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SCIENTIFIC LITERACY FOR SECURITY AND SAFETY EDUCATION IN NIGERIA SECONDARY SCHOOLS

Adijat Omoladun OLAREWAJU
Department of Science Education,
Al-Hikmah University, Ilorin, Nigeria

Adenike Bilikis ABDULSALAM
Department of Science Education,
Al-Hikmah University, Ilorin, Nigeria

and

David O. AMAO
Department of Mathematics,
Kwara State College of Education, Ilorin, Kwara State

Abstract

This paper aims to reiterate the scientific literacy for security and safety education in Nigerian secondary schools. For the past 15 years, the Nigeria school system has been under attack leading to kidnappings and killings of students, teachers and even the school administrators. Measures have been taken to curb these attacks but unfortunately, instead of the attacks to alleviate, they are still frequent and increasing every day while the psychological effect on innocent students is alarming and rate of abductions are increasing. To safeguard the educational system from collapse, the issue of security in secondary schools and Nigeria must be dealt with efficiently. The individuals need to be safe physically and psychologically. Safety is essential within as well as outside the homes. In educational institutions and training centres as well as in various types of employment settings, the individuals are imparted information in terms of ways of promoting safety. When the individuals are safe, then they will be able to concentrate wholeheartedly towards the implementation of job duties well. If these incessant attack are not proactively dealt with, it could bring the danger to the quality of labour force and human capital needed to drive a sustainable economy. This paper, therefore, focuses on the issues of security and safety education in Nigeria education system.

Keywords: Scientific Literacy, Security, Safety Education, Secondary School System

Introduction

Scientific literacy can be view as a fundamental aspect of secondary school education as it provides students with the skills necessary to pursue further studies in science related studies. National Academics Science, Engineering and Medicine (2016) defined scientific literacy as a crucial skill that enables individuals to understand and engage with scientific information, concepts, and issues in their everyday lives. This book emphasized on the three aspects of

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science literacy which are content knowledge, understanding of scientific practices and understanding of science as a social process. Scientific literacy involves having a basic understanding of scientific concepts, theories and principles as well as an appreciation for the scientific method (Barad, 2013). Asunda (2012) defined scientific literacy as an individual's capacity to identify and understand the role that science plays in the world, to make well-founded judgment around the globe. Therefore, science and scientific literacy are closely related as scientific literacy involves having a basic understanding of science and its process while science is a systematic approach to understand the natural world. Science educators are unanimous about their concern on students' achievement. Research literature on how Cultural beliefs affect science concepts and students achievement has raised fundamental concerns on several factors influencing learning outcomes. Chief among the factors are students' living contextual environment. In learning sciences students need time for exploring, for making observations, for taking wrong turns, for testing ideas, for doing things over again.

Scientific literacy is important for individuals to make informed decisions about a variety of issues, such as health, environment and technology (Abdulsalam and Adewara, (2013)). Scientific literacy helps people to understand the importance of science and its contribution to society. It also allows people to evaluate claims and evidence related to issues and make informed decisions based on evidence rather than opinions or beliefs. In Nigeria, scientific literacy is a fundamental aspect of secondary school education as it provides students with knowledge and skills necessary to pursue further studies in science and technology-related fields (Adewoyin, 2019). However, the focus of science education in Nigeria has traditionally been on theoretical knowledge, rather than practical applications that relate to real-world issues (Okebukola & Jegede, 2018). This lack of emphasis on the practical application of science to everyday life may have negative consequences, particularly in the area of security and safety education where scientific knowledge is necessary to understand and address various safety challenges.

Therefore, science educators need a lot to do in order to enable individual learners to achieve their goals, to optimize their potentials and to participate fully in the school, community and the society at large by making provision for learning facilities, instructional materials,

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adequate teachers and security in Nigerian secondary schools. It was noted that every state are no more secured due to the increase in numbers of armed robbery, kidnapers, corruptions, terrorisms, absence of safety measures in schools, insurgencies, hostility and general threats in school that could be found in continents, regions, states and the community (**Ani & Onyebukwa, 2016**). The issue of security has taken center stage in the contemporary international system which needs to call for the solution to this and the impact of insecurity on the implementation of secondary education has become very obvious.

The safety and security of Nigerian citizens are major concerns in the country. The high prevalence of crime, accidents, and disasters such as fire outbreaks and building collapses, underscores the urgent need for safety and security education (Adeniyi, 2016). It was noted that there is a lack of emphasis on practical application of science to safety and security education (**Okebukola, 2018**). As a result, Nigerian secondary school students may not have the necessary scientific literacy skills to understand the safety and security is all about.

Insecurity has presented itself in the form of insurgency such as Boko Haram, Niger Delta Militants, Fulani herdsmen attack etc which has caused a lot of challenges for the economic development of Nigeria. Philomina (2019) defined insecurity as a situation where lives and properties are vulnerable and are left at the mercy of terrorists, criminals or rebels. This insecurity has been link to threat, corruption, inequality and poor leadership. Insecurity in Nigeria secondary schools has ravaged infrastructures and claimed thousands of lives remains an insurmountable mystery in the wheel of educational progress(Adams et.al, 2021) The impact of insecurity on the implementation of secondary education and academic sustenance becoming noticeable.

On the other hand, security is a condition of being safe or protected (Oxford Dictionary). When there is security in schools, all learning activities would be smooth, protected and learning environment would be more conducive for learning. Philomina (2019) affirmed that students environment condition determines to a very large extent his/her academic achievement. The researcher added that a hostile environment due to insecurity hinders significantly, the

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implementation of tertiary education especially in the Northern part of Nigeria. According to Ani and Onyebukwa (2016) security requires physical protection from existing harm and the establishment of resilient socio-political and economic structures to deal with its complexity. In this regard, science educators need to reach consensus in decision making on how Nigerian secondary school would be safe from kidnappers, armed robbery, terrorism etc. This study was to investigate the scientific literacy in decision making for security and safety education in secondary schools in Kwara State, Nigeria.

Importance of Security to Nation

Security is a major policy challenge to decision makers as well as communities and groups around the globe. Philomina (2019) sees security as the mechanism put in place in order to prevent, reduce or resolve violence, conflicts and threats that emanate from other states, non-state actors, or structured socio-political and economic conditions. Ewentan and Urhie (2014) observed that various attempt have been made to redefine the concept of security in a broader view placing more relevance on individuals than state, since national security development and humans rights remain basic yardstick for revealing the concept security. Nigeria suffers from so many security challenges in some areas which make the live of her citizens to be constantly live in a state of panic.

The security situation in Nigeria has brought about manifold implication on education. UNICEF (2016) reported that 10 million Nigerian children are out of school and about 670,000 children have been deprived of an education out of a population of over 160 million children as a result of insecurity in Nigeria. Many parents are no longer interested in sending their wards to school in the north and teachers have abandoned their school for others in more peaceful states because they have been threatened and killed in some cases while some parents allow their students to attend lessons under the trees and canopies which disrupts their access to education (Ekere, 2013 & Bertoni et.al 2019).

Insecurity could be summarized as a breach of peace and security whether historical, religious, ethno-regional, civil, social, economic and political, contributes to frequent conflicts leading to nation destruction of lives and properties (Philomina, 2019). Studies reveal that there

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has been an abysmal low rate of enrolment in the northeastern regions, especially among girls and this is due to security issues in particular the Boko Haram insurgency which has made schools all over Northern Nigeria unsafe (Emelife, 2020). Adams, et-al (2021) observed that conducive and peaceful school environment bring about great achievement in both students and teachers while feeling of insecurity within and outside the school environment deterred the academic performance of students. According to Akintunde and Musa (2016), an insecure school environment affects the learning of children negatively.

Many lives of learners were distorted, some were killed and some were even got pregnant in their custody. In order to avoid loss of lives of learners, teachers, school workers and properties, there must be concrete preventive and resilient decisions for safety education in Nigeria educational system. According to Radhika (2020) Safety education is the education that aims to impart knowledge and understanding to the individuals in terms of measures and strategies to promote safety. That is to promote good health and well-being physically as well as psychologically, the individuals need while safety is a state of being free from criminal activity such as terrorism, kidnappers or espionage. Although there are different types of safety education which are health security, food security, environmental security etc but this study is focused on environmental security.

On 14th of February, 2014 it was reported that more than 200 girls were kidnapped from their school dormitory in Chibok, Borno state in which the Boko Haram drew a global attention. The basis of the kidnap springs from the ideological opposition to the idea of educating girls instead of marrying them off as Boko Haram's leader revealed in a video (Mantzikos, 2014). Girls as young as ten years old have been used as suicide bombers and forcefully taken away from their homes and schools. Also, in 2018 there was a case of 110 school girls' abduction from Dapchi, Yobe state and the government has no solution to all these problems (Mbah, 2019). Presently, the case of kidnappers, abduction are more rampant in all over the state which make Nigeria education to be at stake.

For instance, a student from Moshood Abiola Polytechnic was kidnapped and raped and they eventually killed her in Ogun state (The Punch, Monday, 15, 2022). Recently there was a

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case of a student of Ladoke Akintola University of Technology, Ogbomoso a final year student who was kidnapped and killed after the kidnappers had collected a N5m ransom while okada rider who took the ransom to the kidnappers was gunshot (The Punch, Wednesday, 3, 2022).. Also a case of Gunmen who attack resident in Abuja estate and kidnapped some residents (The Guardian, June 7, 2022). It is observed that the challenges of security have now gone beyond the schools in the North as we can see many cases of kidnappers in almost all over the state.

All these scenarios are indication of inefficacy of Nigerian security operation and Government intervention. Amnesty International (March, 2018) reports that the Nigerian authorities failed to ensure protection for schools in northern Nigerian especially girls' schools. If these could happen in northern part therefore, the southern part should be awake and be minded of security in our secondary schools especially in Kwara state. Therefore, science educators need to make decisions in establishing objectives, planning, organizing, directing and controlling the insurgency of insecurity in educational system. Decision making is a process of identifying alternatives and choosing one of the alternatives to solve a problem or address an opportunity (Koivunen, et-al 2019). Decision making starts with the initial recognition of a problem that is worth-while making decision about, through the collection of data, identification of real situation, the development of alternatives and the evaluation to the final choice that is implemented and controlled (**Alabi, 2015**). There are four elements necessary for effective decision-making according to Campbell, Corbally and Nystrand (1983), sense of purpose, existence of a need for decision, reviewing alternatives and selecting a course of action. To improve and maintain safety education in Nigeria secondary schools, adequate security should be provided in schools, survailance camera at strategic places should be fixed in all area of the school and security men should be trained to face the attacker at any point in time.

Several studies have investigated the actual cause of armed robbery, kidnappers, terrorisms, insurgencies all over Nigeria and findings range from unemployment, poverty, terrorism, economic problems, inefficient' government intervention to extreme political ideology and religious feelings etc (Adelaja, et al., 2018). It is difficult for a country like Nigeria to develop in the face of attack. It is definitely affects the education system therefore inclusive education cannot be guaranteed in such country. As Nigeria is suffering from so many security

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challenges and peace therefore the live of citizens are in a state of panic. There are many factors responsible for the security challenges in Nigeria as observed by different researchers like (Adams, 2021; Ameh, 2015; Philomina, 2019).

Causes of Security Challenges in Nigeria

Many factors have been assumed as causes of unsafe in Nigeria. Some writers put their blames on the government while some others pass the blame on parents other writers hold the blame on youth while many writers put the combination of these on all. Putting all these factors together will provide some of the following as responsible factors responsible for security challenges in Nigeria:

Unemployment: There is a high level of unemployment in Nigeria, especially among the youth. Many graduates are flooding the streets seeking employment within the country. These employment opportunities are resulting in too many young people being jobless and without means of survival and the need for survival makes one vulnerable to manipulation into committing crimes even for very little pay. While many pick up guns and resort to kidnapping for ransom, robbery and other violent acts for their survival.

Terrorism: The violent extremism of various terrorist groups in Nigeria in recent years remains a major cause of insecurity in the country. Different militant groups like ethnic and religious superiority and the likes have emerged and are causing serious havoc in various parts of the country. There are two major groups that continue to pose a problem of security in Nigeria education system, they are Boko Haram and Movement for the Emancipation of Niger Delta (MEND), they employed tactics such as suicide bombing, kidnapping, vandalization, sabotage of oil facilities and other means that result to destruction of property and loss of lives.

Inefficient Government Intervention: Government is a major cause of the state of insecurity in Nigeria by not providing the needs of her citizen. With the nation's rich mineral resources to cater for the needs of her people, the government still shows incapability to deliver public services and provide basic needs of the masses. Laws and order are still unobtainable where the government fails to curb the crime.

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Corruption: This is an act of stealing public funds or embezzled money act which is very common among the government officials in Nigeria. The security agency on our ways fail to do their jobs by allowing criminals to get into the places like church, mosques, school etc after collecting token from them. Some of the government fund terrorist groups in order to assist them during election.

Poverty: Poverty is the lack of capability to function effectively in society. The rate of poverty in Nigeria is quite alarming and the result of this is an increase in petty crimes, gang membership and other social vices that add to the problem of security in the country. Poverty leads to a lack of educational resources in poor schools and sometimes could hinder learning.

Porous Boarder: the boarders are so free to the extent that people move in from another country to Nigeria without proper check. This allows criminals to enter the country which bring about unsafe environment.

Illegal Armed Groups: Illegal importation of arms and animation has made possession of arms by individuals and groups very easy. There are different groups who made possession of arms and animation in the name of their group like Oodua Peoples' Congress, Bakassi Boys etc.

Religious fanaticism/extremism: Religious fanaticism and extremism have been among the major challenges of security in Nigeria. The recent incidences of attack on churches and Christians in Northern part of the country by Muslim extremists have rendered several states in the north unsafe for life and properties.

Labour activities: This is the act of call for strike, in 2012 the Nigerian Labour Congress call for a nationwide strike as a result of increase in price of fuel by government. The NLC accused the government of insensitivity to the suffering of the people as well as ignoring the security challenges in the country.

According to Sababa (2015) in his empirical studies of causes of insecurity in the North-East, streamlined that poverty, massive unemployment and Religious wars against other faiths are the major variables cause Islamic insurgency in northern Adamawa and Borno states of Nigeria.

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Secondary Education and effect of Insecurity in Nigerian School System

The form of education receiving after primary education is either high or secondary education. This is divided into two section that is; junior secondary and senior secondary. Junior education is one which Nigerian child is enrolled and receives just after completing primary education. It is of three-year basic education duration and the objectives of junior secondary school education include providing the Nigerian child with varied basic knowledge and skills for free enterprise and for furthering his/her education. While senior secondary education is the education received after junior secondary education (NPE, 2018). Part of their objectives are to providing the Nigerian child with varied basic knowledge and skills for free enterprise and for furthering his/her education, It is also inspiring adolescents with an aspiration for self-improvement and attainment of quality.

These are the commissioner, governor, president of tomorrow, without giving the children education, all these objectives might not come to materialize, a child who has education is the one that is more recognized in any political passion as at Nigeria of today therefore all teachers, policy makers, stake holders and government need to reach consensus and be proactive enough on how to maintain safety education in Nigeria educational system. Therefore, to safeguard the educational system from collapse, the issue of insecurity in secondary schools and Nigeria must be dealt with seriousness.

No nation can develop when there is a high level of insecurity in the society and one of the major issues affecting education in Nigeria is insecurity. The importance of education has been adequately discussed in many forums and in different literature (Ojukwu, 2017). It is in the realization of the importance of education of the child that the government of the Federal Republic of Nigeria in its 1999 constitution made a declaration of the right of every Nigeria child to education irrespective of gender, tribe, religion or race while these could be realized in the conducive school environment. If there is a feeling of insecurity within and outside of the school environment, both students and teachers are likely to be deterred and this may affect the academic performance of the students (Adams et.al, 2021).

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According to Adams et.al (2021) declared that insecurity in school system trigger traumatic disorder and toxic stress which affect learning negatively through enrolment of students since parents pull their children out of schools and in some cases, insecurity has led to the closure of schools. For instance, Borno schools were shut-down in major towns as a result of insurgency (Ameh, 2015). These attacks on schools usually lead to vandalization and outright destruction of school facilities which discourage the establishment of new schools. As a result of this, government resources are depleted as funds meant for other developmental projects are channeled to tackling the aftermath of attacks (Adams et.al, 2021). In order to tackle the issues of insecurity in Nigeria secondary schools, there is need to deploy extraordinary measures to tackle the spate of attacks on school facilities in Nigeria.

Position of Insecurity in Nigeria

Insecurity in Nigeria has since 1999 become a major item in national and international discuss. Almost a decade now, the nation is still trying to find lasting solution to various forms of insecurities. These challenges constitute threats to the cooperate existence of its citizens and to the maintenance and survival of its democratic political system. These security challenges are ranges from political disagreement to criminal activities with alarming dimensions and consequences. The unexpected bombing by Boko Haram is a big challenge to government, its citizens and international community. Book Haram began their evil enterprise in the North-east and gradually spread their tentacles to Abuja the seat of power and its environs even now there are issues of kidnappers all over the state including Kwara state.

In April 2014, Boko Haram stormed the hostel of Chibok Government Secondary School in Borno state and abducted almost 300 schoolgirls who were preparing for their final examination (WASSCE) it was a traumatic kidnapping experience ever known in the world. In November 2016, head teachers from 114 institutions including 100 schools in the Northeast attended a United Nations Educational, Scientific and Cultural Organisation (UNESCO) workshop on security to help them handle the instability caused by Boko Haram insurgency. Participants from primary, junior and senior secondary schools in the three Nigerian states of Adamawa, Borno and Yobe were given 1350 safe school kits which were developed by a non-

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governmental organization in collaboration with Nigerian security agencies for their establishments. But all efforts to curb these attacks were in vain when Dapchi girls of 110 students were abducted in 2018 from Dapchi, Yobe state (Lawal, 2018).

The issues of school children abduction is now beyond the Northern part of the state, there was another case of abduction on February 29, 2016 in Babington Macaulay Junior Seminary, a school on the outskirts of Lagos where three schoolgirls were kidnapped although some of the kidnappers were apprehended and the girls were rescued. Also, on October 6, 2016 at 7:30a.m, school's vice principal, a teacher and four pupils were kidnapped during the school's general assembly morning devotion at Igbonla Model College in Epe. On January 13, 2017, pupils of the Nigerian Tulip International College), Isheri, Ogun State, three pupils and five employees of the institution were kidnapped (a student from Moshood Abiola Polytechnic was kidnapped and raped and they eventually killed her in Ogun state (The Punch, Monday, 15, 2022).

Recently there was a case of kidnappers in Ogbomosho and the bitter aspect of it was that both the student and the ransomed were killed instantly after collecting the money that was brought to release the student (The Guardian, 2022) This successful kidnaps reveal that school children kidnaps are fast becoming a trend and a major threat. It is pivotal that the government collaborates with schools to increase policing and protective measures, so as to be better prepared in case of any future attacks (Argomaniz et.al., 2015) Now that the problem is identified therefore, science educators need to fast track decision making on strategies to improve security around the globe for safety education in Nigerian secondary schools especially in Kwara state.

Although, Nigerian government has established several initiatives and frameworks aimed at mainstreaming the Sustainable Development Goals (SDG) into national policy and planning since there were issues of insecurity in schools in northeast Nigeria in which there plan objectives include restoring growth, investing in people and building a globally competitive economy (Buhari, 2017). But these plans are not focusing on the pressing issues of insecurity in Nigeria because there are still alarming rate of kidnappers, armed robbers, insurgency in every

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nook and corner of the society which brings about unsafe learning environment. Ojigho (2018) and Amnesty International (2018) shares that no framework seem to be in place to prevent further abductions and it appears that the Nigerian military is unable to protect schools from attack. This shows that nothing practical is being done to keep school safe from abduction in future attack.

Idris (2020) described abduction as a national embarrassment, and blamed the federal and state governments for leaving the girls vulnerable and the government must have learned from what happened in Chibok by providing adequate security for the girls in the school. He urged Governor Gaidam to intensify efforts by providing adequate security for all schools, especially the female institutions in the state.

Methodology

This study adopted expository research design. Expository research design is the type of design that allow the researcher to gather supporting evidence and present a point of view or argument on the topic and this can be done through multiple methods, including compare and contrast and cause or effect. It is expository design in the sense that it was built on the foundation of knowledge of the rate of abduction in Nigeria. It was further prepared with internet search via Google Scholar using the variables of this study for searching and supported by the reviews of the most representative studies of recent years.

Conclusion

In conclusion, this study made an attempt to present the challenges facing security in education which is the major forms of security that is threatening the manifest destiny of the Nigerian State. This research is basically on the terrorism, kidnappers, insurgency etc which need to call for decision making on how to eradicate it since all these affect education system in Nigeria. The dynamics of terrorism is generally promoted by the problem of arms proliferation across the length and breadth of the country, which then empowers the activities of kidnappers,

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criminals and the war machineries that prosecute inter-communal conflicts in different parts of the country. The problem of environmental securities has taken the lives of many Nigerians youth who to be the commissioner, governor, president of tomorrow.

Consequently, the issue of security in Nigeria have manifests multiple forms of complexity. However, as various security issues require strategic policies to curb and manage them, the science educators need to come together through decision making for possible solution to this problem. The government must also come up with policies that will ensure the general well-being of Nigerian citizens and greater enhancement human security. Also, stakeholders, parents, educators policy makers come up with dialogue to apply and enforce diplomacy by means to curb the activities of kidnapers in Nigerian secondary school and the community at large. Government must as a matter of urgency, formulate and vigorously pursue policy strategies aimed at eliminating proliferation. Therefore, the government and management of the school should provide opportunity to their staff for its proper usage in their pedagogical practices these could assist them in curbing most of these problem of security in Nigeria secondary schools.

Recommendations

Based on the above findings, it is recommended that:

Government should create strategies and practical plans directing towards ensuring safety schools and also policy intervention to prevent future attack in Nigeria. In order to attain the sustainable development goals, students should be given equal more access to education by clamouring on education for change. A Ministerial Strategic Plan and Economy Recovery and Growth Plan should be reviewed to include explicit ways of securing all school in Nigeria. Security situation of the country should not be far from the community therefore government should emulate the style of United State of American's Policing style by operating both state

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policing and community policing by attaching them to each street and community. Democratic situation of the country should be strong in such a way that would not affect any Nigerian education system.

All critical stake holders should be involved in decision making and planning so as to guide against insecurity in Nigeria. Government too should be more proactive towards strategic security awareness, strategic security consciousness and crime prevention. This will enable people to appreciate the importance of monitoring developments around and to report unwholesome activities to the security agencies.

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