed that "virtually, every issue, no matter how big or small is considered by a committee which either takes final decision there on or sends its recommendation to an approval organization or authority. For example there is development committee on which all deans sit, and the building, works and estate committee. There is also the finance and general purposes committee which subject to the directions of the council exercises control over the property and expenditure of the university and is in effect a cleaning committee of the council, and of course, the appointment and promotions committee chaired by the vice chancellor for senior staff and by his representative for junior staff matters. Similarly all issues which go to senate are first considered by the faculty. What Jacques Barcum said about university administration in America is to a great extent true or the Nigerian system (Salami, 1999).

According to Ekundayo and Ajayi (2009) Management of university education can be looked into from two dimensions: the external and internal levels. At the external, this is the control by the federal government through the National Universities commission (NUC) a body charged with the coordination of university management in the country. According to Ibukun (1997) the main objectives of the NUC are to ensure the orderly development of university education in Nigeria, to maintain its high standard and to ensure its adequate funding. On the other hand, the internal management of each university is represented by a simple organogram. The first is the visitor who is usually the Head of state or the Head of government that established it (The president in case of federal universities and governors in case of state universities). He usually comes to convocation ceremonies where he uses the occasion to address the academic communities on matters of the moment (Adegbite, 2007). The second is the chancellor who is the titular head of the university, who by law, in relation to the university takes precedence before all other members of the university and when he is present, presides at all the meetings of the convocation held for conferring degrees (Ekundayo & Ajayi, 2009).

Besides at the ape of the management structure within each university is the governing council headed by the chairman (pro-chancellor) which is charged with the administrative functions in the area of goal setting, policy formulation, staff development, general discipline, budget approved and liaison activities with the government. In adding to this, there is the senate, headed by the vice chancellor and the Registrar as the secretary. The senate regulates the academic activities of the university following the general guidelines by the NUC. According to Mbekem (2004) the universities in Nigeria are run through committee systems which are either responsible to the council or the senate, among these committees are:

    a. Finance and general purpose committee
    b. Development committee
    c. Appointment and promotion committee
    d. Admissions committee
    e. Committee of deans
    f. Research grants committee
    g. Academic planning committee
    h. Ceremonies committee, among others.

Problems of University Management in Nigeria

Problems of university management in Nigeria are apparent. Ibukun (1997) observed that university governance in Nigeria today is nothing but crises management. Nigeria's university crises, some of which have been identified by the World Bank (1994), and the traces are noticeable as:

a. Decline public expenditure;
b. Deteriorated infrastructure/facilities/equipment for teaching, research and learning
c. Materials are either lacking or very inadequate and in a bad shape to permit the universities the freedom to carry-out the basic functions of academics
d. The erosion of university autonomy and academic freedom;
e. The increase rate of graduate unemployment;
f. Brain-drain; and student unrest and constant strikes by both students and academic staff

Internationalization of Nigerian Universities

There is no doubt that series of reform efforts have been made by the Federal Government of Nigeria to reposition Nigerian Universities, but a stronger positive political will and financial support are seriously and urgently needed for our Universities to strive and meet up with their global expectation and challenges. Also, varied pressing problems besetting our Universities today need to be addressed with utmost urgency by the government and other stakeholders in the country (Chineze & Stella, 2013). In their efforts to outline strategies for the internationalization of Universities in Nigeria, Chineze and Stella (2013) posited that Universities must take into cognizance of and get into the emerging international competitive world of learning, and to achieve this the following suggestions are made:

a. Admissions and Certification have to be made on merit and not on politics or anything else;
b. Universities must have autonomy to be dynamic and face the challenges of the emerging world.
c. Entrepreneurial leadership has to go with the institutional autonomy (Clark, In William Harnett, 2000). Furthermore, Clark, an internationally recognized Higher Education Expert form the United States enjoined Universities to be more flexible and responsive if they must be in this race of emerging international competitive world of

learning. He therefore outlined the characteristics of rigid responsive higher institutions which every University must adopt. These include:

1. A rigid institution of Higher resists making changes in institutional beliefs but a responsive institution of higher learning is adaptive in its orientation and internationally considers changing circumstances.
2. The rigid institution of higher education often rejects possible changes without openly considering their feasibility or desirability while the responsive and flexible one identifies appropriate ways to adopt and responsive actions.

Furthermore, he identifies four variables for assessing Universities' responsiveness, to be, Access, Teaching and Learning, Financing and Management/Governance. According to him, these qualities of, and the variables for flexible and responsive higher institution of learning must appreciate to guide Nigerian Universities to meet up with the international standard of higher learning. Chineze and Stella (2013) suggested that, it has to be noted that successful development goes beyond investing in physical, it entails acquiring and using knowledge as well as closing the gaps in knowledge. This explains why Ekundayo and Ajayi (2009) stressed that, for a successful confrontation of the challenges of development, a developing country must undertake three management tasks, namely:

a. Acquiring and adapting global knowledge and creating knowledge locally.
b. Investing in human capital to increase its ability to absorb and use knowledge
c. Investing on technologies to facilitate both acquisition and the absorptions of knowledge.

What is a World-Class University?
For a university to be call a world-class university there should some certain attributes. Bamiro (2012) suggested that, if a university is aspiring to become a world-class institution, it is to be expected that it surely knows what it means against the background of its core mandate of teaching, research and community service. Unfortunately, despite the widespread usage of the term 'world-class University', it has defied any objective definition to the extent that Altbach in Ayambele (2004) succinctly observed: every wants one or more knows what it is, and no one knows how to get one'. According to his

statement it reminds him of a debate some years ago in the United States of America on answering the question – what is pornography? After several agonizing weeks by the committee set up to provide operational definitions for the judiciary, the committee concluded thus 'pornography is pornography when you see it'. In like manner, a world-class university is a world-class university when you see it. But what are its attributes?

Attributes of a World-Class University

Attributes of a world-class university as noted by Jamil (2009) cited in Bamiro (2012), the few scholars who have attempted to define what world-class university have that regular universities do not possess have identified a number of basic features, such as:

    a.   high qualified faculty
    b.   excellence in Research
    c.   quality Teaching
    d.   high levels of government and non-government sources of funding
    e.   international and highly talented students
    f.   academic freedom
    g.   well-defined autonomous governance structures
    h.   well-equipped facilities for teaching, research, administration and student life
    i.   international reputation of the university
    j.   university's contributions to society

Globalization and World-Class University

Globalization has to do with a world-class university. In line with this Buseri, Nateinyim and Ayibaene (2015) submitted that, Globalization has been identified as the most important game changing trend in higher education today for it has the potential to reshape our world. The most prominent way to measure globalized universities is by global college rankings. Current ratings of universities have shown that many African Universities especially Nigerian Universities ranked very low. For instance, Asuka (2014) cited in Buseri, Nateinyim and Ayibaene (2015) reported that, the 2012 Academic Ranking of the world universities at Shanghai Jiao Tong Universities revealed that no Nigerian University could make the first 500 – 100 best universities in the world. Equally, according to him, the ranking in 2013 and 2014 by the same body revealed the same. Even in 2015 he lamented that it is indeed a travesty

of monumental proportions that not a single African University made into the list of the world's top two hundred universities released by the Times Higher Education Supplement.

Concept of Sustainable Development

The term sustainable development has been tied down to economic prosperity, environmental quality, social equity and cultural diversity (Ogunyemi, 2005). According to Adegbite (2007) a very crucial point of consideration when discussing sustainable development is the World Commission Report, where sustainable development is defined as the process of developing land, cities, business, communities, etc. to meet the needs of the present generation without compromising the ability of future generation to meet their own need (World Commission on Environment and Development, I987). In the same vein, Lehman, Christensen and Hansen (2007), stated that global sustainable development strategy should focus on satisfaction of people's basic needs without compromising the quality of life of future generations. The World Health Organization (2005) refers to the interdependent and mutually reinforcing pillars of sustainable development as socio-economic and cultural development, and environmental protection. Furthermore, the World Health Organization (2005), identified information, integration, and participation as the building blocks for countries to achieve development.

Thus, sustainable development would involve all citizens of the nation whose knowledge and skills are essential for solving today's problems and preparing for future challenges. Education is expected to play a central role in the production of these human resources. Particularly, university education is to intensify and diversify 'its programmes for development of high level manpower within the context of the needs of the nation' (Federal Republic of Nigeria, 2004). In the light of this, for Nigeria to attain a sustainable political, economic, social educational and technological development, universities' operations must be in line with national goals and aspiration. Moreover, performance of units and departments should be properly managed in order to ensure efficiency and effectiveness. As a result of global challenge, Millenium Development Goals (MDGs) was launched in 2000 to tackle such pressing human needs like poverty reduction, equality of education, etc. However, the goals have not been fully achieved at the end of 2015 as intended

which lead to the introduction of Sustainable Development Goals (SGGs) by the United Nations to build on the MDGs and complete what MDGs did not achieve.

University Education and Sustainable Development Goals: The Relationship

Having stated above, the various definition of sustainable development and University education in Nigeria, it is imperative to examine the relationship between the two concepts. Nigeria just like all other nations, education remains the instrument for effective national development. Development is championed through education, which is often to have significant influence. Education entails the enlightment of people in their ways of in their ways of pursuit in life. Development is associated with a positive change of either individuals' groups, communities or even a country as whole. Development and Education in general and University Education in particular are inseparable, interconnected and interwoven, while on one hand development is geared towards producing or creating something new or more advanced for the society and its members. On the other hand, University education serves as tool which can enhance the desired sustainable development goals in Nigeria. Therefore, one can refer university education and sustainable development goals as two sides of the same coin.

Conclusion

From the foregoing discourse, rapid global economic recovery will continually exert profound influence on the direction of university education management in Nigeria. Universities in Nigeria therefore have to pursue a vigorous agenda of their learning environment in order not to run the risk of further falling behind in the rapidly growing and competitive international market as well as to ensuring the system in making respectable impact on the socio-economic growth and advancement of Nigeria. Furthermore, this would remove doubts whether Nigerian universities under the present condition will be able to continue to lay claims of being central to national capacity to connect with the international educational system and further develop the technologies needed in the wider society.

Recommendations

1. Federal Government as a matter of urgency should increase funding of universities by allocating at least 30% of the budgetary allocation to Education.
2. It was recommended that, two percent (2%) Profit collection from Multi-cultural Companies in Nigeria for TETFund Intervention should be increased to four percent (4%) for the development higher education in general and University Education in Nigeria.
3. National universities commission (NUC) should ensure strict adherence to the existing financial policies, rules and regulations and to check from time to time against mismanagement and misappropriation of funds in Nigerian Universities.
4. It is recommended that in order to make vision 20:20:20 a reality, international donor agencies, individual and corporate organizations should be motivated on the need for their contribution in order to make university to catch up with the current trend in global competitiveness.

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Chapter **4**

The Importance of Water Management in Educational and Leadership Policy Direction, the Enugu State Water Corporation Perspective

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Abstract

Water management and quality control is important for the socio-economic activities of mankind. This is because the usage of water goes a long way to determine a lot of things in the affairs of humanity. Leadership is one of the cardinal principles for effective governance. This is as a result of the role leadership plays in the educational development of individuals in the society. The decisions of leaders on various issues, education inclusive are pivotal to the sustainability and development of environment. This is needed to drive home the capacity for change in the various institutional agencies. This chapter is evaluating the Enugu State Water Corporation activities for the year 2015. It focuses on the management structure of the agency while addressing some fundamental issues at stake.

Keywords: Leadership, Enugu State Water Corporation, Policy Direction, Environmental Management, Educational Development.

Background to the Study

The issue of effective leadership is needed in governance generally most especially water management and environmental quality control. While the administrators of various government agencies and structure are expected to put in place adequate tools to ensure that both the staff welfare and environmental consciousness are integrated into the culture of the system. This work answers some fundamental basic questions on the management structure and leadership position of Enugu State Water Corporation. While it is expected to discuss leadership, it will as well address some other issues such as environmental management, policy direction and educational development. It will also review some operational activities of the Enugu State Water Corporation. However, be it in production, services, operations, distribution and supply the policy of any government parastatal directly or indirectly affects the efficiency and overall output of such agency. The work will briefly discuss Enugu State profile.

Literature Review

Management study guide (2019), leadership is a process by which an executive can direct, guide and influence the behavior and work of others towards accomplishment of specific goals in a given situation. Leadership is the ability of a manager to induce the subordinates to work with confidence and zeal. It can also be seen as, the potential to influence behavior of others. It is also defined as the capacity to influence a group towards the realization of a goal. Leaders are required to develop future visions, and to motivate the organizational members to want to achieve the visions. Davis (2019), Leadership is the ability to persuade others to seek defined objectives enthusiastically. It is the human factor which binds a group together and motivates it towards goals. Team Technology (2019), leadership is setting a new direction or vision for a group that they follow, i.e. a leader is the spearhead for that new direction. S. Smith (2015), leadership is the ability to adapt the setting so everyone feels empowered to contribute creatively to solving the problems. Zeitchik (2012), Leadership is inspiring others to pursue your vision within the parameters you set, to the extent that it becomes a shared effort, a shared vision, and a shared success. Kruse (2013), Leadership is a process of social influence, which maximizes the efforts of others, towards the achievement of a goal.

Enugu State Water Corporation is a parastatal owned and managed by the Enugu State government. Enugu State is one of the states created by the administration of General Ibrahim Badamosi Babaginda on August 27th 1991. It was created from the old Anambra State and the people of Enugu State popularly referred to the Wawa people are predominantly made up of the Nsukka and the Enugu people. However for socio-political expediency and for developmental strategies, it can further be broken down into – Enugu North, Enugu East and Enugu West political zones and seventeen local government areas council as created last by General Sani Abacha administration during the last State and local government creation exercise in Nigeria in the year 1996. Enugu State has produced four democratically elected Chief Executives- Governors. It has a total land mass of 7,161 km^{2}and a population of 3,267,837 with a density of 460/km^{2}according to 2006 census exercise. The Enugu State Water Corporation consists of board members who are political appointees of the State Chief Executives of the State. The corporation is headed by a Managing Director, who oversees the day to day affairs of the corporation. They are supervised by the Honorable Commissioner for Works and or Water Resources or the Permanent Secretary of the Ministry as the case may be, an appointee of the Chief Executive. However, the Enugu State House of Assembly has the powers of oversight on the corporation. The corporation is structured presently to have fourteen service areas and nine sources of supply or schemes. Some of the schemes are: Oji- River Augmentation, Ajalli, Iva Head Works, 9th Mile (old road), 9th Mile (crash programme), Nsukka zone, Udi zone and Agbani zone. Below is a map of Enugu State.
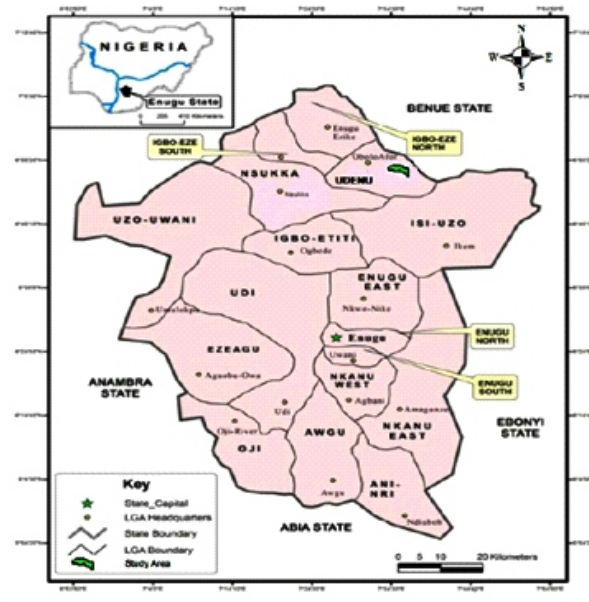
Figure 1: Map of Enugu State

However, British Ecological Society (2019), Policy Directions are a paper type for policy-related pieces that aim to inform and improve policy over a wide range of subjects by providing a broader policy context for the topic and relating it to the wider issues around constrained decision making.

DIY (2019), the code of good governance, policy development involves identifying need, gathering information, drafting, consulting and review. While the key steps in developing policies are:

1. Identify the need; here policies can be developed in anticipation or response to need. This implies that, the organization needs to constantly assess its activities, responsibilities and the external environment in order to identify the need for policies and procedures.
2. Identify who will take lead responsibility. This requires delegate responsibility to an individual, working group, sub-committee or staff members, according to the expertise required.
3. Information Gathering. This requires working with an existing template or example.

4. Draft policy. This is to ensure that the wording and length or complexity of the policy is appropriate to those who will be expected to implement it.

5. Consult with appropriate stakeholders. Policies are most effective if those affected are consulted are supportive and have the opportunity to consider and discuss the potential implications of the policy. As a result, depending on whether you are developing policies to govern the internal working of the organization or external policy positions, you may wish to consult, for example: Supporters; Staff and volunteers; management committee members; and service users or beneficiaries.

6. Approve Policy. It is then approved by the management committee.

7. Consider whether procedures are needed. For internal policies, procedures are needed to support it.

8. Implement. This should show who the policy is for and how it is to be carried out.

9. Monitor, review and revise. What monitoring and reporting systems are in place to ensure that the policy is implemented and to assess usage and responses? On what basis and when will the policy be reviewed and revised (if necessary).

Singh (2011) on policy of financing and management of water supply stated that the aim of any water supply undertaking should be to provide pure and adequate supplies of water at the lowest practicable cost. This requires technical knowledge of water work, design, construction, administration and sound understanding of the elements of financial policy. This financial policy implies:

1. The equitable spreading of the cost of water supply by means of appropriate scales of charges and public water rate.

2. The economic aspect of development and execution of the schemes, the methods of providing the capital needed to finance such schemes and the manner of providing for the redemption of such capital outlay.

Furthermore, on the scope of water supply financing. Singh stated that some of the features of water supply financing are:

1. The application of revenue derived from water charges.

2. Methods of raising capital for the installation of the system and provision for redemption of loans where needed.
3. Methods of raising revenue to meet the annual expenses of water supply including the determination of tariffs as well as the collection and recovery charges.
4. Wages, store and cost accounting.
5. Accounting in connection with income and expenditure.
6. Financial organization land control such as ordering of goods, authorization of payments, internal audits and budgeting insurance.

While Singh maintained that some of the sources for raising capital for water management are:

a. Grant from government.
b. Accumulated funds such as water funds with the local body.
c. Internal Borrowing which means investing the surplus funds of the authority itself from various accumulations such as provident fund and other funds which are the cheapest source as the rate of interest will be low.
d. External borrowing from; government with stipulated terms of payment, public through government bonds, direct beneficiaries, life insurance corporations, nationalized banks and other financial institutions, potential buyers who may be desirous of establishing industries in the area, international agencies such as the International Development Bank, Asian Bank, World Bank, International Monetary Fund, Japan Development Corporation.

Also, IGI-Global (2019), Educational Development is practice of helping those who teach be better at what they do, through resources, workshops, one-on-one assistance, and other means. Educational development is described as being "broader than faculty development, in that it encompassed instructional, curriculum, organizational, and some aspects of faculty development. In another sense, the term was narrower in that it focused on the teaching domain, as opposed to all aspects of academic career development" (Bédard, Clement, & Taylor, 2010, p. 177). In addition, EPA (2019), Environmental Management System (EMS) is a set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency. As Barrow (2005) referred to environmental

management as goal or vision, to attempts to steer a process, to the application of a set of tools, to a philosophical exercise seeking to establish new perspectives towards the environment and human societies, and to much more besides. Springer (2019), Environmental Management offers research and opinions on use and conservation of natural resources, protection of habitats and control of hazards, spanning the field of environmental management without regard to traditional disciplinary boundaries.

However, the components of environmental management are based on five fundamental aspects. Which are:
1. Environmental perception and public awareness
2. Environmental education and training
3. Resource management
4. Control of Environmental degradation and pollution
5. Environmental impact assessment

Bhatia (2011), pollution has been with man at least since he began to live like a civilized being. However, all efforts trying to deal with pollution failed because those pursing them have limited ways of exerting political pressure on the rulers of the time. While the problem of pollution and implementation of control measures hinges on political solutions in all of the industrialized democracies. The question of the fine balance between the powerful industries and the governments, between the economic and ecological interests of the states concerned can only be reached through political means. Furthermore, he highlighted some strategies for preserving environmental quality. They are a three concept strategy namely: planning, placement and prevention. Singh (2011), on the special problems of rural water supply sated that the problem of supplying portable water to rural areas becomes more complex due to the following facts namely:
1. Inaccessibility in areas of some villages.
2. Villages are scattered and thus, no common scheme can be formulated for them.
3. Concentration of population in villages is very small and per capital investment in installation of the schemes becomes forbidable.
4. Sources of water for villages are generally ground water. This requires removal of harmful elements like Fluorides, Iron and Salinity.

In addition, in India, The water pollution legislation Act 1974 provides for a centre- state joint campaign against water pollution. Thus for a successful implantation of this act, water pollution prevention boards have been set up at state and central level. Where their functions are as follows:

1. To advise the government on any matter relating to the prevention and control of water pollution.
2. To collect, compile and publish technical and statistical data relating to water pollution and the measures taken to prevent it.
3. To create public opinion against water pollution.
4. To lay down the standards of purifications.
5. To carry out river survey for classification for beneficial uses of water.
6. To conduct seminars and training courses to help individuals directly or indirectly with water pollution.
7. To develop public opinion through mass propaganda media of TV, radio, newspaper, newsletter.
8. To educate the water consuming industries in the field of water pollution control.
9. To encourage, conduct and participate in investigations and research programs relating to water pollution and prevention.
10. To evolve efficient methods of disposal of sewage and trade effluents on land.
11. The Act 1974 make provisions for stringent and severe penalties for defaulters.
12. The Act also contains the provision that if a particular department of government is found to pollute water knowingly, the head of that department will be liable to be punished as per provisions in the act.

Furthermore, Singh proffered that a good management of water system embraces a number of functions such as:

1. Good and smooth operation.
2. Efficient administration.
3. Efficient and economical maintenance.
4. Provision and maintenance of adequate facilities.
5. Efficient control of equipment and supplies.
6. Good public relations and satisfactory service to consumers.
7. Keeping the wastage of water to a minimum.
8. Development of equitable water tax and water rates.

9. Development of technical and financial plans for future expansion.

While it classified a successful management as:
1. A detailed knowledge of the components of the system, the basis of their design and the assumptions made.
2. Detailing job specifications.
3. Objective plans with charts to indicate the work, past, present and future and the time schedules.
4. Promptness in changing plans to meet any contingencies and unforeseen conditions.
5. Prescription of the duties, powers and responsibilities of each employee of the organization for routine maintenance and in emergencies and to prepare a list of "Dos" and "Don'ts" for the operational staff.
6. Recruitment and in-service training of the personnel, technical and non-technical.
7. Recognition of merit and choosing efficient men to occupy position of higher responsibility. Men with the expertise.
8. A thorough knowledge of the business methods including financing, budgeting, billing and revenue collection work and investment of funds.
9. Carrying out health education programs to get the full co-operation of the public in not only preventing contamination of the water supply, but also making them appreciate the value of protected water with a view to prevent wastage.

Material and Methods
For the year under review, the corporation maintained consistency in their usage of chemicals. Thus, three major substances were used. They are Lime, Aluminium Sulfate and high-test granular hypochlorite (HTH) for the nine schemes. This had an expected target production of over 63 million m^3 but an actual production of over 11 million m^3. Aluminum sulfate, or filter alum, is added to the water coming into the purification facility during coagulation/flocculation. Adding hydrated lime is the next step that occurs during sedimentation. The chemical formula for aluminum sulfate is $Al_2(SO_4)_3$. Frequently, it is known as filter alum. In water purification, a mixture of 48 percent filter alum in a water solution is combined with the raw incoming

water at a rate of 18-24 milligrams per liter. Alums are found in many household products such as deodorant and baking powder.

However, in water purification processes it is as a coagulant. A coagulant binds extremely fine particles suspended in raw water into larger particles that can be removed by filtration and settling. This allows for the removal of unwanted color and cloudiness (turbidity). Additionally, the process removes the aluminum itself. In addition, hydrated lime's chemical name is calcium hydroxide, and its chemical formula is $Ca(OH)_2$. When purifying water, adding hydrated lime to the water for pH adjustment is a part of the process. Filter alum is an acidic salt that lowers the pH of water undergoing purification. Adding hydrated lime to this process between the sedimentation and filtration steps at the rate of 10 to 20 milligrams per liter neutralizes the effect of filter alum on the processing water. In addition, it is imperative to look at the leakages and bursts in the State Facility management scheme. This will be shown in the table on the discussion section.

Results and Discussion

For the year under review, that is, 2015. The water board company made use of Lime as the most consumed chemical with a total of 12,100kg. Which is followed by Aluminium Sulfate of 3,500kg and HTH (Tin) at 135kg for the entire period of purification operation. However, the assumption for the quantification of purification of water by the given materials was,

One (1) bag = 50kg

One (1) Tin = 45kg

In addition, the chemical applications for the water treatment – lime, tin and alum application used was analysed on the SPSS model for a sequence plot, break-down.

Table 1: Sequence Plot

Model Description

Model Name		MOD_1
Series or Sequence	1	Alum(Bags)
	2	Lime(Bags)
	3	HTH(Tins)
Transformation		Natural logarithm
Non-Seasonal Differencing		0
Seasonal Differencing		0
Length of Seasonal Period		No periodicity
Horizontal Axis Labels		Sequence numbers
Intervention Onsets		None
For Each Observation		Values not joined

Table 2: Applying the model specifications from MOD_1

Case Processing Summary

		Alum(Bags)	Lime(Bags)	HTH(Tins)
Series or Sequence Length		12	12	12
Number of Missing Values in the Plot	Negative or Zero Before Log Transform	3[a]	3[b]	3[c]
	User-Missing	0	0	0
	System-Missing	3	3	3

a. The minimum value is 10.000.

b. The minimum value is 61.000.

c. The minimum value is 1.000.
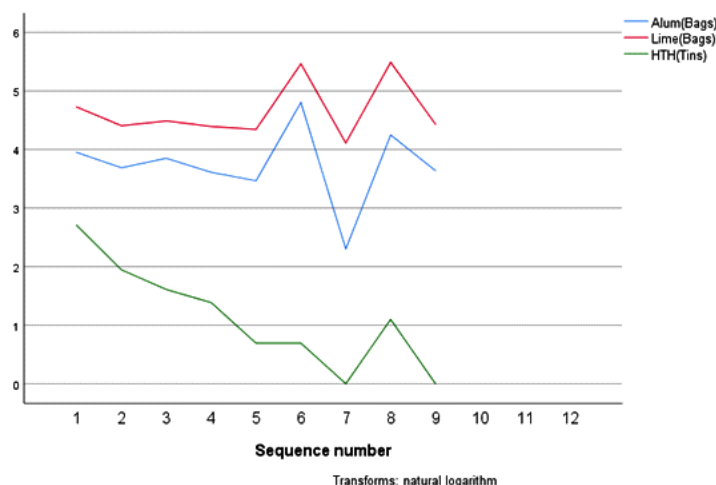
Fig. 2

Table 1: The summary of leakages and bursts for the year 2015 as monitored and observed by the corporation is stated below.

S/N	MONTHS	Total Observed	Total Treated	Total Outstanding
1	January	133	97	36
2	February	135	85	50
3	March	97	52	45
4	April	116	65	51
5	May	88	52	36
6	June	84	44	40
7	July	69	36	33
8	August	66	43	23
9	September	16	8	8
10	October	59	29	30
11	November	49	29	20
12	December	75	41	34
2015 Totals		987	581	406

Table 1 – Showing the Leakages and Bursts in Enugu Sate Water Corporation Scheme. From table 1 above, it clearly shows that for the 2015, the Enugu Sate water corporation witnessed a total of nine hundred and eighty-seven (987) leakages and bursts. Treating five hundred and eighty-one (581). While a total of four hundred and six (406) are outstanding. This could be as a result of shortage in man-power or resources.

Conclusion

From the literature earlier, based on the five components of environmental management, the Enugu State Water Corporation needs to reevaluate their activities particularly on the area of environmental public awareness and resource management. On their policy direction, the corporation should make more input in their developmental plan and strategy towards actualizing their core mandates. On the code of governance, the corporation is highly effective and efficient going by the DIY classification of code of governance earlier stated above. On the Leadership perspective, the corporation has met all the needed requirements and the capacity to move forward. On educational development, the corporation should outsource some of their activities to enable them create more impact and boost productivity. The resultant outstanding leakages and bursts should be reviewed through an independent audit. This will help to boost the integrity of the management of the corporation and the leadership of the various channels of the chains of command in the line of administration for future financial strategies of either borrowing, privatizing or partnership with an independent company. It will also serve out one of the functions of Enugu State Executive Council on the area of accountability, appropriation and job creation. While the state legislators should be co-opted in this process exercise for transparency and oversight.

Recommendations

It is imperative to note that, the corporation going forward need to adopt a proactive maintenance strategy. However, the Enugu State government can put in an intervention plan for the agency. Also, going forward, the Enugu State Water Corporation need to expand and reassess their service schemes operations. This will most likely boost turnover and productivity considering the areas of accessibility while at the same time helping the corporation to meet the set target of production. Thus, based on the scope of this work and for further deliberation, the stakeholders in this process should factor in outsourcing the consultancy of some of their areas of operation especially on the issue of environmental audit, and environmental impact assessment. While the agency should look for modalities to train, re-train, develop, groom and nurture both old and incoming personnel. Also preventive and predictive maintenance operations template needs to be integrated into the management environmental policy plan as in line with global practice best practice. The

agency should also be commended for the prudent management of resources viz a viz accountability. Finally, as a long term strategy, the Enugu State government can put in place a Technical Committee to review the entire operations and offer a sustainable long term development plan for the Enugu State water supply and distribution. This will not only open the economic domain of the state but it will serve as an outstanding legacy if well implemented and monitor. Thus, their model can serve as a reference point or a baseline for other agencies with similar background.

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Chapter **5**

The Challenges of Traditional African Art in Contemporary Nigeria

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Abstract

Since the late 20th century, there has been a decrease in the quantity and quality of traditional African Art. Traditional African art forms, some decades ago were the authentic works of Africa. The works were made to conform to specific cultural statements, and were entirely traditional both in execution and in outlook. Presently, Nigerian traditional art no longer has the attributes of what a real traditional Art should look like, and has also become difficult to sustain the continued survival of traditional art. The study attempts to examine the current state of traditional arts in Nigeria, and identified changes both in materials and media, due mainly to the altered religious, political, social, and economic system. It also identified scholarship and influence of colonial masters that has eroded interest, patronage, and method of traditional art making. The study suggests the continued making of undiluted traditional art as a way of promoting and conserving the people's heritage and civilization. It recommends the renewed patronage through

commissions, purchases, and or exhibitions, as ways to reform and revive the traditional art profession.

Keywords: *Art, Traditional, Contemporary, Religion, Social, and Economic.*

Background to the Study

Willet (1971) described traditional African art as the artwork of pre-colonial Africa, created by the people of Sub-Saharan Africa. It does not usually include the art of the North African areas along the Mediterranean coast, because of Islam which forbids the art of representational images, hence such area created Islamic art (Kino, 2014). The pre-colonial art forms are the genuine and pure creative forms of the people, and are mainly religious and spiritual forms of art that have been acquired from previous generations. The art forms reflect the way of life and aspirations of the people that produced the forms, and also tell much of the people who used the objects (Oloidi, 1998). In Nigeria different art cultures have thrived and are still striving, and have also developed their traditional art skills in various parts of the country. Nigerian traditional art takes many forms, and are made from different materials and media. Sculptures can be wooden or carved out of stone. Ceramic objects are made from clay, while the various forms of textiles are made from diverse materials. The Nigeria art traditions include Nok terracotta, Owo, Tsoede bronze, the bronze works of Igbo Ukwu, the terracotta and bronze castings of Ile-Ife, the famous Benin bronze heads made as court art, as well as the stone carving traditions in the Yoruba and Ekoi areas of the country (Adepegba, 1995). Apart from these art traditions, Makinde and Aremu (2014) identified some ancient Yoruba stone sculptures in communities such as Sekunde in Ikire, Ikirun, Ofaro, Igbajo, and Kuta, among others.

With the evidences of the artworks scattered all through Nigeria, it could be inferred that the objects are the foundation on which the traditional Nigerian art is built, both in implementation and in visual representations. There is a crucial question that needs to be answered at this juncture. From the evidences of all the artworks scattered all over Nigeria, is there any relationship between the ancient art works (traditional art), and those that are being made presently, referred mostly as contemporary art. What constitute Nigerian traditional art started many centuries ago and continues till present. The art forms were the authentic works of the people, entirely traditional both

in execution and in outlook (Makinde & Aremu, 2014). In the 1960's, before scholars like Willet wrote his books on African art, and Ulli Bieir started collecting works of traditional Nigerian artists, works of traditional artists were seen as very primitive. The art forms were referred to as ethnic or tribal art. However, in modern art world, there are varieties of traditional forms varying within the same context of origin, due to changes in means of production using diverse materials and methods. Most modern traditional artists copy western art styles into traditional work, making the work a blend of trado-western in style and concept. Hence, their work is seen as copycat and the artists as imitators.

Carpenter (1973) decries the new development in the production of contemporary traditional art as being imposed from outside. This creative trend has deprived the art forms the things that gave them real traditional values and status. Hence, a majority of modern traditional art forms do not have the genuine attributes of what a true traditional Art should look like. When the modern art forms are assessed alongside tradition, they are in most cases seen as adulterated type of art, prompted by some influences.

Purposes of Traditional African Art
Traditional art is multi-functional and fulfilling many purposes. The art forms have many unique and different reasons for being created, and serves more purposes than merely to beautify the environment, making their reason somehow difficult to ascertain. Traditional art forms are used to create emotional atmosphere of veneration, to teach religious beliefs, to depict the gods in visual form, to record historical events, to exalt rulers, and honour the dead (Russell, 1989). The beauty of traditional art is simply an element of its function; hence the forms are seen to be good if they serve their function and fulfil their purpose. Apart from the religious purpose, there is a major similarity most of the forms, especially sculptures, share for all their stylistic variations. They often have a social function in addition to aesthetic purpose.

Thematic Concept of Traditional Art
Traditional artist has no interest in pictorial representation of a subject matter. The artist reflects traditional aesthetic system by not portraying the subject as it physically appears. Rather, what the mind feels is depicted, thereby showing

the concept and essence, and not the body of a subject (Oloidi, 1997). Traditional art forms are created to favour visual abstraction, and many of them generalize stylistic norms (Blier, 2000). The human figure is the principal subject of traditional art forms. A good example is the Benin and Ife art, where the human figure has always been the primary subject for most of their works (Murrell, 2008). The human figure may symbolize the living or dead, or may reference chiefs, dancers, drummers, or hunters. The figures may even be symbol of a god or may have other votive purpose. Hence, they look sometimes wild and fearful, portraying the absolute power in them with strange aesthetic value (Oloidi, 1997). The figures are executed in frontal view, whether sitting or kneeling, showing body designs, cultural scarification and facial marks implying physical beauty or adornment. Among other attributes of the figures identified by Segy (1969) include big hands and feet, enlarged heads, bulging stomach and navels.

Traditional Art and Contemporary Nigeria
In dealing with traditional art in contemporary Nigeria, one must understand the difference between the terms traditional and contemporary. Tradition is a belief, or way of doing something that has existed for a period of time among a particular group. Makinde and Aremu (2014) give the differences thus: tradition is the passing on of beliefs and customs from one generation to the next undiluted. In relation to art, it could mean the passing of an age-long method or practice of art production from a generation to another, while contemporary could mean present time or modern. Contemporary art therefore means the art of the moment or modern art. Jegede (1983) elaborated on what traditional Nigerian art is all about. To him, the term Nigerian art is used to identify with a particular type of art making, or a creative process worthy of imitation because of its rigid standard of aesthetic appeal, which is traditional to the makers. Traditional art has always being in existence in the African continent long before the western influence. The art forms have continued to evolve through change, and change its form with the times. Art like culture is not static, and to expect traditional art forms of today to resemble that of yesterday is like setting the clock backwards, otherwise, the former will not reflect the African image (Enwonwu, 1968). In like manner, African view of Art has followed the trends of cultural change up to the modern times hence; traditional African art of today does not have to conform to non-representation

in order to maintain the name African art. What concerns today's traditional artist, is to find a new aesthetic creed as a guide to his revolutionary ideas (Enwonwu, 1968).

In response to expressing their creative creed, a variety of styles, forms, and approaches among modern traditional artists reveals their openness to new concepts. The artists express their creative and artistic prowess with new material contents by inventing new art forms to solve new problems. The creative process of their work is towards development of new styles, which embrace new concepts, intended to capture new roles within and outside. This creative exercise as posited in Roy (1991) could be referred to as the relationship that exists between traditional and modern art.

Problems of Traditional Art in Contemporary Nigeria
Traditional art forms are made to conform to specific cultural statements but have faced difficult struggles, especially when confronting prevailing Western delusion and bias about the African traditions. The use of the word primitive, archaic, and the triviality ascribed to traditional art by foreign institutions have worked in subtle ways to the artists' detriment, denying them of respect and recognition. The bias is further fostered by persistent efforts to compare and categorize traditional African art in line with the Western aesthetic criteria (Jean, 2007). Traditional African art objects were almost never created for art sake, but were made for religious rituals, political, economic, and have always been related to magical or social rites. The artworks were valued for everything they represented which was African. The works were not just visual, but have their symbolism and spiritual dimensions alongside decorative and aesthetic qualities. The art forms were used to indicate rank, affiliation with a group, or purely for aesthetics. The objects were also part of channels that the traditional Africans use in making contact with the gods, fellow man, their material and spiritual environment.

In contemporary Nigeria, every aspect of art is passing through change, where new tools and materials, influences, and expertise, have helped to determine the nature of art production. Today, many modern traditional artists have deviated from the known traditional materials, media, and content, in response to the altered religious, political, economic, and social customs of the people. The change has affected interest, patronage and making of traditional

artworks, and has also caused a decrease in the quality and quantity of traditional artworks. It has also been observed that, the features of most modern traditional art works have changed because of the new creative culture.

1. Religion

In writing about traditional arts, Bascom (1973) emphasised that most African art especially sculptures appear to have been linked with religion, which pervades aspects of African life. The religious genres cover reliquary and votive figures which adorn shrines. Others are artefacts, dance staff, musical instruments, charms and tools used for divination and cult's initiation, and a variety of other paraphernalia and costumes, created as instrument of worship. These art forms and objects are made for the service of one form of deity, god, religion or another. Traditional Africans believe that communication with the supreme God is best carried out through a lesser force, which is God's messenger. Because of this believe, they produce and use the various artefacts, as part of their medium in making contact with the supernatural force. Today, traditional artists rarely create art for religious purposes. The question is, does our traditional believe system still exist? If yes, to what extent. Our traditional believe system still continues, but has been presently, eroded with western influence.

The western colonial powers that ruled the African continent for centuries introduced their ways of life, and initiated Christianity. As a result of this influence, every sphere of African life began to change. Religion has been the most important of the changes, because of its damaging and ruinous effect on traditional art. The sense of power and respect accorded Christian missionaries also served to influence the traditional cultural values. The missioners destroyed sometimes in dramatic public bonfires, in many places objects linked with traditional religious beliefs and practices. This singular act has helped to eliminate one of the strong reasons for existence for most traditional art (Werner, 1984). The activities of Christian missionaries swayed many artists who started their career on a traditional platform to give way. Thus, their artworks and visual representations, like other aspects of traditional culture, prove to be adaptable, adjusting to new ideas and new forms. The old forms disappear, and modernized types became the order of the day. Lamidi Fakeye (as cited in Makinde & Aremu, 2014) posited that his

brother Adeosun Fakeye was made to believe that his work was evil by the Christian missionaries. He had to drop his creative ideas before he could be accepted into the Christian fold, thereby mortgaging his artistic ideas and initiatives because of his new religious faith. As a result of the influence of missionaries, it has become very difficult to find artists who work in the traditional styles of their ancestors. However, a few of the trained local craftsmen who still produce traditional art objects are too old to work, and their successors are with little or no experience, and their works appear distorted in content. In some instances, the media, style, and content of their work have relatively changed, while the quantity and particularly quality of work have reduced greatly (Werner, 1984).

2. Social

Socially, objects of traditional art such as mask, sculpted staff, carved-tusk, leather hand-fan, anklets, beads, cowry bracelets and anklets, among others, are made and used for special and important ceremonies (Brommer, 1981). The ceremonies include marriage, coronation, title-taking, and cultural festivals, among others. Those who attend these ceremonies use the objects as an accompaniment or body adornment. Mask for instance is a very popular art object used for traditional ceremonies. In some communities, the funeral of monarchs and titled chiefs attract masquerade display. The masquerades pay final respect to the deceased, and also maintain social control in more subtle ways, while merriment and fun accompany their appearance. In today's contemporary society most of these norms and traditions have gradually changed as a result of new norms in social life of the people. The appearance and display of masquerades and mask wearers for instance are often not greeted with the usual crowd that accompanies their display, as their displays are linked to fetish and idol worship.

3. Political

Politically, in the past, Nigerian traditional art objects were made or produced for special classes of people: monarchs, prominent persons, chiefs, and restricted associations, often called secret societies (Oloidi, 1997). These classes of people commission traditional artists to produce works like figural staffs, bowls, stools, chairs, textiles, drums, bracelets, anklets, metal gongs, and various special bags among others for their use, and to add effect to their status. The objects are carried on special occasions by their protégé, to

symbolize power and authority. In today's contemporary Nigeria, the powers of this group of people have diminished, and the use of the objects has also reduced. Nigerian cultural heritages are faced with a lot of challenges such as the influence of modernisation, civilization, Christianity and social change. (Onyima, 2016). In the ancient Benin kingdom for instance, various guilds of artists were commissioned to produce for royal court. Presently, the trend has changed as none of these guilds still produce for royal patronage. The punitive expedition destroyed the Oba's sole authority over the patronage of the art works and the craft guilds (Agbontaen, 1997). The question is does the Oba still have control over all the guilds in the kingdom? For how long has he visited the guilds for patronage or for solidarity? The artists or guilds must survive. In order to survive, most of the guilds have channelled their efforts into producing works for contemporary use, and most of their art has become airport art. This factor has considerably affected the quality and style.

4. Economic

Art forms are source of economic stability in traditional African economy. The ability of the traditional artists to adapt to the new economic pressures has allowed them to survive, and their art continues to flourish as an expression of their resilience, and as a weapon in their struggle (Roy, 1991). In order to survive, the traditional artists are shifting ground, combining more modern medium with the traditional content. The shift is to cope with the prevailing economic situation, and to gain attention from art collectors. The role of tourist-collectors and the zeal to move with global trends in creativity are usually deemed to have corrupted and promoted the destruction of traditional art works. The external influence was mainly on the choice of subject and not on method of production. In some cases, the content still remain relatively same, but the materials and medium has undergone considerable change due largely to contemporary trends. Jegede (1984) while discussing the issue of patronage of Nigerian Art, emphasised that economic factor can influence and reduce the artist's creative expression. He gave example with the issue of money as being very important to an anxious artist. The artist may be desperately in need of money to the extent of accepting to alter the traditional essence of the work, thus equally reducing the status of the artwork. However, the artists can as well work for money without losing integrity, just as Michelangelo did. As rightly pointed out in Carpenter (1973), Michelangelo worked for money without loss of integrity, and he never mass-produced to debase the status of his art works.

Traditional Art and Scholarship

The changing attitude observed in Nigerian art, which has diluted the traditional essence, and promoted the modern content started with the advent of formal training and scholarship in art. Other influence identified by Adepegba (1982) includes colonialism, and the efforts of Aina Onabolu, who had earlier trained abroad. The attitude of most formal trained elite, sometimes contributes to, rather than arrest the decrease of traditional arts. A majority of this group of people received their early training at mission schools, which was the only education available on most part of the continent. Hence, their ideas often reflect the early European and mission-inspired training (Marshall, 1970). Among the formal trained artists who pioneered a new form of Art in modern Nigeria are personalities like Ben Enwonwu, Solomon Wangboje, Bruce Onobrakpeya, Erhabor Emokpae, and Uche Okeke. The creative skills of these personalities and others alike, marked another era in the development of modern Nigerian Art. Their creative instinct promoted the concept of synthesis in art, as they integrate local content to create more refined art forms.

Enwonwu's paintings and sculptures reflects naturalistic and stylized forms which he called African style (Ademuleya, 2003). Okeke incorporated the Igbo Uli linear tradition to his drawings and paintings, while Demas Nwoko unearthed the antiques of classical art of Nigeria for modern artistic rendition (Oloidi, 1998). This group of artists dictated the trends in modern Nigerian art for decades. Their philosophies according to Filani (2006) were carried to other formal schools and workshops to create vibrant artistic revolution that influenced their followers and students.

Traditional Art and Art Workshops

In the contemporary Nigeria, the establishment of art workshops and other experimental art centres inspired the adaptation of new concepts to traditional art forms. Today, traditional art embrace a variety of visual art concepts, with the frequent use of organic forms, symbolism, metaphors, inherent rhythms, and much of the time religious contexts (Famule, 2016). These experimental mission according to Makinde and Aremu (2014), are gradually taking away the status of traditional art heritage. In some years to come the roots of what has been referred to as the traditional Nigerian Art, which used to be pride of the nation, should have been completely destroyed from the Art world.

However, there is still some hope along the tunnel of extinction because there are still a handful of adherents of traditional art who still cling to the past glories of the traditional Nigerian art and artistic rendition.

Traditional Art and Apprenticeship

Among other challenges facing traditional African art today is how to keep indigenous artists to continue in traditional style, while embracing the neo-modern art style. **Today,** it has become difficult to sustain the continued survival of traditional artworks. The artists who create traditional artworks, like their other contemporaries elsewhere, acquire their creative trainings and competencies under the apprenticeship system. Their skills are acquired from the master-artists, who, in many cases, are descendants of the lineages of renowned traditional artists. **Presently, t**here are a few traditional artists who are still making genuine traditional artworks. The resultant effect of lack of interest on continued production is that when the few older artists die, it may likely be that traditional art will die with them.

Conclusion

The new traditional artists, who emerged in the last four to five decades, are working in new ways with new materials, to channel their art to a wider public. Some synthesize memory of past with new content, while others create imagery with mythical or ritual references. The artists, though rooted in tradition, use materials, and methods alien to the traditional art, and produce art usually based on personal aesthetic. This direction of the modern artists portends danger as they are criticized either for leaving behind traditional elements or for embracing new concepts (Jean, 2007). In as much as new art forms appear in every aspect of Nigeria's landscape; the continued making of undiluted traditional artwork is a direct link to the promotion and conservation of the people's cultural heritage and civilization. Therefore, it becomes pertinent for the traditional artists to produce their works, enriching them with their cultural elements for the benefit of all. Traditional artists must always link up with the past, and equally care about the traditional efficacy of their creative content, while trying to respond to new art forms and styles. In spite of the traditional artists' contemporary content and subject matter, they need more local patronage and government support. The patronage may come in the areas of commissions, purchases, and or exhibitions as ways to reform and revive the traditional art profession, so as to make it a viable entity in the contemporary Nigerian society.

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Chapter **6**

Proactive Strategies for Security Enhancing Educational Development

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Abstract

The security crises in the Nigerian education system are tangible and manifest. This is obvious to the deaf, blind and unborn. This insecurity in Nigeria has impacted negatively on all the development spheres. Security or insecurity impinges on all spectrums of education and national life. It is worthy of note that, societies place high premium on security are educationally more advanced and developed. The scientific and technological breakthrough in the western and Asian societies lay credence to this assertion. It's therefore an apt postulation that significant relationship exists between security and development and between insecurity and underdevelopment. These papers therefore examine and x-ray the benefits of peace and secured educational institution, and its environment. It also proffered some lofty tips and mechanisms for a safe and peaceful school environment that is completely free from danger for excellent academic thrive. Proactive priority on security in our educational institutions at all levels will engender equality and purposeful school system in Nigeria. The paper thus concludes that

societies all over the world will be peaceful. Free from danger, more democratic and would achieve sustainable progress through prioritization of security.

Keywords: Educational Development security and Education, Effective security, Pro-active Security, United Nations Commission.

Background to the Study

That there are security crises in Nigeria is real, tangible and manifest. This is obvious and clear, even to be the deaf, blind and the unborn. Thus, insecurity in Nigeria has impacted on all the development spheres/indices in Nigeria, security, in its totality, is implicitly anchored on the over-all development of any society. Security or insecurity impinges on all spectrums of human development, governance, infrastructural development, education, transportation, business, entrepreneurship, agriculture etc. it is important to note that societies that placed high premium on security are more advanced and developed. The scientific and technological breakthroughs occasioned in the Western and Asian, countries lay credence to this assertion. Benson (2010) observed that, there is significant relationship between security and development and between insecurity and underdevelopment or stagnation. Security all over the universe is a vital government trajectory responsibility. it is a paramount utility that the government should provide. Reasons of insecurity some claim to be the basis of elections outcome, strategies and campaign. It was deduced that the outcome of the 2015 and 2019 general elections in Nigeria was predicted on promises of provision of adequate security for the life and properties.

This was so, giving the vortex and degree of insecurity and volatility that was prevalent at the point in time. Educational institutions were more vulnerable and mostly considered as soft targets for attacks. This was at the peak of the Boko Haram insurgency with its debilitating ideology that, western education is Evil. With this anachronistic ideology, schools and university campuses were deliberately attacked and innocent student were killed and kidnapped. The attack and kidnapping of over 250 teenagers in chibok, the attack on Mubi Polytechnics when several students were selected identified and killed, the Audu Bayaro University attacks and kidnapping of school children in Lagos were some of the typical and unsavory incidents of attacks on places of

learning in Nigeria. The climax of the attacks on schools culminated the withdrawal of the children and the wards from schools. Thus, the lack of safety in school, created an atmosphere of de-schooling. These unabated attacks on universities and other institutions led to final closure of almost all the schools in the north eastern geopolitical zone of northern Nigeria.

Amidst this scenario, Oto and Ukpere (2010) observed that the security situation in schools and the country in general nosedived and further deteriorated. Thus, considerable efforts should be put in place to reverse the trend by providing protection and safety for student and staff proved futile with further security dysfunctional consequences. Further dislocation and disorientation of universities and schools, is the vicious attacks and kidnappings of university lecturers and students for ransom which in most cases result to death, by rampaging Fulani herdsmen. No doubt, this attacks and carnages have impacted negatively on the sustainability, quality and quality of the education system in Nigeria. The pertinent questions one may pose are; to what extent has security crises impacted in the development of education in Nigeria? To what extent has insecurity negatively impacted on the quality and quality of education in Nigeria? To what extent has the government provided security to ensure peaceful and safe academic environments for sustainability and continuity of the school system? These all important questions need to be addressed as the quality and quality of school enrolment continue to deteriorate in attrition.

Security and Education
The concept security and its application is as old as mankind itself. The phenomenon has been central and primordial even in primitive societies and days of the early man in perspective. For want of security, the early men live in protective caves and on top of trees to – ward off dangerous preys. Security and safety is central and priceless to humanity and even animals that has the instinct of safety. Oto and Okpere, (2012); averred that the instinct of self-preservation is central in all living organisms. Indeed security measures and strategies evolved overtime and space with the impact of modernity and technological innovations. With the evolution of nationhood, the need for security necessitated the social contract theory in which the state and people willingly surrendered their lives to organ (Government) who will oversee the survival and wellbeing of its citizens. However recent outburst and contrived

impunity of government agencies entrusted with security issues, the monolithic responsibility of security issues in the hands of government shifted. With the end of the cold war, there have been debates and prepositions against the concentration of security issues in the hands of the government. The debates and conjecture shifted swiftly from the control of the states to societies and individuals. Buzan (1991) argued that the straight jacket militaristic approach to security that dominated the disclosure during the cold war was simple minded and subsequently led to the underdevelopment of the concept. From then onward the emphasis is the development of individual environmental, food, education, industrial job/ occupational and individual or personal.

The advancement in human rationality has provided three contending perceptions of human security. One is neo-realist theoretical framework. This is centered majorly and principally on the state for the responsibility of security. This was also the standpoint of Buzan (1991), when he illustrated a tripartite conceptualization of security based on international system, state level and individual level. This assertion predisposes that the protection of life and property is the primary responsibility of the state. The state is made up of institutions, and institutions are established directly or indirectly by the constitution, directly id explicitly provided for in the constitution, indirectly if established in manner that conforms to the constitution. It is through such institutions that government fulfils its primary responsibility of protecting life and property of the citizen.

The second approach to the concept of security is the pluralist school of thought. This view deemphasizes the state as the major provider of security. Advocates of this standpoint contents that security goes beyond a military and paramilitary determination of threats. Leading credence to this assertion, booth (1994) posited that government should no longer possess the monopoly to provide security because government and its agencies rather that providing security for the citizens becomes the major source of insecurity for major of citizens becomes the major source of insecurity for majority of citizens living in their domains. In consonance with this assertion, Nwabueze, (1989), averred that government should be more preoccupied with the economic security of the citizenry.

The third view point of the concept of security is the populist approach. Much advocates of these approach conceptualize security in a more realistic viewpoint. They see security as the absence of threat and violence to acquire values and tendencies that would undermine national cohesion. Thus a safe society connotes and necessitates the feeling of safety from harm where citizens go about their business without hindrance and molestation. Woltrs, (1962), posited security as the absence of fear of crime that such values will attract. Thus;

Security has to do with freedom from danger or with threat to a nation's ability to protect and develop itself, provide its cherished values and legitimate interests and enhance the wellbeing of its people. Thus, internal security could be seen as the freedom from or the absence of those tendencies which could undermine internal cohesion and the co-operate existence of the nation and its ability to maintain its vital institutions for the promotion of its core value and socio-political and economic objectives as well as meet the legitimate aspiration of the people internal security also implies freedom from danger to life and prosperity. Evidently, security of national societal, communal and the individual is a sineo-qua- non to national and educational development and sustainability. The security system is the super-structure on which the other structures depends upon for their growth, development, sustainability and progress. Any dsyfunctionlism in the security affects all the other systems. In the same token, it is also theoretical expedient to analyze some dimensions of insecurity which is the opposite or absence of security. Aspects of insecurity with destructive consequences according to Ezeocha, S.L. (2010), are:

Physical insecurity: violence against person and property Public insecurity: violent conflicts, insurgency and terrorism. Economic insecurity: Poverty, employment, deprivation, penury. Social insecurity: illiteracy, ignorance, decrease, malnutrition, discrimination Human Rights violation: Denial of fundamental rights by state, state agencies and others Political insecurity: Denial of goods and special democratic governance. When all these forms of insecurity are in place there is bound to be instability in the educational system . Students in the different campuses will not be able to concentrate on their studies .Teachers will not be able to carry on with their job . There will be total disruption of the school calendar, which might end up making the calendar year not fulfilling its agenda for the session.

The United Nations (UN) Commission on security 2003 recommended that human security means protection and empowerment of citizens. Issues of human security are all encompassing. It is no longer on physical protection of life and property alone, but also requires a manifest empowerment of citizens with capabilities, skills and competences to enable them function and useful to society. The absence of this social security for the citizens will invariably turn them to be security risk and exacerbate the entire security system of the land.

Security and Educational Growth
There is an altruistic desire for people and goodwill by all nations, communities, institutions and individuals. Education is the only solution to the persistent security challenges facing the country. Today we have the Boko Haram and other form of security challenges facing the country. We can only address the problem of insecurity when we educate the people. The only time we can feel safe in our society is when everybody is educated he said. Giving the above prognosis, security, education and development on each other. Needless to overburden the goals aims and objectives of education to national development as this has become a universal phenomenon to all lovers of education. It is therefore expedient to highlight values of education in any society. Okorie, (2011), showcased variety of security lapses in schools that pose grave consequences to the educational growth of any society and succinctly stressed that;

> *In a war, military problems are given priority. When there is an epidemic, medical problems are given priority. There is a wave of crime, the police receive high priority our children are our major investment in the future. We have relatively few years when we can look to the quality of our great – investment if the opportunity is lost it will not reoccur again.*

Attainment of national education goal is dependent, to a large extent on the availability of a secured and conducive school environment without fear or danger. Recently, there has been a plethora of attacks and kidnappings of school staff and students by Boko-Haram insurgents, nomadic herdsmen, and upsurge of activities of cultism within and outside schools. This has greatly affected the smooth operations of schools. In the North-Eastern part of Nigeria, it has led to de-schooling and total closure of all educational

institutions. This has accentuated ignorance and poverty which has impacted negatively on, the educational growth of the country.

Universally, educational growth and development according to Okeke (2005), could be seen as a dialectical phenomenon in which the individual and the school interacts with their physical, biological and the environment transforming the individual for his own betterment and that of the society and humanity at large. And being transformed in the process, educational growth and development is therefore consequent upon the society's economic, political, social and infrastructural advancement of the given society. Educational development and attainment could therefore be seen as the process of empowering people to maximize their potentials and ability to exploit nature to meet them dally human needs and the general progress and advancement of society.

Security Challenges in Schools
Vividly, there are so many security challenges in the schools, both secondary and universities researchers have identified series of causes of insecurity in our schools and this has resulted to dysfunctional consequences in our school system. In some regions, schools are out rightly closed for fear of the students being kidnapped or gruesomely bombed by terrorist. Research findings abound why schools have turned out to be fertile grounds for insecurity to thrive. Okorie, (2011), have identified and spotted several courses of security crises in our institutions of leaning. Amongst the causes is Ethno Religious Differences. This is a situation in which the religious or ethnic affiliations of one ethnic group is treated and threatened with disdain, animosity, mistrust and suspicion. Nigeria being an heterogeneous society with religious, cultural and ideological schisms, differences in religion, culture and ideology could burst into tremendous conflagrations.

Similarly, in the Niger delta region, the activities of Militancy have also contributed magnificently to the disruption of academic activities. At times the widespread militant activities invariably led to the occupation of towns and communities by the military in search of militants in such a way that the interplay predisposes a war of attrition that led to disruption of schools. The school premises at times are the habitats of soldiers going after militants. The case of Gbarauatu Kingdom is typical of such unsafe school environment as

soldiers will indiscriminately arrest and school at sight. The innocent and vulnerable ones are sometimes the unfortunate victims. Students' unrest, deviancy through the activities of cultism also poses a grave danger in the smooth operations of schools. Nearly, all the universities in Nigeria and other higher institutions with exception of few had one form of crises related to cultism and gangstersim. Of recent, universities have become fertile and productive environments where students' unrest and cultism vis-à-vis primitive display of wealth and power held sway, and this gave rise to individual corruption, proliferation of illegal arms a light weapon. Violent confrontation between different ethnic-religious groups. Inter and intra cultist attacks has infiltrated the schools without check. This endemic ethnic and religious polarization in the country is also evident in the political sphere aptly demonstrated by the political elites. Political parties are also structured and founded along these cleavages. This has often orchestrated divisions between students and staff in some schools.

In specifics, the Boko Haram upsurge and kidnap of over 250 school girls in chibok in which some of them are still in the custody of the kidnappers was the height of insecurity in our schools. In Nigeria, especially the North Central part of Nigeria, the activities of herdsmen who go about attacking villagers and schools with sophisticated military rifles has also made schooling impossible. Some of these attacks led to dead of scores of lives. Perpetuity of these attacks by Boko Haram insurgency and the pandemic attacks of herdsmen on towns, villages and schools in the North Central, South Eastern and South South western geopolitical zone has also led to closure of schools. A cursory look and exposition of some of the causes of insecurity of schools as being highlighted by (Okorie 2011 P.37-39), (Etanuibi 2006 P.1-6) and (Uche 2001 P.94-97).

The systematic decline in the quality of governance at all levels which is tantamount to lack of patriotism. Widespread insecurity in the society through political ethnic –religious violence. Some radical university lectures provide some ideological justification to this effect. Lack of quality hostel facilities, administration and relationship promotes indiscipline, decadence in the cardinal virtues of honesty, trustworthiness, handwork and increasing gospels of prosperity through vices and crime. Admission through primordial considerations. This led to the admission of misfits into schools whose

preoccupation is the perpetration of crime. Excessive admission and overcrowding of lecture halls and hostel accommodations. Rising wave of ethnic and religious bigotry in society that undermines fairness, equity, accountability, hard work and productivity. Inadequate security services on campuses. Violent and non-violent disruption of school's activities by students and academic staff unions. High youth population and concentration on restricted school environments. Undue interference in the autonomy and affairs of school. High prevalence of ethnic religious and political violence in the country found expression of legitimacy within the school system. Intolerance, mistrust and lack of cordial relationship between students, staff and members of the universities host communities. Cultism and gangstersim which resulted to inter/intra cult groups, that result to reprisal attacks. Decline in academic excellence and merit on the part of students and staff always looking for short cuts. Campus residency by students which is normally infiltrated by criminal students within the host communities.

There is no gainsaying that the above factors which gave rise to insecurity have negatively impacted on the smooth harmonious administration of schools. The effects of this could be seen in the light of violent attacks leading to death and injury. A notable example is the Sunday Christian service attack in Bayero University, Kano which led to the killing and maiming of several students and lectures. There is replete of such attacks on colleges and universities in the North Eastern part of the country. Equally, more grave and destructive impact of insecurity in the school system is kidnapping of students and staff. Academic activities and the school calendar is always disrupted leading to students not graduating on record time. Similarly, insecurity in schools also engendered gender violence issues. Female students and even female lecturers are often the victims. In some cases, female students are being gang raped in the school campuses. Insecurity in schools also results to infrastructural damage and decay. Violent demonstrations on schools often times lead to destruction of the school plant planting, Okeke, 2005, P. 148, According to Benson, 2010; Insecurity in schools also depreciates the quality of education. Incessant closure of schools will devalue the management and quality of education. The low quality of education in any particular school will also have a concomitant effect on student enrolment. The poor quality of graduates from these crises ridden school will affect the national development goals. Finally, insecurity in school will not attract qualified staff from both within and outside.

Promoting Proactive Security in Schools

Pro-activity in security entails that, crime and social disorder are prevented from happing before actions are taken to discover they would be perpetrators. It is diametrically opposite to reactive security which reacts to crime and incident that have already taken place. Benson 22009 averred that the reactive approach which is the traditional form of security is costly and largely in-effectual because crimes, incidents are often left undetected. Proactive security therefore necessitates that available data be analyzed in order to identify trends and causes of security crises. The pro-activeness requires the pressure or high visibility of security personnel, accessibility to members of the school or community. This is the demonstration of the ever presence availability of the security to wade off who would be criminals that lurk around to commit crime. Very similar in operation and practice to proactive security strategy; is the problem-solving security strategy. The problem solving system is about solving underling problems which give rise to crime and social disorder in the community. Teething problems will surface as issues are brought to the attention of the security outfit. Problems such as ethnic discrimination, religious intolerance amongst various groups within the school or community that have not degenerated to a full blown crisis could be curtailed or nipped in the bud by the security department or the school's management through interventions, reconciliation, arbitration and dispute resolution mechanisms.

Security and safety issues are germane to the overall development and productivity of a nation state and organizations. Security system of any school is the incorporation of all other systems. If the security system is deficient and defective, all other systems within the school organization will be grossly affected. To this end, the following Measurable Proactive Strategies are recommended for improving security and safety in schools by Jaja,N and Jude, O P.285-289) Buzan, 1991 P. 148 and Okeke, 2005 P.49

Young people are essentially partners in any crime prevention and reduction strategy. To prevent them from becoming victims and offenders alike, the strategy will involve building up of partnerships in institutions of higher learning and colleges. Development crime prevention initiatives dealing with gang-related problems such as cult activities in schools, example community policing initiatives/vigilante group. Sharing information to identify those young people at risk of becoming victims or offenders or those who already

are criminal or cult members in schools. Investigating criminal activities around the school property and assuring other officers with outside investigation that have a link to the school or students. Initiate and develop problem solving relationship between the police, student unions and school authorities. Create and promote liaisons with youth organizations, NGO's dealing with youth and gender issues in schools, Prohibition or reducing substance misuse in the school and the wider community. Develop and impact strategies that improve the physical security of the school and the personal safety of staff and students using it. Initiate and develop a partnership approach to supporting school staff in managing safe learning environment. Educating students of their rights and responsibilities. Initiate, develop and implant crime prevention programmes in schools. Assisting the school authorities on related, safety and emergency matters. Counseling/advising on community oriented policing issues. Carry out community policing initiatives by maintaining a crime – free learning environment. These preferred solutions are ideal with an altruistic desire for peace and goodwill in schools. However, security issues and challenges in schools are inextricably linked to the national security issues. To this extend, the Nigerian National Security crises affects the schools which are micro societies in the large Nigerian society. In the light of the above, some intrinsic values to promoting security in Nigeria are recommended.

Conclusion
Security is the bedrock of any society. A peaceful and secured society is the hallmark of any developmental possibilities to sprout. Thus, security is analogous to national development. Unarguably, the Nigeria society and schools including universities and colleges had experienced an upsurge of security crises through the activities of Boko- Haram insurgency, militant activities in the Niger Delta, Marauding herdsmen, religious intolerance, kidnapping, armed robbery and gender based violence crime against women and children. This has adversely affected the smooth running of academic programmes vis-à-vis the quality and quality of education. Students should therefore be helped to become risk aware without unnecessarily becoming risk averse. Laws on safety in schools should be reinforced as well as provision of robust insurance schemes for staff and students be implemented. Universally, security is everybody's business, collaborative efforts are required from all and sundry to create a peaceful society free from crime and

criminalities. Protection of life and property is an enormous and hazardous task. It takes average security personnel to be well informed, intelligent, mentally and physically fit and alert, to enable him offer excellent policing of the neighborhood. Just as physicians now recognize the importance of fostering health, rather than simply treating illness, so the police and communities ought to recognize the importance of maintaining attract communities and schools without broken windows.

Finding/Recommendations

In view of this study, the researchers observed that the insecurity of the nation has in so many ways stunted the educational development of the time. As earlier stated, national security and that of the schools are intertwined. There will be no security in the schools when there are national security crises. Causes of insecurity in any nation or society are multi-dimensional. Like in the schools, the followings are recommended for improving security in Nigeria.

1. Massive employment opportunities – unemployment and underdevelopment has been the bane of the Nigerian Labour market. To address the security crises in Nigeria, the government should create enabling environment for the economy to grow in order to employ the teeming population of unemployed but employable graduates from our schools.
2. Re- evaluation of the value system. For the Nigerian society to be relatively free of insecurity, there is need to overhaul our value system. The cardinal virtues and values of hard work, honesty, accountability, transparency and probity be strengthened and encouraged, while corruption, insecurity should be heavily sanctioned and discouraged.
3. Enthrone good governance: the enthronement of good governance embedded in sound control economic planning to engender free enterprise to ensure citizens personal welfare be imputed. The government should adopt and implement social and political security to alleviate poverty.
4. Government should articulate, re- invigorate and institutionalize national value of discipline, peace, tolerance, equity, justice, national and social integration.
5. The principle of non-violence approach by civil right organizations, NGOs, social crusade organization be encouraged to adopt non-confrontation/violence in expressing their grievances.

6. The development of self-reliant, sustainable, productive and diversified economic measure through agriculture, industrialization should be promoted by the government. This will expand the economic resources and opportunities for majority of the working age bracket that will meaningfully engage them and keep away from crime.
7. Reviewing obsolete laws and policies to drive sanctions and effective punitive measures against corruption and impurity.
8. Placement of appropriate laws, rules and policies in a democratic setting in order to streamline and enshrine the fundamental human rights and liberty of citizens.
9. Robust privileged driven national security policies and strategies should be articulated and implemented.
10. The government should institutionalized the public institutions and be placed for well service delivery on non discriminatory basis. Functional and unbiased justice administrative system should be adopted and implemented.

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Chapter **7**

Teachers and Students Perception on Measurement Error in Economics Achievement in Senior Secondary Schools in Nasarawa State, Nigeria

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Abstract

The study assessed teachers and student's perceptions on measurement error in Economics achievement in senior secondary schools in Nasarawa State, Nigeria. Three research questions, three null hypotheses were formulated, and cross-sectional research design was adopted. The sample size of 350 respondents, 50 teachers and 300 students were selected through stratified random sampling techniques. Questionnaire for Teachers and Students Perception on Measurement Error in Economics Achievement was used for data collection (QTSPMEEA). The instrument "TSPMEEA" was validated by experts yielded 0.79, and Cronbach alpha was used to determine the reliability of the internal consistency of the instruments which gave 0.80. Data collected were coded and analyzed using descriptive statistics (mean and standard deviation) to answer research questions while

Non-Parametric statistics (x) was used to test the hypotheses at the 0.05 level of significance. The study revealed that there is a significant influence between the perception of teachers and students on the influence of Measurement error in Economics Achievement, there is no significant influence between the perception of male and female teachers on the influence of Measurement error in Economics Achievement and there is a significant influence between the perception of male and female students on the influence of Measurement error in Economics Achievement. The study recommended that teachers and students should be counseled toward reducing or minimizing errors in Economics achievement before and after exam. Emphasis should be placed on moral instructions and value re-orientation on male and female teachers to avoid awarding scores to students freely without them meriting it and educational stakeholders/parents should place value re-orientation on male and female students to avoid error and any form of exam misconduct.

Keywords: Teachers, Students, Perception, Measurement Error, Economics Achievement

Background to the Study
Perception is the process of recognizing and interpreting sensory stimuli (information). Perception also includes how we respond to the information. We can think of perception as a process where we take in sensory information from our environment and use that information in order to interact with our environment. Therefore, the teachers and students' perception could influence their attitude towards learning of Economics or any other school subject. Students more often than not, judge their teachers in such areas as the teachers' knowledge of the subject matter, communication, ability and the choice of appropriate teaching method. A teacher who is rated high on these indices in the perception of the students is likely to enjoy the confidence, respect and admiration of his/her students and vice versa (Audu, 2015). The way students perceive a subject determines their success or failure in that subject. Some students perceive Mathematics as no go area because of the negative impression passed down to them by the past generation who had bad experience with unqualified Mathematics teachers; that Mathematics is the most difficult subject in the school, it is not meant for everybody, not everybody passes it, it is meant for those with special talent, some were born to do Economics while others were not (Audu, 2015).

According to Nelson and Quick (2012), perception is the process of interpreting information about another person. What this definition has clearly highlighted for your attention is that the opinions you form about another person depends on the amount of information available to you and the extent to which you are able to correctly interpret the information you have acquired. In other words, you may be in possession of the same set of information that other people have on a particular situation, person or group but still arrive at different conclusions due to individual differences in the capacity to interpret the information that you all have. Rao and Narayan (2011) obviously share the main characteristics of the above definition. However, they emphasize that perception ranks among the "important cognitive factors of human behavior" or psychological mechanism that enable people to understand their environment. They define perception as the process whereby people select, organize and interpret sensory stimulations into meaningful information about their work environment. They argue that perception is the single most important determinant of human behavior, stating further that "there can be no behavior without perception.

Though focusing on managers in work settings, Rao and Narayan (2011) draw attention to the fact that since there are no specific strategies for understanding the perception of others, every one appears to be left with his own inventiveness, innovative ability, sensitiveness and introspective skills to deal with perception. Thus, perception refers to the process by which we form impressions of other people's traits and personalities. You may have noticed that by referring to "our senses" as the means of data collection, the authors may have placed too much emphasis on its perception component, which the first two definitions clearly avoided. In other to shed more light on this concept it is important to pay attention to the following elements of the above definitions of perception listed by Rao and Narayan (2011).
1. Our attention, feelings and the way we act are influenced by our environment.
2. Perception helps you to gather data from your surroundings process the data and make sense out of it.
3. In perception, it is sometimes difficult to separate the information from the action.
4. It is basically a process of gaining mental understanding, and

5. Perception guides the perceiver in harnessing, processing and channeling relevant information towards fulfilling the perceiver's requirements.

Deduced from above listed points, assessment of one kind must be subsumed and this possible way could lead to three errors: the first "errors inherent in the instrument, second the "errors in the use of the instrument and third the "errors emanating from responses of the test takers" (Anikweze, 2015). According to William (2010), measurement error (also called observational error) is the difference between a measured quantity and its true value. It includes random error (naturally occurring errors that are to be expected with any experiment) and systematic error (caused by a mis-calibrated instrument that affects all measurements. For example, in measuring the weights of 100 marathon athletes, if the scale used is one pound off, this is a systematic error that will result in all athlete body weight calculations to be one pound off. On the other hand, if the scale is accurate, some athletes might be dehydrated than others. Some might have wetter (and therefore heavier) clothing or a 2 oz. candy bar in a pocket to affect the measurement. These are random errors and are expected.

In fact, all collected samples will have random errors and they are, for the most part, unavoidable. Measurement error in every score is made up of two independent components: true scores and the random measurement error score. The true score theory is a good simple model for measurement, but it may not always be an accurate reflection of reality. In particular, it assumes that any observation is composed of the true value plus some random error value. But is that reasonable? What if all error is not random? Isn't it possible that some errors are systematic, that they hold across or all of the members of a group? One way to deal with this notion is to revise the simple true score model by dividing the error component into two subcomponents, *random error* and *systematic error.* The differences between these two types of errors and try to diagnose their effects on this research expressed as:

$$X = T \pm E \quad (X = T + E_r + E_s)$$

Random error (E_r) is caused by any factors that randomly affect measurement of the variable across the sample. For instance, each person's mood can inflate

or deflate their performance on any occasion. In a particular testing, some children may be feeling in a good mood and others may be depressed. If mood affects their performance on the measure, it may artificially inflate the observed scores for some children and artificially deflate them for others. The important thing about random error is that it does not have any consistent effects across the entire sample. Instead, it pushes observed scores up or down randomly. This means that if we could see all of the random errors in a distribution they would have to sum to 0, there would be as many negative errors as positive ones. The important property of random error is that it adds variability to the data but does not affect average performance for the group. Because of this, random error is sometimes considered noise.

Systematic error (E_s) is caused by any factors that systematically affect measurement of the variable across the sample. For instance, if there is loud traffic going by just outside of a classroom where students are taking a test, this noise is liable to affect all of the children's scores in this case, systematically lowering them. Unlike random error, systematic errors tend to be consistently either positive or negative. Because of this, systematic error is sometimes considered to be bias in measurement.

However, William (2010) defines standard error as directly related to the reliability of the test. It is an index of the amount of variability in an individual student's performance in a test due to random measurement error. If it were possible to administer an infinite number of parallel tests, a student's score would be expected to change from one administration to the next due to a number of factors. For each student, the scores would form a "normal" (bell-shaped) distribution. The mean of the distribution is assumed to be the student's score "true score," and reflects what he or she "really" knows about the subject. The standard deviation of the distribution is called the standard error of the measurement and reflects the amount of change in the student's score which could be expected from one test administration to another. Whereas the reliability of a test always varies between 0.00 and 1.00, the standard error of measurement is expressed in the same scale as the test scores. For example, multiplying all test scores by a constant will multiply the standard error of the measurement by that same constant, but will leave the reliability coefficient unchanged. A general rule of thumb to predict the amount of change which can be expected in individual test scores is to

multiply the standard error of measurement by 1.5. Only rarely would one expect a student's scores to increase or decrease by more than that amount between two such similar tests in or in terms of gender.

Adeyegbe (2015) affirmed that gender disparity in Mathematics achievement, male candidates performed well in Mathematics than their female counterparts, this is because most of them failed to make better grades in science examinations because of their inability to transfer mathematical knowledge to solving problems in science. Emaikwu (2012) pointed that measurement of ability has always been an important part of the school system such that even the habitual absentees normally turn up to school and present themselves for testing on examination days. The essence of testing is to reveal the latent ability of examinees. The term ability connotes the characteristics of the examinees that the test is intended to measure. It includes factual knowledge, specific skills and general skills. For an examinee's ability to be measured, the examinee has to respond to a sample of questions. A test score based on this sample of questions would be an approximate indicator of examinee's ability, but due to the problems of perception of an individual or group of persons result to their academic performance.

According to the Performance Statistics West Africa Senior School Certificate Examination WASSCE for school candidates, (WAEC, 2017) released 1,567,016 candidates registered for the examination, out of which 1,559,162 candidates sat for the examination. Of the total number of candidates that sat for the exam, 829,853 were males & 729,309 were females, representing 53.22% & 46.27% respectively. Out of the total no. of candidates that sat for the exam, 1,471,151 , representing 94.36% have their results fully processed and released. 95,734 candidates, representing 5.64% have a few of their subjects still being processed due to errors traceable to the candidates. Specifically, with respect to Economics achievement, 923,846 candidates, representing 59.22%, obtained minimum of credits in 5 subjects & above, including English Language and Mathematics. Another problem is that, students' lack of interest in Mathematics, as well show great sign of anxiety whenever test in the area of geometry in particular is given to them. Therefore, the thrust of this study is to determine perception of students and teachers on the influence of measurement error in Economics achievement among senior secondary schools in Nasarawa state using school location, teachers and students gender as moderator variables.

Statement of the Problem

Over the years, perceptions of teachers and students toward Economics performance, is a thing of concern on the side of educational stakeholders and the society due to measurement error. Large scale assessments (WASSCE-WAEC, NECO, NABTEB and JAMB) are essential examples of what is designed to measure students' achievement in secondary schools which involves many stages for constructions, development, implementation, presentation and analysis of result or scores. The construction and development of items and task introduce unsystematic error, for example, performance tasks while considered comparable, render alternate form nonequivalent. Unsystematic error results from varied assessment implementation by test developers (teachers) and in different classrooms with different students. This measurement error occurs in three ways thus: the first "errors inherent in the instrument, second the "errors in the use of the instrument" and third the "error emanating from responses of the test takers". There is generally poor performance by students in Economics and other related subjects in particular and this has been a thing of great concern and therefore, it is against this background that this study assessed teachers and students perception on measurement error in Economics performance in senior secondary schools in Nasarawa State, Nigeria. In addressing this problem, the following research questions and hypotheses were raised.

Research Questions

The following research questions guided the study:

1. What is the perception of teachers and students toward the influence of Measurement error in Economics Achievement?
2. What is the perception of male and female teachers on the influence of Measurement error in Economics Achievement?
3. What is the perception of male and female students on the influence of Measurement error in Economics Achievement?

Statement of Hypotheses

The following null hypotheses were developed and tested at the 0.05 level of significance:

H_o1: There is no significant influence between the perception of teachers and students on the influence of Measurement error in Economics Achievement.

H₀2: There is no significant influence between the perception of male and female teachers on the influence of Measurement error in Economics Achievement.

H₀3: There is no significant influence between the perception of male and female students on the influence of Measurement error in Economics Achievement.

Literature Review

In a review of empirical studies, Bala, Hyelni and Muhammad (2016) examined students' perception of factors influencing teaching and learning of Mathematics in senior secondary schools in Maiduguri Metropolis of Borno State, Nigeria. The study used a sample of 1500 male and 1100 female students from six selected senior secondary schools in Maiduguri Metropolis, Borno State, Nigeria. The instrument used for data collection was a self developed questionnaire measuring students' perception of factors influencing teaching and learning of Mathematics. It had a reliability index of 0.81. To analyze the data collected, the research questions were answered using descriptive statistics such as simple frequency, mean and standard deviation. The results indicated that qualification of Mathematics teachers, teaching method, and instructional materials were highly perceived by students as important determinants of their success in learning. Also, students' attitude towards mathematics teaching and learning was an important factor in the performance of students. Based on the results of this study, it was recommended that: There is need to improve the quality of mathematics teachers. Government of Borno State should embark on serious in-service training of Mathematics teachers to equip them with skills for teaching Mathematics in secondary schools. Also, there is need for Mathematics teachers to try and understand the perceptions of their students and try to adopt instructional strategies that whatever student perceives as easy would really turn out to be easy and whatever is difficult may be properly addressed to motivate and encourage students to see the need in learning Mathematics and improve their performance.

Ampadu (2012) examined students' perception of their teachers' teaching methods on how it impacted on their learning experiences. The sample of the study involved 258 students from 12 junior high schools (12-14 years), who were randomly selected to complete a semi-structured questionnaire. The

study revealed that students' perception of their teachers' teaching varies as the results established that both teacher-centered and student-centered teaching approach were used by Mathematics teachers. The results of the study revealed that teachers' action and inaction impact positively or negatively on students' learning experience as the majority of the respondents reported that their learning experiences are to a larger extent controlled by the teacher.

Asikhia (2010) conducted a study on students' and teachers' perception of the causes of poor academic performance in Ogun State secondary schools, Nigeria. The study had a targeted population consisting of all (SSII) students in Ogun State. That is 135 (SSII) students and 50 teachers were selected from five (5) secondary schools for the study through stratified random sampling. The instrument used for data collection was a self designed questionnaire on the perception of students' poor academic performance. The data obtained were analyzed using frequency count and chi-square statistical analysis. Findings showed that teachers' qualification and students' environment did not influence students' performance but teachers' method of teaching influence performance. In addition, some of the factors of poor academic achievement identified were motivational orientation, self-esteem, emotional problem, study habits teacher consultation and poor interpersonal relationship.

Research Methodology
This study adopted a cross-sectional survey design. This is because, it involves the collection of data within a short span of time from a random sample of the target population distributed over a wide area (Anikweze, 2015). The population for the study consists of all 5787 students and teachers and the sample of 350 students and teachers. The study adopted a stratified proportional random sampling procedure. Respondents were stratified alone teachers and students, male-female dichotomy before simple random sampling was employed to obtain 350. Finally, the lottery method of simple random sampling was employed to obtain a sample size of 350. Serial numbers of the elements in the sampling frame were recorded on pieces of paper folded and mixed thoroughly before respondents were asked to pick at once without replacement. This procedure gave the respondents equal opportunity of being selected thereby, reducing the bias effect that may interfere with the validity

and reliability of the study. The researchers developed an instrument for data collection called 'Questionnaire for Teachers and Students Perception on Measurement Error in Economics Achievement (QTSPMEEA) which contained 20 structured items. QTSPMEEA made up of two sections. Section 'A' has 2 items contained the bio-data of respondents such as status and sex. Section 'B' consisted of 18 structured items that expressed statements on teachers' and students' perception toward Measurement error in Economics achievement is based on 5-point Likert type scale given as follows: Strongly Agree=SA, Agree=A, Undecided=UD, Disagree=DA, and Strongly Disagree=SD. QTSPMEEA was subjected to an expert in educational measurement and evaluation for value judgment by checking for appropriateness and relevance of the items, adequacy and agreement with the blueprint, clarity of expression and size of print and the logical consensus of the expert gave 0.82 indexes. Cronbach coefficient Alpha method of estimating reliability was used to compute coefficient of internal consistency of the instrument which yielded 0.81 indexes. The researchers made use of descriptive statistics (simple percentage) to sought 2 demographic information about the respondents were presented in simple bar chart and 18 structured items were used to answer research questions while chi-square (X^2) was used to test hypotheses at the 0.05 level of significance using SPSS version 21.

Presentation of Results

Table 1: Demographic Characteristics of the Respondents by Status

Variables	Frequency	Percentages (%)
Teachers	50	14.29
Students	300	85.71
Total	**350**	**100.00**

Source: Field work, (2019)

Table 1 shows demographic characteristics of the respondents by status. The teachers had 50 (14.29%) and the students had 300 (85.71%), this information is presented in the bar-chart fig.1 below:

Fig.1: Demographic Characteristics of the Respondents by Status
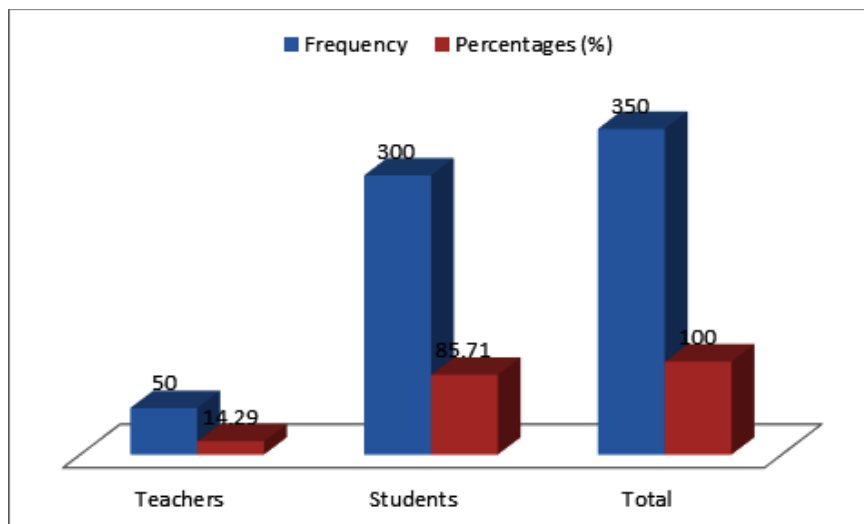
Table 2: Demographic Characteristics of the Respondents by Gender

Gender	Teachers	Percentage (%)	Students	Percentage (%)	Total
Male	30	8.57	170	48.57	200
Female	20	5.71	130	37.14	150
Total	**50**	**14.28**	**300**	**85.71**	**350**

Source: Field work (2019)

Table 2 shows demographic characteristics of the respondents by gender. Male teachers had 30 (8.57%) and female teachers had 20 (5.71%) while male students had 170 (48.57%) and female students had 130 (37.14%), this information is presented in bar-chart fig 2 below:

Fig.2: Demographic Characteristics of the Respondents by Gender
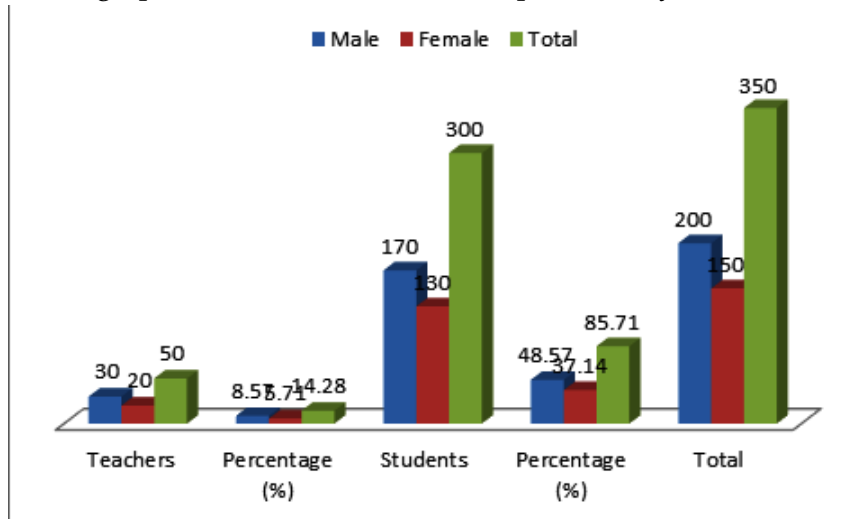
Answering of Research Questions

Research Question 1: What is perception of teachers and students toward the influence of Measurement error in Economics Achievement?

Table 3: Mean and Standard Deviation for Teachers and Students Perception on Measurement Error in Economics Achievement

		Teachers (N=50)					Students (N=300)							
	Item Description	SA	AG	UD	DA	SD	SA	AG	UD	DA	SD	X Mean	Std Dev	Decision
1	Errors occur when scoring without marking scheme	20	16	4	10	10	120	90	10	50	30	3.92	0.88	Accept
2	Every score has error in student Economics achievement	21	12	2	8	7	100	120	5	45	30	3.82	0.72	Accept
3	Some teachers add scores to students	15	20	-	8	7	130	90	2	40	38	3.92	0.88	Accept
4	Economics achievement test items with sequence of errors generate confusion	20	10	2	8	10	100	120	3	37	40	3.85	0.72	Accept
5	Error of language in teaching affect Economics achievement	21	14	2	5	7	110	105	3	37	45	3.23	0.96	Accept
6	Giving students area of consideration before the Economics test is not an error	21	14	-	10	5	110	120	1	39	30	3.13	0.86	Accept
	Pooled mean											**3.65**	**0.85**	**Accept**

Source: Fieldwork, (2019) Decision line: 2.50

Table 3 above shows the mean and standard deviation on the perception of teachers and students responses toward the influence of measurement error in Economics achievement. All the items ranging from 3,4,5,6,7 and 8 were considered accepted because they had the mean scores above the decision line, therefore the pooled mean score of 3.65 and standard deviation of 0.85 was accepted. This implies that teachers and students perceive errors that occur in Economics achievement either ± are due to extraneous variables in the process.

Research Question 2: What is the perception of male and female teachers on the influence of measurement error in Economics achievement?

Table 4: Mean and Standard Deviation for Male and Female Teachers Perception on Measurement Error in Economics Achievement

	Male Teachers (N=30)					Female Teachers (N=20)							
	Item Description	SA	AG	UD	DA	SD	SA	AG	UD	DA	SD	X Mean	Std Dev	Decision
1	Females commit errors when scoring than the male teachers	10	8	2	7	8	1	1	-	8	10	1.92	0.97	Reject
2	Male teachers award mostly higher scores to female students than the male students	8	7	1	6	8	8	10	-	1	1	2.82	0.72	Accept
3	Teachers add scores to students for money	8	9	1	4	8	8	8	2	1	1	2.77	0.77	Accept
4	Economics achievement test items developed by female teachers have more errors than male teachers	10	8	2	7	8	1	1	-	8	10	1.92	0.97	Reject
5	Most of the female teachers teaching is confusing than the male	10	9	1	7	8	1	1	-	8	10	1.92	0.97	Reject
6	Most of the male teachers give students area of consideration than the female teachers	8	10	1	6	6	8	10	-	1	1	2.82	0.72	Accept
	Pooled mean											**2.36**	**0.85**	**Reject**

Source: Field work, (2019) Decision line: 2.50

Table 4 above shows the mean and standard deviation on the perception of male and female teachers' responses toward the influence of measurement error in Economics achievement. The items ranging from 10, 11 and 14 were considered accepted because they had the mean scores above the decision line of 2.50 while items 9, 12 and 13 were rejected due to mean scores below the decision line, therefore the pooled mean score of 2.36 and standard deviation of 0.85 was rejected. This implies that male and female teachers perceive that errors occur in Economics achievement are generous which can occur at any time.

Research Question 3: What is the perception of male and female students on the influence of measurement error in Economics achievement?

Table 5: Mean and Standard Deviation for Male and Female Students Perception on Measurement Error in Economics Achievement

	Male Students (N=170)					Female Students (N=130)							
	Item Description	SA	AG	UD	DA	SD	SA	AG	UD	DA	SD	X Mean	Std Dev	Decision
1	Female students commit errors in exam than the male students	90	60	2	10	8	50	60	2	8	10	2.92	0.97	Accept
2	Female students cheat in exam than the male students	70	70	2	15	13	60	60	-	5	5	3.42	0.72	Accept
3	Female students befriend their teachers for high scores	80	60	5	15	10	40	30	20	15	25	2.77	0.77	Accept
4	Male students use money to buy exam questions from their teachers	55	60	15	20	30	50	60	5	10	5	2.92	0.92	Accept
5	Most of the female students get confused in exam than the male students	25	30	15	50	60	20	20	-	40	50	1.92	0.97	Reject
6	Most of the male students allow female friends to copy their answers in exams	80	60	5	15	10	40	30	20	15	25	2.77	0.77	Accept
	Pooled mean											**2.79**	**0.85**	**Accept**

Source: Field work, (2019)   Decision line: 2.50

Table 5 above shows the mean and standard deviation on the perception of male and female students' responses toward the influence of measurement error in Economics achievement. Items 15, 16, 17, 18 and 20 were considered accepted because they had the mean scores above the decision line while item 19 was rejected due to low mean score, therefore the pooled mean score of 2.79 and the standard deviation of 0.85 was considered accepted. This implies that male and female students perceive that errors occur in Economics achievement as a result of the attitudes around their teachers.

Testing of Hypotheses

H_o1: There is no significant influence between the perception of teachers and students on the influence of measurement error in Economics achievement

Table 6: Chi-Square Statistics for Significance Influence between teachers and Students Perception on the Influence of Measurement Error in Economics Achievement

Variables	df	X^2_{cal}	X^2_{tab}	P	Remark
Teachers Perception	4	7.71	9.488	0.05	Accepted
Students Perception					

Source: ©SPSS Version 21.

Table 6 shows the chi-square (X^2) statistics for significance influence between teachers and students perception on the influence of measurement error in Economics achievement. It is evident that at the 0.05 level of significance and df of 4, the $X^2_{calculated}$ value of 7.71 which is less than the $X^2_{tabulated}$ value of 9.488 was obtained. Therefore, since the $X^2_{calculated}$ value is less than the $X^2_{tabulated value,}$ the null hypothesis was rejected and alternative hypothesis was accepted. Hence, there is a significant influence between teachers and students perception on the influence of measurement error in Economics achievement. This implies teachers and students perceive errors that occur in Economics achievement either ± is due to extraneous variables in the process.

H_o2: There is no significant influence between the perception of male and female teachers on the influence of measurement error in Economics achievement.

Table 7: Chi-Square Statistics for Significant Influence between Male and Female Teachers Perception on the Influence of Measurement Error in Economics Achievement

Variables	df	X^2_{cal}	X^2_{tab}	P	Remark
Male Teachers Perception	4	9.71	9.488	0.05	Rejected
Female Teachers Perception					

Source: ©SPSS Version 21.

Table 7 shows the chi-square (X^2) statistics for significant influence between male and female teachers perception on the influence of measurement error in Economics achievement. It is evident that at the 0.05 level of significance and degree of freedom (df) of 4, the $X^2_{calculated}$ value of 9.71 which is greater than the

$X^2_{tabulated}$ value of 9.488 was obtained. Therefore, since the $X^2_{calculated}$ value is greater than $X^2_{tabulated}$ value, the null hypothesis was accepted and alternative hypothesis was rejected. Hence, there is no significant influence between male and female teachers perception on the influence of measurement error in Economics achievement. This implies that male and female teachers perceive that errors occur in Economics achievements are generous which can occur at any time.

H_o3: There is no significant influence between the perception of male and female students on the influence of measurement error in Economics achievement.

Table 8: Chi-Square Statistics for Significant Influence between Male and Female Students Perception on the Influence of Measurement Error in Economics Achievement

Variables	df	X^2_{cal}	X^2_{tab}	P	Remark
Male Students Perception	4	8.61	9.488	0.05	Accepted
Female Students Perception					

Source: ©SPSS Version 21.

Table 8 shows the chi-square (X^2) statistics for significant influence between male and female students' perception on the influence of measurement error in Economics achievement. It is evident that at the 0.05 level of significance and degree of freedom of 4, the $X^2_{calculated}$ value of 8.61 which is less than the $X^2_{tabulated}$ value of 9.488 was obtained. Therefore, since the $X^2_{calculated}$ value is less than the $X^2_{tabulated}$ value, the null hypothesis was rejected and alternative hypothesis was accepted. Hence, there is no significant influence between male and female students' perception on the influence of measurement error in economics achievement. This implies that male and female students perceive that errors occur in Economics achievement as a result of the attitudes around their teachers.

Summary of the Major Findings
Based on the results of the analysis, the following major findings emerged from the study:

1. There is a significant influence between teachers and students' perception on the influence of measurement error in Economics achievement.
2. There is no significant influence between male and female teachers' perception on the influence of measurement error in Economics achievement.
3. There is a significant influence between male and female students perception on the influence of measurement error in Economics achievement.

Discussion of Results

Table 1 shows details of demographic characteristics of the respondents by status. The teachers had 50 (14.29%) and students had 300 (85.71%), this information is presented in bar-chart fig I while Table 2 shows demographic characteristics of the respondents by gender. Male teachers had 30 (8.57%) and female teachers had 20 (5.71%) and male students had 170 (48.57%) and female students had 130 (37.14%), this information is presented in bar-chart fig II. Research question one sought to find out the perception of teachers and students toward the influence of measurement error in Economics achievement. All the items ranging from 3, 4, 5, 6, 7 and 8 were considered accepted because they had the mean scores above the decision line, therefore the pooled mean score of 3.65 and the standard deviation of 0.85 was accepted. The result of hypothesis one also revealed that at the 0.05 level of significance and degree of freedom (df) of 4, the $X^2_{calculated}$ value of 7.61 which is less than the $X^2_{tabulated}$ value of 9.488 was obtained. Therefore, since $X^2_{calculated}$ value is less than the $X^2_{tabulated}$ value, the null hypothesis was rejected and alternative hypothesis was accepted.

Hence, there is a significant influence between teachers and students perception on the influence of measurement error in Economics achievement. This implies that teachers and students perceived errors that occur in Economics achievement either ± is due to extraneous variables in the process. This result is in agreement with that of Bala, Hyelni and Muhammed (2016) opinion that qualification of teachers, teaching method and instructional materials were highly perceived by students as important determinants of their success in learning. Also, students' attitude towards Economics teaching and learning was an important factor in the performance of students. In line

with this, Asikhia (2010) argued that teachers' qualification and students' environment did not influence students' performance but teachers' method of teaching influence performance. In addition, some of the factors of poor academic achievement identified were motivational orientation, self-esteem, emotional problem, study habits, teacher consultation and poor interpersonal relationship.

More so, the result of research question two in Table 2 shows the items ranging from 10, 11 and 14 were considered accepted because they had the mean scores above the decision line of 2.50 while items 9, 12 and 13 were rejected due to mean scores below the decision line, therefore, the pooled mean score of 2.36 and the standard deviation of 0.85 was rejected. The result of hypothesis two also confirmed that at the 0.05 level of significance and degree of freedom of 4, the $X^2_{\text{calculated}}$ value of 9.61 which is greater than the $X^2_{\text{tabulated}}$ value of 9.488 was obtained. Therefore, since the $X^2_{\text{calculated}}$ value is greater than the $X^2_{\text{tabulated}}$ value, the null hypothesis was accepted and alternative hypothesis was rejected. Hence there is no significance influence between male and female teachers perception on the influence of measurement error in Economics achievement. This implies that male and female teachers perceived that errors occur in Economics achievement are generous which can occur at any time. This finding is in agreement with that of Ampadu (2012) which revealed teachers action and inaction impact positively or negatively on students' learning experience as the majority of the respondents reported that their learning experiences are to a large extent controlled by the teacher.

Finally, the result obtained in table 3 for items 15, 16, 17, 18 and 20 were considered accepted because they had the mean scores above the decision line while item 19 was rejected due to low mean score, therefore the pooled mean score of 2.79 and the standard deviation of 0.85 was considered accepted. In line with this summation, the result of hypothesis three confirmed that at the 0.05 level of significance and degree of freedom 4, the $X^2_{\text{calculated}}$ value of 8.61 which is less than the $X^2_{\text{tabulated}}$ value of 9.488 was obtained. Therefore, since the $X^2_{\text{calculated}}$ value is less than the $X^2_{\text{tabulated}}$ value, the null hypothesis was accepted and alternative hypothesis was rejected. Hence, there is significant influence between male and female students perception on the influence of measurement error in Economics achievement. This implies that male and female students perceive that errors occur in Economics achievement as a

result of the attitudes around their teachers. This finding corroborated with that of Adeyegbe (2015) who affirmed that gender disparity in Economics achievement, male candidates perform well in Economics than their female counterpart. This is because most of them fail to make better grades in science examinations because of their inability to transfer mathematical knowledge to solving problems in science.

Conclusion
Teachers and students perceive error that occur in Economics achievement either ± is due to extraneous variables in the process by either teachers favoring students to increase test scores or students buying teachers to increase his/her exams scores. The result of hypothesis one confirmed that there is a significant influence between teachers and students perception on the influence of measurement error in economics achievement. Again, gender also influences error in Economics achievement scores of individual students which could lead to their performance that they do not merit it.

Recommendations
Based on the result of these findings, the following recommendations are suggested:
1. That teachers and students should be counseled toward reducing or minimizing errors in Economics achievement before and after the exam.
2. Emphasis should be placed on moral instructions and value re-orientation on male and female teachers to avoid awarding scores to students freely without them meriting it.
3. Educational stakeholders/parents should place value re-orientation on male and female students to avoid error and any form of exam misconduct.

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Chapter **8**

Enhancing Student Researchers Attitude Towards the Use and Application of Educational Research Paradigm Theories in Research Studies in Nigeria Universities

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Abstract

This study investigated the attitude of student researchers towards the use of educational research paradigm theories in four Nigerian Universities. As current research studies do not reflect the educational research, paradigm theories neither are they mentioned, rather much emphasis is on methodology and data collection tools based on quantitative and qualitative research. This study is geared towards the need to specify, identify, indicate, and select the appropriate research paradigm theory and to determine the combination and relative influence in any research study. The researcher employed a descriptive survey design. The population of 780 was used composing of post-graduate students from universities in South-South Geographical Zone of Nigeria while the sample size of 120 research students was adopted using a purposive sample technique. The research instrument

used was (RPAS) Research Paradigm Assessment Scale. The scale was tested and had a reliability coefficient of the index of 0.82. 20 items were developed on a 4 point Likert scale of SA – strongly, A – Agreed, D – Disagreed and SD – strongly Disagreed. The statistical analysis used was ANOVA and T-Test for hypothesis 1 & 2, while ANOVA for hypothesis 3. Based on the result obtained, recommendations made were geared towards the need for all Faculties in the University to introduce the use and application of paradigm theories in research studies. In addition, paradigm theories should be added in the Curriculum of Tertiary Institutions as a core section in research methodology. Research bodies while organizing seminars should create awareness of research paradigm theories. Also, the National Association for Research Studies and Research Methods in Measurement and Evaluation should ensure that these paradigm theories are reflected and used in research studies in Universities by student researchers.

Keywords: Educational Research Paradigm Theories: Positivist, Constructivist, Transformative, Pragmatic, Research Paradigm Assessment Scale, Student Research Community.

Background to the Study
The dynamics involved in research writing and the call for improvement in research studies is acknowledged by notable authorities (Egbule, 2008; Nworgu, 1991; Kpolovie, 2011; Akinade, 2012, and Nwankwor, 2012). Other researchers have contributed contemporary findings on how to improve the research process (Pajarus, 2011; Creswell, 2011, Sally and Neolla 2011). They took lead way in the application of paradigm theories in research studies as a way of ensuring a continuum on the improvement of a more scientific method of writing a research study: a typical case of applying the paradigm theories in a research study. The paradigm theories have been seen as "theories that help the researcher to create avenues for inquiries, formulate questions, select methods with which to examine questions, areas of relevance, establish and create meaning in a research study (Pajarus, 2011). The theories are co-relates with research methodology, the pre-ordinate role while methodology is the central point of focus coming together to form a research study (Neolla and Sally, 2006).

The authenticity of a research study depends on the citations of authorities and applications of theories relevant to the study. This makes a study universally accepted by scholars and the entire research communities. Student researchers that form a sector of the university or higher education Research communities need to improve and explore the application of the paradigm theories. The classification of a research study of qualitative or quantitative and of mixed methods which is the methodology approach and the absence of appropriate paradigm theories make a study incomplete (Somekh and Cewin, 2005). The controversy in research methodology approach which makes the relevance of research paradigm theories very relevant, as "Arising from the dichotomy between qualitative, quantitative and mixed methods which has been problematic for post-graduates supervisors and teachers of research methodology" (Sally et al, 2006).

The research study, therefore, needs to be coherent enough as to make meaning to the reader and scientifically acceptable, hence the need to apply and use necessary theories in the methodology and theoretical framework is very essential for student researchers.

However, paradigm theories have not yet gained wide acceptance but its scientific connotations give it a green light for popularity amongst student researchers as paradigm theories help the researcher in the following ways.
1. Create avenues for inquiries.
2. Formulate questions.
3. Select methods with which to examine questions.
4. Design areas of relevance.
5. A puzzle-solving tool.
6. A guide for research.
7. An emergency for solving anomalies.
8. Paradigm theories are responsible for prices.
9. Paradigm theories as a change of worldviews (Pajarus, 2011).

Theories, therefore, cannot be seen in a vacuum but as an emergency and impact of education which all student researchers tend to acquire in any area of study. Education, therefore, can be seen as the sum total of scientific research which is embedded in any research since it involves testing of hypothesis. Theories, therefore, sum the basis on which hypothesis could be tested and proven, verified and accepted (Creswell, 2011).

It is also obvious that the paradigm theories seemed philosophically frowned at by most research students who tend to avoid analysis of whatever topics they research on. The paradigm theories are philosophical and are essentially a collection of beliefs shared by scientists, a set of argument about how problems are to be understood in scientific inquiries. No natural history can be interpreted in their absence and at least some implicit body of intertwined theoretical and methods of logical beliefs that permits selection, evaluation, and criticisms. Indeed paradigm theories guide the research efforts of scientific communities (Frank citing Kuhn, 2011). Eric (1990), noted that paradigm theories are very useful in research writing, they are seen as a guide for decision making and how we carry out research writing across disciplines, for instance, lawyers use Adversarial and Judgmental paradigm theories. These theories are scientific and philosophical with intent or motivation for undertaking a study.

The issues of using alternative paradigm theories like generalization granded, phenomenology theories etc are more regularly used Ojoego (2006), Oranusi (2005), Nnadi (2010), Samiavi (2010), Ibanichuckwu (2011), Utonasasi (2009), Anyuro (2011), Light Ile (2012), Okachukwu (2010), to mention a few used alternative paradigm theories in their research studies. Thus Makenze and Sally (2006) explain the confusion and misconception in the application of the paradigm theories as follows; however many University courses and research text continue to discuss research in terms of confusion which may be created for undergraduate's students, first time or early career researchers, the research process is already a daunting prospect to the inexperienced researcher and the ongoing debate and contradictory information adds to the confusion. This is further exercised by the indication that people continually ask researchers whether the research is qualitative or quantitative. An appropriate solution to this confusion will be necessary for research to progress from one stage to another.

Statement of the Problem
Student researchers currently do not reflect or mention paradigm theories. Emphasis is on mainly research design, research paradigm methodology approach which deals with qualitative, quantitative and sometimes mixed methods or a combination of both, others include the paradigm language like fundamental research, historical research, phenomenological research while

some use alternative paradigm theories like granded theory, qualitative and quantitative, generalization, epistemology, observation, action research, heuristic research (Panjarus, 2011).To enable supervision of student researchers and teachers flow easily with studies carried out by students in the university. Young, (2010) explains that educational research paradigm theories are the "theoretical base for data created by the research activities which are in turn created by the research design".

The need to improve research writing, makes it more meaningful and have a worldview of the study by students researchers to this, Willies (2007) in his piece as a worldview outlined paradigm theories as more in touch with reality, gives reasons or purposes for doing research, pointing out the different data, methods as valuable, meaningful and indicates relationship between research and practice.

Student researchers have needed to include paradigm theories in research studies to make explicit and relevance their use in university research communities. Mac-Naughton (2001) sees paradigm theories as a method that guides research and practice in a field. Iketaku (2011) explain research as a study that is aimed at discovering, corrections, interpreting new facts or modifying, revising or verifying accepted theories based on new information. Anaekwe (2007) also adds that when research is geared towards unraveling instructive problems, educational research is implied.

Student researchers need to know how to apply the paradigm theories in research studies. This refers to science, arts, and social sciences. Ikehi (2013) explains educational research as empirical, theoretical, cumulative objective, verifiable and replicable. Noella citing Martins (2005) and Creswell (2003) emphasized the pattern paradigm theories should be in research writing as classification, and secondly matching research paradigm, paradigm approach method, and tools. Orluwene et al (2008) citing Nworgu (1991) explains that when research employs a systematic approach and a scientific method it is said to be a scientific research. And when a scientific method is applied in education it is called educational research.

Objectives of the Study

The study intends to achieve the following research objectives.

1. To ascertain the attitude of student researchers towards the use and application of educational research paradigm theories in a research study.

2. To ascertain whether the faculty type influences the attitude towards the application of educational research paradigm theories in research studies.

3. To ascertain whether a difference exists between student researchers in different Universities, on attitude towards the application of educational research paradigm theories in research studies.

Research Hypothesis

1. There is no significant difference between student researchers with the positive and negative attitude towards the application of educational research paradigm theories in research studies.

2. There is no significant difference in the attitude of student researchers in Arts, Science and Social Science towards the application of educational research paradigm theories in research studies.

3. There is no significant difference between the attitudes of student researchers from the four different universities towards the application of the educational research paradigm theories in research studies.

Literature Review

The four educational research paradigm theories are;

1. Positivist |Post positivist | Anti positivist
2. Constructivist |interpretive
3. Transformative
4. Pragmatic

These theories were made popular by Thomas Kuhn an American scientist & philosopher in 1962 and later by Frank Pajarus in (2011). Kuhn defined these theories as "essentially a collection of beliefs shared by scientist, a set of

argument about how problems are to be understood, in scientist inquiries" Kuhn also deduced that, no natural history can be interpreted in the absence of these theories at least some implicit body of intertwined theoretical and methods that include logical beliefs that permit, solution, evaluation, and criticism. Indeed, Paradigm theories guide the research efforts of scientist communities.

Positivist Paradigms/ Post Positivist/ Anti-Positivist Paradigm Theory
This paradigm theory was propounded by a French philosopher AugushComte, he based it on observation and reason as means of understanding human behaviour. He believes that time knowledge is based on the experience of senses which can be obtained by observation and experiment, which can only be understood within the framework and principles of assumption of science which are determinism, empiricism, parsimony and generality (Dash 2011).

Determinism according to Comte (2011) means that event is caused by other circumstances; hence prediction and control are necessary to understand the causal link. Empiricism means the collection of verifiable empirical evidence to support theories or hypothesis. Parsimony means explaining the phenomenon in the most economical way possible. Generality is the process of generalizing the observation of the particular phenomenon in the research community and the world. Anti-positivist emphasizes that social reality is viewed and interpreted by the individual according to the ideological position possessed. It also states that knowledge is personally experienced and not acquired or imposed by others.

Ignon (2011). This theory is supported by three schools of thought in social science research. They are phenomenology ethno methodology and symbolic interactionism in which all emphasize human interactions on daily bases. Phenomenology is based on the belief that the individual behavior is determined by the experience gained out of an interaction with the phenomena. Ethno methodology –developed by Harold Garfinkel –deals with the world of everyday life and that theoretical concern is centered around the process of common sense reality construction in everyday interactions. Symbolic interactionism by Dewey, Cooley & Mead (2006) is based on "the understanding and interpretation of interactions that exist

between human beings. The concern of this approach is that human beings interpret and define others actions rather than merely reacting to each other's actions. These two theories Positivist and Anti-positivist gave rise to critical theory. The critical theory was propounded by Jungen Hagerman (2000) on investigation and action in social science, in history for historical forces that restrict human freedom and revealed the ideological justification behind such force.

They were later built on a typology of interest, which are technical interest, practical interest, emancipating interest. Critical theories suggest two kinds of research methodology namely, ideology critique and action research, Rashdi (2011) citing Cohen et al (2000).

Selection of Research Paradigms and Research Methods

Table 1: Selection of research paradigms and research methods

Research paradigms	Research approach	Research methods	Examples
Positivism	Quantitative	Surveys: Longitudinal,	-Attitude of distance learners towards online based education
		Cross-sectional, Correlational; Experimental, and Quasi-experimental and Ex-post facto research	-Relationship between students' Motivation and their academic achievement. - Effects of intelligence on the academic performances of primary school learners.
Anti-positivism	Qualitative	Biographical; Phenomenological; Ethnographical; Case study	-A study of autobiography of a great statesman. -A study of dropout among the female students. -A case study of a open distance learning institution in a country
Critical theory	Critical and action-oriented	Ideology critique; action research	-A study of development of education during the British rule in India -Absenteeism among standard five students of primary school

Although, each of the paradigms have corresponding approaches and research methods, still a researcher may adopt research methods cutting across research paradigms as per the research questions she proposes to answer.

Constructivist/Interpretive

This theory was propounded by Edmund Harssel's in the 20th century deduced from human experience. This theory deals with the creative

tendencies of man and the ability to apply all that is learned in our own way. In other words, it means the way we understand them and interpret them' the theory relies on the participant view of the situation being studied and recognizes the impact of the researcher's background and experiences. These involve research studies though are student-centered not teachers centered, Creswell (2003). Examples of such research topics are:

i. Predicting musical performance among students
ii. Some correlates of locus of control among student.
iii. The attitude of the student towards the study of English and Mathematics in Secondary Schools.
iv. Continuous assessment as motivation for students' performance in schools.

Transformative Education Paradigm Theory
This theory is based on research that addresses issues of social injustice and marginalized people (Martins, 2010). This theory is based on the belief that, inquiry needs to be intended related to politics and political agenda for a change in the society (Pajarus, 2011). In the 1980's & 90's, more people began to see that existing paradigm at that time that positivist and constructivist paradigms theories did not address issues of marginalized people and contained an action agenda for reforms (Makenze and Sally, 2006). It based its research approach on qualitative, quantitative and mixed method and prefers the last in analyzing data.

Pragmatic Educational Research Paradigm Theory
This theory is traced to pragmatists like John Dewey, William James, and Charles Sender Pierce. This theory is based on influence on the field of public administration. In the 1990's, feminist philosophers discovered classical pragmatism as a source of feminist theories in research studies. Such female pragmatist was Duran Keith, Whipps, and Siegfried. Neolla and Sally citing Creswell (2003) explain this paradigm theory as "pragmatism is not committed to any one system of philosophy or reality". Pragmatist researchers form on the what and how of the research problem and use mostly sociological methods. This theory is also defined as "the illustration of the logic of science including the fixation belief and how to make our ideas clear" (Charles, 2010).

These four theories are made simplified as they make sense in their approach and presentation on how they are to be used by Neolla and Sally (2006) citing Martins (2005) and Creswell (2003) as follows:

Table 2.

S/No.	Positivist	Interpretivist/ Constructivist	Transformative	Pragmatic
1	Experimental	Naturalistic	Critical theory	Consequence of actions
2	Quasi-experimental	Phenomenological	Neo-Marxist	Problem centered pluralistic
3	Correctional	Hermeneutic	Ferminish	Pluralistic
4	Reductionism	Interpretivist	Critical race theory	Real world practice oriented
5	Theory verification	Ethnographic	Frerean	Mixed methods (qualitative and quantitative)
6	Casual comparative	Multiple participant meanings	Participatory	
7	Determination	Soval and historical construction	Emancipatory	
8	Normative	Theory generation	Advocacy	
9		Symbolic interaction	Grand narrative	
10.			Empowerment issue oriented	
11.			Change-oriented	
12.			Interventionist	
13.			Queer theory	
14.			Race specific	
15.			Political	

Methodology

This study utilized the survey design. According to Basavanthappa (2010) states that survey design is used because it deals with the research that the characteristics, behaviour, attitude and intentions of a group of people by asking individuals belonging to that group to answer a series of questions. Also this design was used because the study surveyed the student researcher's attitude towards the application of educational research paradigm theories in research studies in four universities in South South

geographical zone in Nigeria. Also a scale relating to application of educational research paradigm theories was administered to student researchers.

Population of the Study

This study was carried out in four Universities in South South Geographical zone of Nigeria. There are University of Port-Harcourt, University of Uyo, Niger Delta University and University of Calabar. The population of study was 780 comprising student of post-graduate studies in the year 2007/2008 study graduate of 2007, 2008/2009 Academic Sessions.

Sample and Sampling Technique

This study adopted the purposive sampling technique used to sample size of 120 research students. This study adopted the suggestion provided by Gay, Mills and Arasian (2009) that 10% of the total population can be used by the researcher, especially if the research adopted the descriptive survey research design. To these effect 76 research students were sampled.

An instrument name Research Student Attitude towards application of educational research paradigm theories scale (RPAS) was generated by the researchers. The scale was scrutinized by expert in measurement and evaluation. The scale was tested and had reliability co-efficient of 0.82. Demographical data were school, gender, faculty and course of study. 20 items were developed on a 4-point Likert Scale of SA-Strongly, A-Agreed, D-Disagreed, and SD-Strongly Disagreed. The scale was scored as SA (4), A (3), D (2), SD (1) on positive statements, while the negative statements SA (1), A (2), D (3), SD (4). 25 and above was scored as positive attitude towards the application of educational research paradigm theories. While below 25 was scored as negative attitude towards the application of educational research paradigm theories.

Method of Data Analysis

Collection and scoring of data was done manually and data was analyzed using ANOVA and T-Test. Using SPSS version 0.15, t-test was utilized for analyzing hypothesis 1 & 2 while ANOVA was used for hypothesis 3

Data Interpretation and Analysis

Hypothesis One: There is no significant difference between research students with positive and negative attitude towards the application of educational research paradigm in research study.

Table 3: -t-test Analysis of attitude towards the application of educational research paradigm theories by student researchers in research studies in Universities South South geopolitical zone of Nigeria.

Variables	N	X	Sd	Df	t-cal	Et	Table	Decision
Positive attitude	233	51.24	13.140					
Negative attitude	614	52.27	12.392	294	1.68	2.56	N	Null hypothesis retained

Table 3 indicate that the calculated t-test value of (1.68) is less than the t-test table value of (2.56) which signifies that there is no significant difference between student researchers with positive attitude and student researchers with negative attitude towards the application of educational research paradigm in research studies.

Hypothesis two: There is no significant difference on attitude of student researchers of Art, Science and Social Sciences towards the application of educational research paradigm in research.

Table 4: t-test Analysis attitude of student researchers of Art, Science and Social Sciences towards the application of educational research paradigm theories.

Variables	N	X	Sd	Df	t-cal	Et- Table	Decision
Arts	455	56.47	13.311	292	0.22	1.86	
Science	154	53.80	13.130				Null hypothesis retained
Social Science	156	51.41	12.130				

Table 4 indicates that the calculated t-test value of (0.22) is less than the t-test table value of (1.86) which implies that there is no significant difference in the attitude of student researchers of arts, science and social sciences towards the use and application of Educational research paradigm theories in all four universities of South South geopolitical zone in Nigeria. The null hypothesis was retained.

Table 5: Analysis of variance (ANOVA) on attitude of student researchers for four universities on application of Educational research paradigm theories

Source of Variance	Sum of Squares	Df	Means Squares SS	Cal F-ratio	Critical F-ratio
Between Groups	131.2481	3	44.0827		
Within Groups	8111.2119	263	26.4300	1.622	2.582
Total	8242.46	269			

Table 5 implies that the calculated F-value of (1.622) is less than the critical F-value of (2.58) at 0.05 level of significance. Therefore, there is no significant difference in the attitude of student researchers towards the application of educational research paradigm theories in all four universities in Nigeria and all the null hypothesis was retained.

Discussions of Findings
Hypothesis one states that there is no significant difference between student researchers with a negative and positive attitude towards the application of educational research paradigm theories in research studies. This, therefore, means that student researchers have a negative attitude towards the use of educational research paradigm theories. This is true as most theses by student researchers reviewed by the researcher merely mention alternative theories like generalization theories, ethnographic theory Granded theory etc. Also, the mentioned paradigm approach like qualitative, Quantitative and mixed methods and went on to mention the research design. Tesch (1990) classified paradigm language as, content analysis, discourse analysis, ethnographic communication, ethno methodology, even structure analysis etc.

Hypothesis two results exposed that there is no significant difference in attitude of student researchers in Arts, Sciences and Social Sciences in the application of educational research paradigm theories. This implies that their

attitude is negative. This corresponds with the findings of Pajarus(2011) citing Kuhn (1962) that there is a need to mention educational research paradigm theories, to make research study in all faculties a complete research study. As Bryka (2001) explains negative attitude as a disposition that needs more awareness for implementation.

Lastly, Hypothesis three explains that there is no significant difference in research students of the different four universities on the use and application of educational paradigm theories. This implies that in all the four universities, they maintained a negative attitude towards the use and application of educational research paradigm theories.

Campbell (1963) theories on inconsistency as a valuable tool on attitude influence to a large extent explain the case of the use and application of the paradigm theories in research studies. Kazeem (2012) states that an area of study or faculty of study can affect the acceptability to apply or teach a particular theme or apply a new approach in a study while those in measurement and evaluation can easily apply a new approach in research studies.

Conclusion

As reflected in this research study, it is glaring that student researchers need to embrace the use of educational research paradigm theories in the research study not minding the area of study or department or faculty be it Arts, Science or Social Science, all universities would embrace a new systematic way of research writing as it will go a long way to improve research writing and make a more meaningful and accepted worldview. Therefore, it is pertinent to say that the educational research paradigm theories are not applied as a result of unawareness and the unpopularity of their importance in research studies.

Recommendations

1. All departments in a faculty should introduce the application of paradigm theories to make a research study more intense and to embrace the realities of change as a dynamics in life.
2. The curriculum for the tertiary institution should include the teaching of paradigm theories in the core course on research methodology as the inclusion of this paradigm; theories will make research work more complete and interesting.

3. Since theories are important to cite in the theoretical framework and in the methodology as the case of the educational research paradigm theories, it will enhance the productivity of research study as each of the educational paradigm theories make more meaning to our present-day lives and can be adopted as ones personal guide towards daily application on the activities that we carry out.
4. Research bodies should organize seminars and conferences where these educational research theories awareness and importance in research studies will be properly explained.
5. The National Association for Researchers Studies & Research Methods in measurement and evaluation should ensure that the paradigm theories are accepted and pursued in all universities by supervisors of students Researchers that will make use of them as a necessity in order to make a research study complete refined and more meaningful.

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Chapter **9**

The Role of Science Education in Good Governance, Peace Education and National Security in Nigeria

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Abstract

Nigeria, the global capital of extreme poverty, the 16th most dangerous nation in the world and the 33rd among 54 Africa nations in good governance is obviously in dire need of potent tools to stem poverty and insecurity, and to enhance good governance. The focus of this paper therefore, is on how science education can be utilized as a potent tool to develop and promote good governance, peace and national security. Firstly, the paper provided overviews of concepts such as science, education, science education, peace education, good governance, and national security. Secondly, the paper x-rayed the relationship between national security and good governance, national security challenges and the need for peace education. Thirdly, the paper examined the roles of science education as a panacea for security challenges and sustainable human development in Nigeria. Lastly, before conclusion and recommendations were made, the paper discussed how to utilize science education to enhance good governance and national security. It was recommended in the paper that stakeholders in the education industry should establish robust synergy with the political class

to guarantee effective utilization of science education for good governance, peaceful coexistence and sustainable development in the nation.

Keywords: Science, Education, Integration, Security, Good Governance, Peace Education**.**

Background to the Study
Science: Science is a specialized body of knowledge, involved with the study of nature, in which certain peculiar methods are used and the knowledge acquired presented in the form of concepts, theories and law (Ayo, 20003). Science is also defined as an attempt by human beings to organize their experiences about nature into meaningful systems of explanations. (Ogunniyi, 1986). Science has made tremendous impact in our world to such an extent that; modern man now tends to see science as an integral component of modernity. Science has helped man in improving his environment and supplying his basic needs. This is of course a clear indication that the economics, social and political growth of a nation or society is predicated on scientific and technological advancement. Science has made tremendous impact in our world to such an extent that modern man tends to see science as Almighty. (Ejechi, 1999).

Education: Education as a lifelong process by which individual   develops all his capabilities and become useful to himself, his fellow beings and thus contribute to the development of the society in which he belongs (Taiwo, 2014). It is equally the process of receiving or giving planned instruction in educational institutions. According to Wikipedia (n.d.) education started during the prehistory era during which adults train children knowledge and skills considered to necessary using oral and imitation methods only. Today education has evolved from oral transmission of knowledge and acquisition of skills by imitation into an interdisciplinary discipline.

Peace Education: Peace education is the process of acquiring the values, the knowledge and developing the attitudes, skills, and behaviours to live in harmony with oneself, with others, and with the natural environment (James, 2008). Peace education encompasses the key concepts of education and peace. Negative peace is defined as the absence of large-scale physical violence–the absence of the condition of war. Positive peace involves the development of a

society in which, except for the absence of direct violence, there accordingly, peace education could be defined as an interdisciplinary area of education whose goal is institutionalized and non institutionalized teaching about peace and for peace. Peace education aims to help students acquire skills for nonviolent conflict resolution and to reinforce these skills for active and responsible action in the society for the promotion of the values of peace. Its aim is to prevent a conflict in advance or rather to educate individuals and a society for a peaceful existence on the basis of nonviolence, tolerance, equality, respect for differences, and social justice.

Good Governance: Good governance is a system of government based on good leadership, respect for the rule of law and due process, the accountability of the political leadership to the electorate as well as transparency in the operations of government (Odock, 2006). It is governance that provokes and defines the nature of security. When there is governance failure, the security frame work deteriorates. Good governance is able to provide growth and structural change which result in development. Such structure includes schools, judiciary, military, and parliament. When the resulted structural change performs their roles properly, there will be security and the good governance will further be enhanced.

National Security and Good Governance
National security covers all activities and arrangements put in place to ensure free movement, integration and interactions among citizens without any real or imaginary danger and obstacles such as gender, racial, tribal or religious discrimination. The level of insecurity in the nation today calls for sober reflection by all particularly, in view of the fact that Nigeria is ranked 148 out of 163 nations in the 2019 Global Peace Index. The nation is also, one of the top five least peaceful countries in Africa; this means that Nigeria is one of the most dangerous nations in the world. National security is in jeopardy. Insecurity comes in different coloration and magnitude among which include the spate of bombings in some parts of the country, election related crises, kidnapping, human trafficking, banditry, terrorism, political assassination, extra- judicial killing of innocent citizens by security agents, hunger, armed robbery, and environmental degradation among others. All these have thrown up the need for all and sundry to be more retrospective, introspective and proactive on issues of national security so as to arrest this negative drift currently impacting

our national psyche. Some of these security issues have been with us for some time now without fizzling out despite concerted efforts to the contrary (Orikpe, 2013).

The concept of good governance is ages old rather it is as old as civilization itself. History reveals that empires destroyed, states broken up regimes vanished because of bad governance. This implies clearly that good governance is the key ability of a government to maintain control over a state. Terrible consequences of bad governance can be seen in the recent history. Good governance should, and it must result in decision making that is fruitful and beneficial for the masses and through which they feel secure and participative as if they themselves would have made those decisions security is comprised of three basic factors, traditional security in a militarized sense, human security that comes from economic progress and good governance and finally the rule of law.

It is imperative to note here that major responsibility of a state is security. Understanding security in totality is important. Words "security" and "threat" are cognate words. Source of insecurity should carefully be analyzed to determine the focal points of national security strategy for any state. It is certain that security is not a standalone concept and especially it cannot be separated from governance. It is important to note that governance is not limited to development rather it encompasses all the sectors of human society that ensure quality of life for a human being. Most time security has been considered as physical means of protecting sovereignty of a state but in Westphalian model, security is constructed parallel to the protection of social order (Bislev, 2004: 282).

Link between security and good governance is vital since good governance enhances justice, equity and equality, thereby helps to prevent conflict and therefore, ensures peace coexistence and prosperity. There is this popular saying that, "People who feel secure and free, governed by the rule of law and not of men, are much less likely to go to war with each other - either within or across borders, than those who don't". it is clear that if government is responsive to the requirements of its people and is properly and justly utilizing resources whatever available to the benefit of its population will strengthen its bond with people and will lead to a strong internal structure that will help

promote and sustain a national security policy based on consensus and support of the masses. If not this condition, bad governance will lead to insecurity that will lead to instability and that would certainly affect national security of a country negatively. The improvements in good governance are directly linked to security and stability. (Fung & Wright, 2001: 6). If governance strategy of a particular government is the consolidation of political structures and the establishment of legitimate democratic institutions, power-sharing and promotion of human rights along with provision of such free and dynamic environment that is friendly for development and is corruption free then peace and prosperity will prevail.

Governance encompasses the states institutional and structure arrangement, decision making process and implementation capacity and the relationship between the governing apparatus and the governed, that is the people in terms of their standard of living (George – Genyi, 2013.) It is also the exercise of political power in the management of a nation's affair, (World Bank Report, 198). Good governance is also seen as system of government based on good leadership, respect for rule of law and due process, and the accountability of the political leadership to the electorate as well as transparency in the operation of government (Odock 2006). Good governance is characterized by high valued qualities such as accountability, transparency; rule of law, human and civic sensitivity, active participation, due process and good leadership. These governance qualities have the ability to provide structural development process of a country in other to survive. Such structures include schools, industries, military, electric power, courts, health care and clean water. The status of a state is reviewed as failed or collapsed when it exhibits inability to fulfill the functions of a state such as the sovereign authority, decision ++ making Institution and security generator for its population (Zartman, 1995).

National Security Challenges and Peace Education
National security is a top public issue today. It is a matter of national importance that should be of concern to all stakeholders in the Nigerian State. National security cannot be narrowed down to defense and military might alone. It is wider than that. It is this narrow conception of national security that forms the basis for the disproportionate budgetary allocation of funds as the case is, to "ensure the security of lives and property", however, to the neglect of other equally important sectors of the economy that bear directly or indirectly

on national security. Such sectors as education, health, agriculture etc become poorly financed.

National security as the ability of a State to overcome any form of its challenges no matter what the challenge is (Iredia, 2011). National security is wider than military might, defense or law enforcement and pointed out other rather basic dimensions like employments, water supply and food security; therefore national security policy would be of no use to the unemployed and hungry citizens if they constitute the majority of the citizens (Iredia, 2011).

National security is considered as the major challenges confronting the nation include political and electioneering conflicts, ethno-religious crises, ethnic militias, boundary disputes, cultism, criminality and organized crimes (Abubakar,2005). Nigeria is today plagued with social disorder, insecurity, poverty, illiteracy, balance of payment deficit, poor health statistics, ethnic and religious conflicts, corruption, crime and criminality and political crises (Oshio,2009). These mean that we are very insecure in terms of human wellbeing. The problems, individually and collectively constitute threats to the peace, security and development of the country. Invariably, they have implications for the continuity and survival of the
nation's democracy.

Iredia (2011) sees this conception as microscopic and quickly points out that national security cannot be equated to military might, defense or law enforcement alone. It goes beyond that to accommodate far more reaching issues. Elaborating more on this, Esiemokhai (2010) averred that in states where the interest of the ruling elite is put above that of the people, the police, the army and security formations are expected to defend the government, its personnel and its property. In a populated and poor country like ours, recent social unrests in various African countries no doubt have roots in the failure of the government policies to provide or manage the basic human physiological needs of their citizens. In recent times, Nigeria has witnessed increasing number of security challenges that constitute threats to the cooperate, existence of its citizens and to the maintenance and survival of its democratic political system. These security challenges are diverse and complex, ranging from political disagreements to criminal activities with alarming dimensions and consequences. The spate of target bombings by the Boko Haram sect is a big

security challenge to the Federal government, the affected states and the entire nation.

Science Education: Panacea for Security Challenges in Nigeria

Education has earlier been defined as a process by which individuals are assisted formally through proper direction and guidance to develop their capacities for their own benefits and that of the society. It therefore follows, by a simple logic, that if a nation bequeaths the right type of education to its citizens, the citizens will not turn against their father- land. Daily Sun (2013) reported the former minister of Education, Professor Ragayyatu Rufai as having identified reform of the education system as the solution to the security challenges confronting the nation.

There is need for a total overhaul of the curriculum at all levels of education with a view to providing its recipients, broad based education in the development of the mind, soul and body; and in comprehending the environment and in the development of appropriate attitudes, skills, abilities and competences to co-exist with and contribute to the development of the society. This calls for a synergy between science education, liberal education, vocational and entrepreneurship education. A liberal education is one that frees the minds of its recipients from their preconceptions. It broadens the possibilities for greater understanding of others in our nation and around the world (Forum Futures, 2007).

Institutions should try to train future workers to help States' economies and to offer liberal education so as to produce informed citizens who can contribute to our democratic way of life. Every sovereign, independent state must train, sustain and nurture men and women to serve in its security and intelligence out fits. According to Esiemokhai (2005), in Europe and America, these men and women are selected from the best and the brightest citizens, who are endowed with keen and subtle intellect. Recruitment into defense and military intelligence outfits needs scrupulous assessment of the recruit's educational background, intellectual sharpness, smartness and patriotism. Graduates with the best grades should be deployed not those who got ranks by the federal character formula. It increases the potential for individuals to perform as citizens. There are many examples of the public being misinformed and making bad decisions. However, without education, the situation would be

vastly worse. It gives one the ability to critically examine an issue and articulate a reasoned position about it. Nurturing critical thinking is a key component of education.

The introduction of Vocational and Entrepreneurship programmes into the curriculum at the various levels of education in Nigeria is a welcome innovation that goes a long way to strengthening the popular liberal education. What is required by the government at various levels now is to adequately provide the needed human and material resources to make these programmes effective and functional. It is no longer news that liberal education alone has failed to equip recipients / youths with requisite skills and attitudes for leading a productive life. It is also no news that graduates of our institutions of higher learning have been populating the crime world due to their inability to secure meaningful employment upon graduation.

Science and Sustainable Human Development
Science is a specialized body of knowledge, involved with the study of nature, in which certain peculiar methods are used and the knowledge acquired presented in the form of concepts, theories and law (Ayo, 20003). Science is also defined as an attempt by human beings to organize their experiences about nature into meaningful systems of explanations. (Ogunniyi, 1986). Science has made tremendous impact in our world to such an extent that; modern man now tends to see science as almighty.

Science has made tremendous impact in our world to such an extent that; modern man now tends to see science as almighty. It has indeed triumphed over superstition and other forces (Ejechi, 1999). It is a widely held belief that, science differs from other disciplines in a number of features these features which are used in defining science include:

   i.   The methods (technical and integrated);
   ii.   The products (scientific facts, concepts, generalization and theories);
   iii. The process (basic and integrated);
   iv.   The ethics (objective, careful, observation and determination)

   1.   Science provides meaning and explanations for events in nature, such as rainbow formation, thunderstones and hurricanes.

2. Science provides meaningful and relevant knowledge of facts concepts, theories and laws of events situations and phenomena of nature.
3. Science inculcates in individual's strict scientific procedural principles of careful observation, faithful recording and collation or reporting of data; detailed and unbiased analysis and accurate inferences on which sound conclusion can be based.
4. Science teaches a number of peculiar attitudes and behaviours which have their basis in the ethics of science, such as objectivity, humility and open mindedness.
5. Science is of importance in providing such as medicine, pharmacy and agriculture
6. Science is particularly importance in being of relevance to the provision of the primary necessities of life such as food, shelter and clothing.
7. Science is of relevance in meeting the environment needs of man
8. Science is relevance in many hobbies such as gardening, poultry and painting
9. Science provides education on a number of peculiar social problems of man such as alcoholism, drug abuse and sex abuse.
10. Science also contributed in a small measure to the development of human culture and on improvement of life of mankind through the following area: medical science, agriculture, engineering and transportation. (Ayo, 2003).

The importance of science to humanity cannot be over emphasis. It uses and application can be felt in all sphere of life both in governance and security. In Carl Sega quote: advances in medicine and agriculture have saved vastly lives than have been lost in all wars in history.

Utilizing Science Education to Enhance Good Governance and National Security
Science has tremendous influence on our world to such an extent that modern man tends to see science as almighty. The impacts of science to humanity have resulted in development in all sphere and endeavour. The developmental results of science have improved knowledge and help in better understanding of nature and proper application of it has better on our society tremendously.

Education has thus been defining as a lifelong process by which an individual develops all his capabilities and become useful to himself, his fellow beings and thus develop society in which he lives (Taiwo, 2014).

Science is a developmental product of education aimed at individual, fellow being and society in which he belongs. Science education is the application of scientific methodology in education. The present era is commonly referred to as the age of technology. This is of course a clear indication that the economics, social and political growth of a nation or society is predicated on its scientific and technological advancement. Science has helped man in improving his environment and supplying has basic needs such as food health, shelter and clothing as well as other needs like recreation, transportation and communication. (Ejechi, 1999).

U7Governance and security are separate concepts, yet they have a relation. To be precise, it is governance that provokes and defines the nature of security. It is apparent that, there is deficit in the governance process but this can be corrected through full integration process of governance with the concepts of science. In Elbert Hubbard statement: *the church saves sinners, but science seeks to stop their manufacture.*

For a nation or society to develop, there is need for scientific development. Any nation that ignores it usefulness will be doom stagnation and retrogression. In frank press statement: *in a nation whose people depend on scientific progress for their health, economic gains, and national security, it is of the utmost importance that our students understand science.*

For any nation to develop scientifically there is need to educate the citizen to understand and appreciate science and apply its knowledge and technical know-how effectively and useful. There is need to integrate scientific knowledge in teaching pupils and our students from elementary stage to tertiary level to know and appreciate science.

In George porter statement: *should we force science down the threat of those that have no taste for it? It is our duty to drag them kicking and screaming into the twenty-first century? I am afraid that is it,* the importance of science to man is enormous, governance and national security will be in deficit without full integration of science. Let me end the with Williams James note: *man lives for science as well as bread*

Purpose of the Paper

This main purpose of this paper is to elucidate the potency of science education as a tool for enhancing good governance, sustainable national development and stem insecurity and extreme poverty in the nation.

Objectives of the Paper

The specific objectives of this paper were as follows:

1. Examine the concepts of Science, Education, Science Education, Peace Education, Good Governance, and National Security;
2. Discuss the relationship between national security, and good governance and the need for peace education;
3. Examine the roles of science education as a panacea for security challenges and sustainable human development in Nigeria; and
4. X-ray how to utilize science education to enhance good governance and national security.

Statement of the Problem

Nigeria is currently experiencing enormous inter woven socio-economic, political, climate and security challenges than ever before. The challenges seem to have overwhelmed the government at all levels of governance and tend to make the nation a failed state. For instance, Nigeria is ranked 148 out of 163 nations in the 2019 Global Peace Index. The nation is one of the top five least peaceful countries in Africa (Sahara reporters, 2019 June, 16). This means that the nation is one of the least peaceful places on earth. Nigeria is the 144th least corrupt nation out of 180 according to the 2018 Corruption Perceptions Index reported by the Transparency International (2019, July 11). In addition, Nigeria is now the global capital of extreme poverty according to the World Poverty Clock (2019).In the area of good governance ranking, the nation is in 33rd position out of 54 African nations (Mo Ibrahim Foundation, 2018).

Literature abounds in the field of science education, most of which were empirical studies focusing on instructional strategies and students' performance in sciences. There are also, many non-empirical studies and position papers in the field of science education that focuses on how the potential of the discipline can be used to promote sustainable socioeconomic development in the nation. However, there seems to be relative dearth of literature addressing how science education can be used to address good

governance, extreme poverty, sustainable socioeconomic development and insecurity in an integrated manner.

Conclusion

It is apparent that, there is deficit in the governance process which has resulted in insecurity, starvation, poverty unemployment, injustice, inequality and absence of ingredients of life. These deficits can corrected through full integration process of science. The impacts of science to humanity have resulted in development in all spheres of life and endeavour. This is of course a clear indication that the economics, social and political growth of a nation or society is predicated on its scientific and technological advancement. Any nation that ignores it usefulness will be doom to stagnation and retrogression. Good governance foster and defines and nature of security of a nation. For any nation to develop scientifically, there is need to educate its citizens to understand and appreciate science and apply its knowledge and technical know-how effectively and useful, in other to correct the deficits of governance. There is also need for government to provide science friendly environment in our schools, technical and vocational centre, such as well-equipped laboratory. The importance of teachers training and retraining on the latest methods and technology cannot be left out, researches should be encourage and well-funded. There is need for government to provide other functional structures such as judiciary, military, and parliament. When the functional structure are integrated with science, there will be further enhanced. There are unrests of various shades and hues in different states of Nigeria, borne out of equally diverse causative factors. This paper has identified different national security challenges. All these threaten the very existence of the nation

There are security problems posed by natural disasters e.g. flooding, desertification etc; and from youth unemployment. We also have security threats from hunger and filthy environment which can lead to such deadly diseases as malaria, diarrhoea, typhoid and Lassa fever etc. There is no doubt that the security situation in the country calls for extraordinary measures to combat it. It will need a transformation in the way we think and in the way we look at one another. The education option comes in handy for the desired transformation. It may take a long time and huge resources to achieve but the end is certainly going to justify the means. Nigerians should perceive the education most especially science education option as a new way to reduce the

sophistication of crimes and violence that are threatening national integration and security

Recommendations

Sequel to the revelations and implications of this discourse, the following recommendations become imperative.

1. Stakeholders in the education industry should establish robust synergy with the political class to guarantee effective utilization of science education for good governance, peaceful coexistence and sustainable development in the nation. In this regard adequate funding and regular review of science education curricular at all levels of the education ladder is crucial.

2. Regular revision and introduction of innovative curricula such as in Family living Education, Science Education, Biology Education and Entrepreneurship Education will go a long way to bridging some of the existing gaps in Student acquisition of the right attitude to life and work.

3. There is need for a review of our Science Education curriculum to include critical subjects that are necessary for development of informed and well rounded citizens. There is no doubt that a good knowledge of certain subjects such as our national history and civics will help in the development of more socially aware youths, truly literate and educated citizens who understand and appreciate the nation's peculiar challenges and can situate themselves within the search for solutions to the problems. Through the curriculum used in our schools, we need to develop citizens that are truly Nigerians at heart and care about the challenges facing our country.

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Chapter **10**

Assessment of e-Learning System for Effective Teaching and Learning in National Open University of Nigeria (NOUN), Azare Study Centre, Bauchi State

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Abstract

As technology advances, the use of Information and Communication Technology (ICT) tools or gadgetries has proliferated in all areas of human endeavours which paved way for the use of electronic learning (e-learning) system in which teachers are no longer present in the physical classroom to teach their courses. This paper therefore assesses the e-learning system as a mode of teaching and learning process, relevance of its usage and challenges that hinder majority of students in its usage in learning process. This research adopted survey research design where the researchers developed questionnaire known as Questionnaire on Usage of Electronic Learning System (QUELS) was used as an instrument for data collection. The study population consists of 172 students (Male = 133, Female = 39) of National Open University of Nigeria (NOUN), Azare Study Centre. No sample was selected as population is small. The instrument was validated by experts in both fields of Computer Science and Education. The reliability index of the instrument yielded 0.82 using Cronbach alpha. The data obtained

were analyzed using descriptive statistics (mean and stand deviation) to answer all research questions while hypotheses were tested using chi-square statistics. The results showed that the use of e-learning system eases learning among the students and since course contents and materials are made available, it makes teaching and learning process be student-centered and gives the students the opportunity for collaborative learning. Challenges such as non-availability of internet services, inability of indigent students to possess portable computer devices, irregular power supply as well as cost of accessing Internet facilities were identified by the students as major obstacles facing studying electronically. In addition to these, it was observed that gender and students' age groups have influence in the usage of e-learning system. Some recommendations, such as provision of portable computer devices at subsidized rate for students, provision of alternative source of power supply and reliable internet facility by the centre, among others were suggested in the study.

Keywords: e-Learning System, Teaching and Learning, ICT, Challenges, Methodologies, NOUN.

Background to the Study

Today, the world has revolutionized into an information-driven society which characterized with the use of Information and Communication Technology (ICT) tools as a result of advancement in technology. This new development paved way for the use of electronic learning system (ELS) in our educational realm. ELS is a mode of learning that involves the use of electronic gadgetries, which can be online or offline. It is offline when students are learning on their own without connecting to internet facilities with ICT devices, while the online involves connection to internet and use of learning facilities. In the e-learning system, teacher may adopt any pedagogy while in the classroom, where interactions between teachers and students take place and location of teacher and students do not matter. Nedeva (2005) sees e-learning system as a way to use a variety of computer and networking technologies to access (often geographically remote) training materials, interact with learners, etc, with the learning management system for education.

The electronic learning system makes use of many application software and hardware/devices for its effectiveness by user. The hardware consists of

Personal Computers (PCs), Personal Digital Assistants (PDAs), smart mobile phones, to mention but a few. Students make use of PCs to read materials downloaded from learning management systems of the institution to which he or she enrolls. Teachers also make use of PCs to type and organize the lectures for students and the lectures can also be uploaded to learning management system of the institution so that students can access them anywhere and anytime. PDAs and mobile phones work like PCs too; the main difference is that the duo are more portable than either laptop or desktop computers. Commenting on the importance of PDAs, Kim, Mims & Holmes (2006) opined that PDAs help professors to organize their courses and to manage their research materials and information. In addition to this, students use PDAs to write quizzes, to view lecture schedules and to read notes. Similarly, Engel & Green (2011) pointed out that mobile phones and PDAs can be used by teachers to survey students' responses on a given topic, to give them an immediate feedback from their responses and to quickly assess their understanding of a given topic. Cell phones can also be used in a classroom to gather information from internet using tools such as web searches and social networks. In the words of Keegan (2005), students use e-mails and SMSs from their cell phones to exchange information about timetables changes, examinations deadlines and assessments results. E-mail attachments communicated through cell phones may also contain important academic or administrative documents.

Furthermore, some of the application software that can aid students in ELS includes You-Tube, video conferencing and learning management systems. On You-tube social media, different lectures on different topics and subjects available on streaming. With the aid of good and reliable internet connectivity, students can log on and download these course-lectures on their devices and later watch at their own convenience. Relating the use of audio and visual to e-learning system, United Nations Education Scientific and Cultural Organization–UNESCO (2006) asserted that combination of both audio and visual stimuli is more effective than visual stimuli alone in enhancing vocabulary and sentence construction skills and can aid information processing and memory of any student. Besides, through the use of videoconferencing, remote learners are able to engage with their tutors in interactive tutorials and practicals. Videoconferencing also paves way for remote learners to engage with their peers for group work or discussions;

postgraduate research students can use videoconferencing to discuss their research with their supervisors and researchers can present their research findings through videoconferencing in a situation where travelling to a conference is not possible for whatever reasons (Smyth cited in Ntshakala, 2016).

However, learning management system (LMS) is a software application for the administration, documentation, tracking, reporting and delivery of educational courses or training programmes via internet. With this, learners can log on with their details, interact with their e-tutors, download lesson contents or materials and as well check their academic progress at the end of each semester. In the words of Ntshakala (2016), learning management systems (LMSs) are used in education to allow educators and learners to engage in meaningful online teaching and learning activities. There are two types of learning management systems: Open Source learning management systems which are freely available online and proprietary learning management systems, which can be acquired from the market for a fee and are owned by a particular institution as its in-house developed software. Examples of contemporary Open Source learning management systems are Moodle, Sakai, a Tutor, Open Class, Blackboard Course Sites, and Google classroom.

In essence, with the use ELS, education is not restricted gender-wise and age-wise. This implies that, a student can get education without age and gender barriers. With this, a student that can feel discourage as result of age at physical school can now study online without much stress.

Research Objectives

The objectives of this paper are:
  (i)   To ascertain whether students of National Open University of Nigeria (NOUN) Azare Study centre have access to e-learning system (ELS);
  (ii) To affirm whether students of NOUN Azare Study centre enjoy the perceived ease of use of ELS; and
  (iii) To identify the challenges associated with the use of ELS among the students of National Open University of Nigeria (NOUN) Azare Study centre.

Research Questions

This study is guided by the following research questions:

(i) Do the students of National Open University of Nigeria (NOUN) Azare Study centre have access to e-learning system (ELS)?

(ii) Do the students of NOUN Azare Study centre enjoy the perceived ease of use of ELS?

(iii) Are there any challenges associated with the use of ELS among the students?

Hypotheses

These hypotheses were formulated to guide this research:

Ho$_1$: Gender has no influence in the use of e-learning system among the students of National Open University of Nigeria (NOUN), Azare Study Centre.

Ho$_2$: Students' age groups do not have any influence in the use of e-learning system among students of National Open University of Nigeria (NOUN), Azare Study Centre.

Theoretical Framework

The study adopted Technology Acceptance Model (TAM) which was proposed by Davis in 1989 and it is shown in Figure 1. In the TAM, there are four constructs, namely; perceived usefulness, perceived ease of use, attitude toward usage which is also known as behavioural intention to use and actual system use (Davis 1989). This model is related to this work as follows:

(1) **First Construct -Perceived Usefulness:** This implies that for any technology that is being produced, there is an associated perceived Usefulness. It is this construct that will entice the user of such technology to acquire and start making use of it.

(2) **Second Construct-Perceived Ease of Use:** In this construct, it is expected that produced technology devices should be easier in usage. The aim of any produced technology is not achieved if it is complex to use.

(3) **Third Construct - Attitude Toward Using:** This means that a user may use produced technology or device in either positive or negative way. This construct depends on individual difference.

(4) **Fourth Construct - Actual System Use:** This is the real usage of the produced technology or device. That is to say putting the exact technology into usage.

The X1, X2 and X3 indicate interactions of the users within the system which can lead to user motivation if it is used appropriately. All these four constructs are also applied to E-learning system.
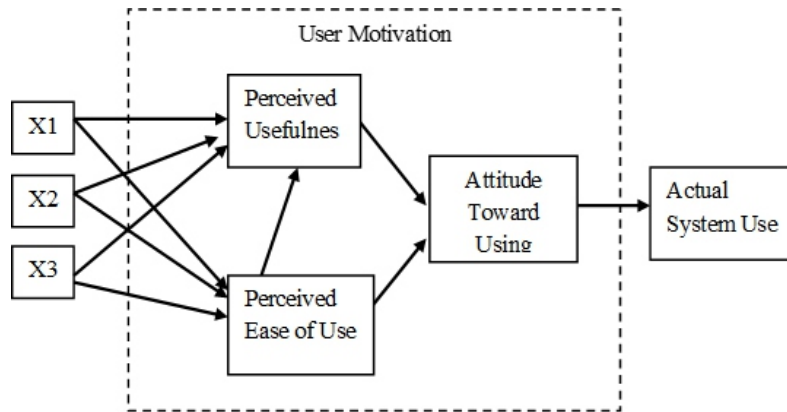
Figure 1: Technology Acceptance Model (TAM). Source: Davis, (1989)

Conceptual Framework

This work is built on the conceptual framework shown in figure 2 below. Electronic Learning System (ELS) as a product of technology adapts to the construct proposed by Davis (1989). In an ELS, a user needs to gain access to both tools and reliable Internet. Having gained access to Internet connectivity via connected tools and devices, users can then easily make use of perceived usefulness associated with E-learning system, which is actual system use.

Figure 2: Conceptual Framework of the Research

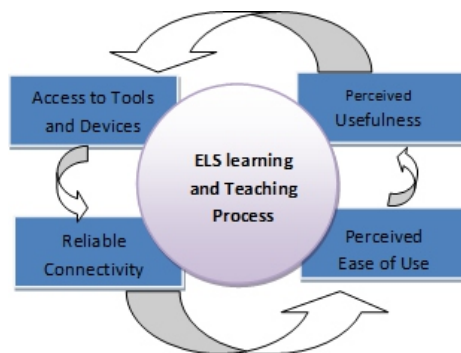**Research Methodology**

This research is a descriptive research of the survey type. The survey involved the use of a researcher-designed questionnaire, known as Questionnaire on Usage of Electronic Learning System (QUELS) to collect necessary information on student. The population for this study comprised all 172 (133 males and 39 female) students in Azare Study Centre of NOUN.

The questionnaire consisted of two sections; A – consists of respondent's age, sex and faculty, while B consists of statements that solicit for respondents' responses on access to ELS; Usage of ELS and Challenges of ELS. The questionnaire items were face-validated by two experts. One was from the field of Measurement and Evaluation while the second was from the Computer Science Education Department of Federal College of Education (Technical), Potiskum, Yobe State. The items were trial-tested to ascertain their consistency among some students of Aminu Saleh College of Education, Azare, Bauchi State and data obtained were analyzed using Crobanch alpha test of reliability, which yielded 0.82. In order to ease the work of researchers, two research assistants were employed to assist in questionnaires distribution and retrieval.

Data gathered were analyzed using mean, standard deviation and chi-square statistics. The three research questions were answered using mean and standard deviation while the two hypotheses in the study were tested using chi-square statistics. Questionnaire item statements were set out using five-point scale with Strongly Agree (SA), Agree (A), Strongly Disagree (SD), Disagree (D) and Undecided (U). Their corresponding scales are 4, 3, 2, 1 and 0 respectively. The criteria for agreeing or disagreeing to an item statement are based on calculated mean responses. If the computed mean is equal to or greater than 2, then an item statement is agreed by the respondents, otherwise it is disagreed upon.

Results

Answering of research questions

Research Question One: Do the students of National Open University of Nigeria (NOUN) Azare Study centre have access to e-learning system (ELS)?

Table 1: Means and Standard Deviations of Learners' responses on the access to an Electronic Learning System (ELS)

S/N	Item Statement N = 172	$\bar{x}$	SD	Remark
1.	I find ELS readily available at any point in time.	3.74	0.61	Agreed
2.	I easily access the content of my lesson anytime and anywhere when need arises.	3.31	0.66	Agreed
3.	Using ELS simplifies education as I learn while on transit.	3.62	0.69	Agreed
4.	From experience, I find using ELS easy in my studies	3.37	0.58	Agreed

Key: = Mean, SD = Standard Deviation, N = Number of sampled students
Source: Fieldwork 2018

Table 1 presented means and standard deviations of learners' responses on the access to an electronic learning system. As it is indicated in the Table 1, all four item statements that sought for such information were unanimously agreed upon by the students. This is because each of the item statements has computed mean value (3.00 and above) which is greater than the cut-point of 2.00 used in this study. The SD value obtained for each item is low, an indication that respondents' responses were very close to each other. Therefore, it can be inferred that learners access electronic learning system.

Research Question Two: Do the students of NOUN Azare Study centre enjoy the perceived ease of use of ELS?

Table 2: Means and Standard Deviations of Learners' responses on the ease of use of an Electronic Learning System (ELS)

S/N	Item Statement N = 172	X	SD	Remark
1.	After online interactions with my lecturers, I enjoy studying my lesson privately.	3.13	0.68	Agreed
2.	I download my study materials from the university LMS websites at ease.	3.26	0.51	Agreed
3.	I can ask questions while in the interactive class without feeling being looked down upon by my course-mates.	3.58	0.73	Agreed
4.	I do all my assignments and Teacher Made Tests (TMA) with no stress.	3.31	0.81	Agreed
5.	I enjoy ELS because it supports collaborative studies.	3.41	1.12	Agreed
6.	Using ELS is student-centered rather than teacher-centered.	3.20	0.94	Agreed

Key: X = Mean, SD = Standard Deviation, N = Number of sampled students
Source*: Fieldwork 2018*

Table 2 depicted means and standard deviations of learners' responses on the usage of electronic learning system. It is indicated that all six item statements that sought for information on usage of ELS were unanimously agreed upon by the students. This is clear from Table 2 that each of the item statements has computed mean value (3.00 and above) which is greater than the cut-point of 2.00 used in this study. The SD value obtained for each item is low, an indication that there were closeness in the respondents' responses. Therefore, it can be deduced that learners make use of electronic learning system easily.

Research Question Three: Are there any challenges associated with the use of ELS among the students of NOUN Azare Study centre?

Table 3: Means and Standard Deviations of Learners' responses on the Challenges of the Electronic Learning System (ELS) Usage

S/N	Item Statement N = 172	X	SD	Remark
1.	From experience, sometimes, poor internet access causes frustration in my study	3.69	0.58	Agreed
2.	Lack of portable computer devices makes electronic learning difficult.	3.53	0.57	Agreed
3.	Incessant of electricity supply makes study on electronic device a problem.	3.74	0.51	Agreed
4.	Cost of purchase of data bundles and internet subscriptions is a challenge for me in studying on ELS.	3.67	0.84	Agreed

Key: X = Mean, SD = Standard Deviation, N = Number of sampled students
Source: Fieldwork 2018

Table 3 presented means and standard deviations of learners' responses on the challenges of using electronic learning system. It is evident that the four item statements that sought for such information on the challenges of using ELS were unanimously agreed upon by the students. This is clear from Table 3 that each of the item statements has computed mean value (3.00 and above) which is greater than the cut-point of 2.00 used in this study. The SD value obtained for each item is lower, an indication that respondents' responses were very close to each other. Therefore, it can be concluded that learners face problems such as poor internet access, lack of portable computer devices, incessant of electricity supply and cost of purchasing internet data bundle. All these affect students' learning styles as they limit what students can learn online.

Testing of Hypotheses

Ho$_1$: Gender has no influence in the use of e-learning system among the students of National Open University of Nigeria (NOUN), Azare Study Centre.

Table 4: Chi-square Analysis of Learners' Responses on the Usage of an Electronic Learning System (ELS) in relation to Gender

Gender	Learners' Responses on Usage of Electronic Learning System (ELS)			Total	ρ -value	α	χ^2Cal.	χ^2Cri.	Remark
	Agreed	**Disagreed**	**Undecided**						
Male	127(73.8%)	6(3.5%)	0(0%)	133(77.3%)					
Female	31(18.0%)	8(4.7%)	0(0%)	39(22.7%)	0.001	0.05	77.35	5.99	S
Total	158(91.8%)	14(9.9%)	0(0%)	172(100%)					

Key: α = Significance level at 2 degree of freedom (df), ^{2}Cal = calculated chi-square value, ^{2}Cri.= chi-square value from table, S = significant

Table 4 above showed the calculated chi-square = 77.35, p-value = 0.001, critical chi-square value = 5.99, at 2 degree of freedom with level of significance () = 0.05. Since calculated chi-square = 77.35 is greater than the critical chi-square value = 5.99 and the P value = 0.001 is less than level of significance () = 0.05, the null hypothesis which states that gender has no significant influence in the use of e-learning system among students of National Open University of Nigeria (NOUN), Azare Study Centre was rejected. This shows that gender has significant influence in the mode of e-learning system among students of National Open University of Nigeria (NOUN), Azare Study Centre.

Ho$_2$: Students' age groups do not have influence in the use of e-learning system among the students of National Open University of Nigeria (NOUN), Azare Study Centre.

Table 5: Chi-square Analysis of Learners' Responses on the Usage of an Electronic Learning System (ELS) in relation to Age Groups

Age Group (Years)	Learners' Responses on Usage of Electronic Learning System (ELS)			Total	ρ -value	α	χ^2Cal.	χ^2Cri.	Remark
	Agreed	**Disagreed**	**Undecided**						
15-24	22(12.8%)	5(2.9%)	0(0%)	27(15.7%)					
25-34	121(70.4%)	9(5.2%)	0(0%)	130(75.6%)	0.005	0.05	48.13	9.49	S
35 &Above	15(8.7%)	0(0%)	0(0%)	15(18.7%)					
Total	158(91.7%)	14(8.1%)	0(0%)	172(100%)					

Key: α = Significance level at 2 degree of freedom, ^{2}Cal = calculated chi-square value, ^{2}Cri.= chi-square , value from table, S = significant

Table 5 above depicted calculated chi-square = 48.13, p-value = 0.005, critical chi-square value = 9.49, at 4 degree of freedom with level of significance () = 0.05. Since calculated chi-square = 48.13 is greater than the critical chi-square value = 9.49 and the p- value = 0.005 is less than level of significance () = 0.05, the null hypothesis which states that students' age groups do not have significant influence in the use of e-learning system among the students of National Open University of Nigeria (NOUN), Azare Study Centre was rejected. This implies that the age groups of students have significant influence in the mode of e-learning system usage among students of National Open University of Nigeria (NOUN).

Summary of Research Findings
This paper established the following:
    (i)   Learners have access to ELS;
    (ii)   Learners make use of ELS;
    (iii)   However, learners encounter some challenges in the process of using ELS, such as: electricity problem, lack of portable computer devices, poor internet access and cost of purchasing data bundles;
    (iv)   Students' gender has significant influence on the use of electronic learning system; and
    (v)   Students' age groups also have significant influence on the use of electronic learning system.

Discussion of Findings
This study found out that learners of National Open University of Nigeria, Azare study centre have access to the e-learning system. The finding is line with Ardito, Costabile, DeMarsico, Lanzilotti, Levialdi, Roselli & Rossano (2006) who emphasized in a paper that ensuring usability and accessibility to the largest number of users should be one of the main goals of e-learning application developers, as well as a prerequisite that should allow users to profitably exploit such applications.

Besides, this study found out that learners make use of E-Learning System effectively (learn at own pace and convenient time) which is in consonance with the findings of Irina, Irina & Elvina (2016) which gave comprehensive survey that showed the attitude of the students to practical use of distance learning which came out as neutrally-positive. Most students evaluate

distance learning at Kazan Federal University as effective. The finding is also in support of findings of Shute & Towle (2003) which concluded that the potential payoffs of designing, developing, and employing good e-learning solutions are great, and include improved efficiency, effectiveness, and enjoyment of the learning experience.

The result of this study also showed that some of the challenges in the process of using ELS are electricity problem, lack of portable computer devices, poor internet access and cost of purchasing data bundles. This finding is also in agreement with the findings of Adesanya (2014), Cole & Dipeolu (2014), Ohwofasa & Elesho (2014), Jimoh & Olabode (2014) and Jimoh & Salawu (2011) which stated that ICT phobia among students and teachers, poor ICT infrastructure facilities, finance and inadequate power supply were major problems that confronted the use of ICT in teaching and learning process.

In this study, it was also discovered that students' gender has significant influence on the use of electronic learning system and this is in disagreement with the finding of Irina, Irina and Elvina (2016) which states that both gender and school system have nothing to do with students' satisfaction while using electronic education.

Finally, this study found out that students' age group have influence significantly on the use of e-learning system which in line with the research finding of Bakkabulindi, Sekabembe, Shopi, & Kiyingi (n.d) that age affects the use of computers, that is to say there was a significant inverse relationship between age and the use of computers. Also, Adil, A. , Masood, M. & Ahmed, M. (2013 revealed that there was moderate negative association between level of age and quantity of daily time spent on computer which in support of this finding.

Conclusion
The study investigated the assessment of e-learning system for effective teaching and learning process in National Open University of Nigeria (NOUN), Azare study centre. Issues as regards accessibility to the services provided by e-learning, its ease of use as well as challenges that served as barrier or obstacle in its usage were explored. Based on the findings, some recommendations were given so as to improve the use of e-learning system among students and teachers.

Recommendations

Based on the findings in this study, the following recommendations were proffered:

(i) There is need to provide alternative power supply means such as solar power system / provision of generating set for the National Open University of Nigeria (NOUN), Azare study centre;

(ii) Procurement of portable laptops or PDAs to ease mobile studying by students. This can be acquired by the government and sell to the students at subsidized amount.

(iii) Procurement and installation of globally-approved internet infrastructure in the NOUN Azare study centre to enable students and teachers have access to internet facility at their will.

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