



## Re-Engineering Science Education to Curb Socio-Economic and Security Challenges in Nigeria

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### Abstract

This paper focused on re-engineering science education to curb socio-economic and security challenges in Nigeria. Nigeria is experiencing multifarious challenges that threaten its existence and has brought about backwardness in sustainable socio-economic development and threat to national security. It is the responsibility of any government in authority to secure and protect its citizens. Security is the pillar upon which every meaningful development in any nation is sustained. There is no nation without a security challenge, but the type of insecurity experienced among the nations and the way it is confronted differs. This security challenges have metamorphosed into a cankerworm that confronts the nation's existence. These have created a porous security condition that challenges the national security and impedes development. It is on this note the paper was concluded by discussing how re-engineering science education can take care of these challenges confronting our nation in the areas of intelligence, information technology, intelligent gathering and monitoring systems, energy systems, training of security agencies and effective implementation of science education curriculum. The paper suggested among others that science education should be given a priority in the national educational policy.

**Keyword words:** Re-engineering, Science education, Socio-Economic and Security Challenges.

### Introduction

Security is a social contract between the state and the citizens, in which the former is expected to protect, defend and provide for the security and welfare of the people. According to Christian (2019) Security is the state of being free from danger and fear of attack or molestation on the backdrop that every apparatus needed for this purpose has been provided. Security is a collective responsibility of all citizens of a country in ensuring a secured and peaceful environment for the economic growth and development of the Nation. This implies that the security and welfare of the people shall be the primary responsibility of the government (Abuh, 20023). A well secured environment inspires greater mind to achieve greater things that guarantee growth and development of the nation. To secure an

environment is to protect it from attack which affects the physical, psychological and emotional well-being of the people (Ogbonanya, 2016). Meaningful development can only be achieved in an atmosphere of peace and tranquility, which is national security. National security involves effective policing and careful watch against elements that could breach peace or jeopardize the social, economic and political development of the country (Dada, 2018). The discourse on national security is not only limited on territorial boundaries but encompasses other important areas such as human and political security (fundamental human rights), economic security, environmental security, energy and natural resources security, cyber



security, social and food security and prevalence of internal peace (Hirsh, Dijkstra & Geode, 2020).

National security according to Okeme (2019) is the ability of a nation to protect and develop herself, promote her cherished interest, legitimate values and enhance the standard of living and the well being of her citizens, guests and visitors. Okeme further added that, National security is the absence of those tendencies which could undermine internal cohesion and corporate existence of the states of a nation. It is also the ability of a nation to maintain all vital institutions for the promotion of her core values, socio-political and economic objectives, as well as meet the legitimate aspiration of the people (Timothy & Owolabi, 2018). Abuh (2023) added that National security is the struggle to secure the most basic necessities of life such as food, fuel, medicine and shelter. Abuh maintained that this broader view of security from the perspective of human physiological needs is important for the attainment of physical and national security and overall peace and development, as social unrest arising from the absence of such basic-human necessities can indeed lead to insecurity. Onuoha (2015) defined insecurity as a condition in which people have no confidence in the institutions and leadership that should protect their lives and property, as well as provide for their well-being. As a result of that, they live in fear, anger, despair, trauma, suspicion and mistrust. Onuoha added that insecurity is a disvalue, a bad thing, one among a number of evils to which we are unavoidably exposed to. It is the state of being unsafe or insecure and a state of mind characterized by self-doubt and vulnerability. Any nation undergoing this is said to be security and economically distressed.

However, recent happenings in the nation have shown that National security is in jeopardy. Nigeria as a nation is presently facing severe security challenges that are threatening the corporate existence and stability of the country. This is evident in the wake of the increasing terrorism, violent extremism, insurgency, piracy, kidnapping, armed robbery, organised crime, cultism, political thuggery, ethnic and religious clashes, Fulani herdsmen killings, etc. The level of insecurity in country is on the increase despite the huge sums of money budgeted on yearly basis as security votes by the three tiers of government (Otarigho, Rachael & Oviogbodu, 2018). The security challenges being experienced in the country presently, requires all and sundry to be more proactive on issues of National security so as to curb the dangerous situation that is ravaging the nation. Some of these security challenges

which have been ravaging the nation for some time now, have defied every effort put in place to combat them by the security apparatus of the country (Wikipedia, 2018). Therefore, there is need for re-engineering Science education to curb socio-economic and security challenges in our Country, Nigeria.

### **Concept of Science Education**

Science education is the teaching and learning of science to students or individuals so as to equip them with fundamental scientific skills, creativity, critical thinking, curiosity and positive attitudes towards science (Abuh, 2023). The primary focus of science education in Nigeria has been the search of relevant content and new methods of science teaching and learning which should be alternatives to the colonial heritage. This embraces philosophies and content which should reflect the total environment in which science education takes place thus meeting the needs of the learner (Odili, 2016). The objectives of science education according to the National University Commission (NUC, 2020) include: have basic knowledge of organisational concepts and techniques in science education and laboratory management, be aware of the fact that the fundamental ideas of science education evolved from a process of inquiry which will enable them to develop scientific attitudes which are transferable to other life situations, plan and effective execution of science education based lesson in accordance with National Policy on Education (NPE), have sound basic knowledge of science education concepts and principles to equip them for further study in science education and science education related courses, explain the nature of science, use science resources effectively, use information technology (IT) effectively to support pupils/students learning science education, demonstrate the understanding of concept of science education, reflect upon and revise them when necessary, organize science education lessons for the whole class, groups, and individual effectively, recognize the difficulties students face with their science learning, develop pupils' use of science language, remedy students misconception in science carry out formative, diagnostic and summative assessment of students' work (Theory and practice) and have basic Knowledge of management courses such as entrepreneurship for skill acquisition. These objectives are derived from conceptual views of Science Education for developing in science students an inquiring mind and a scientific approach to problems. The emphasis here is on student's activity in the



acquisition of the scientific process, skills and appropriate attitudes which are accepted as more enduring than content by engaging them more in practical work.

Thus Science Education in Nigeria aims at helping Science students at being simple scientist, and to be a scientist, one has to acquire certain skills including those that have to do with the brain (intellectual skills) with the hand (manual skills) and with feelings (attitudinal skills). The questions is whether in reality our Science Education classes have become the sources from which young children draw those skills, attitudes and habits of thought useful for working successfully as simple scientist, that is the issue to be addressed (Otarigho, Abah & Oviogbodu, 2018).

Relevance of Science Education to national development cannot be underrated. Science Education is an international enterprise which plays a key role in the future progress of mankind. It is an exciting intellectual adventure that inspires young people and expands the frontiers of our knowledge about nature. It generates the fundamental knowledge needed for the technological advancement that will continue to drive the economic engines of the world. The fundamental knowledge of Science Education is gotten from the graduates of Science Education based on the fundamental objectives above (Ali, 2014). Science Education is a cross-cutting discipline that has applications in many sectors of economic development, including health, agriculture, water, energy and information technology. For instance Quantum mechanics is an aspect of physics education in all levels of science curricular in the tertiary level. Ali (2014) said that all principles in chemistry education can be explained in terms of formulated theory in quantum mechanics. He discovered that structure of every atom in the universe is determined by quantum mechanics. Biologist like Crick, who won the 1962 Nobel prize in Medicine for the discovering of DNA, realized many years ago that even biology is ultimately governed by the laws of physics and quantum mechanics. The fundamental principles and concepts in quantum mechanics are best taught by science teachers. The relevance of science education disciplines above cannot be accomplished without science education. The advanced and developing countries know that Science Education is the backbone of every security and development of a nation and are therefore making serious effort to better the condition of science teachers. England formed partnership with experts in Science

Education to train more people in Science Education disciplines, (physics, chemistry, Biology and mathematics education), in order to increase the number of specialists' science teachers because of the relevance of science knowledge to economic growth (Mgajjorgu 2018).

### **Problems of Science Education:**

Science Education can take care of the current security and socio-economic situation in the nations of the world if the curriculum is well implemented at all levels of education; especially in developing country like Nigeria. The curricular of Science Education (Physics, Chemistry, Biology, Mathematics) including Integrated Science the mother of all science disciplines is facing some challenges in terms of implementation. The challenges include; lack of trained science teachers, equipped and functional laboratories, constant supply of electricity. Laboratory technologist, current and standard science textbooks in our schools libraries etc (Okureme, 2018). Okureme asserted that developing Science Education in Nigeria schools is not simply one of providing more better resources and facilities per se, but a much more complex issue involving among others the understanding of the background (training), attitudes and values of the Science Education teachers in the context of the society they operate in. Unfortunately, both national and state curriculum project have tried to avoid issue by making use of interested science teachers and "experts" in both development and evaluation roles. The teaching of Science Education involves primarily the transfer and development of skills, concept and positive attitudes in relation to the subject matter in question. For this reason Mohammed, Musa, Taihiru and Uriah (2020) opined that there are a number of interrelated factors of a pedagogical nature which are likely to either facilitate the learning of Science Education or otherwise contribute to the problem of teaching Science Education. These factors are identified here and grouped into four broad categories. The pupil factor, the Science Education teacher factor, the Science Education subject curriculum factor and the classroom environment factor as stated by Ogbonnaya (2016), each of these will determine the extent which they may have contributed to the problem of Science Education in Nigeria.

It will be very difficult to achieve the objectives of Science Education with the above challenges facing it, therefore; re-engineering Science Education will lead to the achievement of these objectives and in turn reduce



or eliminate security and socio-economic challenges of the nation, Nigeria.

### Science Education and National Development

Science education brings about development due to the applications of scientific knowledge acquired from the teaching of science education courses. It therefore implies that without Science Education there can be no adequate security and development (Ogbonnaya, 2016). This implied that Science Education is the means through which employable skills needed for all sectors of economy are acquired. It is recognized the world over as a prerequisite for scientific knowledge and skills that are associated with scientific processes needed for advancement in Science and technology. In Science Education, students are encouraged to acquire and practice the scientific skills and principles. The growth and security of any nation is a measure of its level of Science Education (Moemeke, 2017). Moemeke stated that Science Education has introduced a lot of changes in our world today and it will continue to do so in the future. Achievement in Science Education will go a long way in reducing illiteracy and poverty which are impediments to National security and development. Furthermore, Science Education is concerned with finding answers to problems in a bid to understanding and interpreting natural phenomena (Eze & Akubue 2018). They went further to point out that the reasons for teaching Science in schools are for the production of much needed manpower for the nation, acquisition of scientific knowledge, development of individual potentials, essence of discovery, development of rational thought, explaining of natural phenomena and general scientific literacy. All these would culminate to enhanced national security. Scientific literacy is the ability of an individual to live gainfully and conveniently in a science and technology driven world through the teaching of Science Education (John, 2016)

### Security Challenges in Nigeria

Insecurity in Nigeria today can be blamed on some factors that have been left unchecked for a long time by both the Government and the people, which are threatening the existence of the country (Mohammed, et al., 2020). Some of the security challenges are:

- a. **Boko Haram:** Activities has gone beyond the educational philosophy but politically motivated by some elements that drive joy in slaughtering human beings and rendering them homeless, including several acts of bombing

and kidnapping (Christian, 2019). Christian asserts that this sect enjoys effective support from some well-to-do individuals, religious leaders, allies, admirers of their ideology and highly placed politicians in the North who claim to be Nigerians but are clandestinely working against the state.

- b. **Carnage of etho-religious conflict:** Arises when the relationship that exist between members of one ethnic or religious group and the other in a multi-ethnic and multi-religious society is characterised by lack of cordiality, mutual suspicion and fear, and a tendency towards violent confrontation (Safiyya, 2020). The causes of this conflict rallies on fanatics, inequality, disregard of other ethnic nationalities, tyranny, bigotry and abuse of position of importance in the society
- c. **Militant and Kidnapping Activities:** In the Niger Delta and other regions of the country has equally threatened the security and economy of the nation. The incessant bombing of oil facilities and kidnapping of both oil and non-oil workers including setting fire to offshore oil facilities has destabilized the regions, threatens the national security and socio-economic development (Titilayo, 2020). Kidnapping has become another thriving business in the country as the kidnappers not only targeting the upper-class but the middle and the lower-classes.
- d. **Scarcity of well-trained security operative:** Of which can physically and intellectually challenge the contemporary security issues are grossly under policed, considering the ratio of security personnel and citizens (Ojo-Eyitope, 2020). The proliferation of deadly weapons and ease of acquisition of these weapons by unscrupulous individuals portend grave security consequences in Nigeria and West African nations (Timothy & Owolabi, 2018).
- e. **Proliferation of arms and porous border:** has made it easy for terrorist, human traffickers, drug barons and dare-devil herdsmen to infiltrate and perpetuate heinous crimes and acts of terrorism. The rate of crime and criminal activities in the country portends the potency of illegal and unlawful trafficking of arms and ammunitions for perpetrating violence and heating up the polity.





- f. **Herdsmen and Bandit attack:** Has been on the increase and this has become a matter of national concern. Many communities in this country had faced severe attacks allegedly perpetrated by herdsmen or bandits. Most of these communities had regrouped to attack the herdsmen or the bandits which is creating a national tension because any attack springs a reprisal attack which fuels a spill over of attacks.
- g. **Economic, Systemic, political corruption and hate speech:** Has generated lot of violent conflicts and arbitrarily increased the nation's expenditure on internal security. According to Okene (2019) insecurity of lives and properties increased in the country because corruption has entered the management of the nation's security budgets and suddenly becomes a big-times business, as bureaucrats and military officials diverted security votes and expenditure on defence to personal coffers; and tactically fuel insecurity in different parts of the country to get more funding from all levels of government.

#### **Socio-Economic Challenges in Nigeria**

Some factors that pose socio economic challenges in Nigeria are:

- a. **Unemployment:** Has posed great danger to the national socio economic status. Simon (2021) projected the unemployment rate in Nigeria to reach 33.5% in 2023, and is expected to increase to 34% in 2024, and it has constantly rose in the past years. When people are unemployed with no hope of living or what to do, it has great effect on their socio economic life of the people. especially the youths with so much ideas and energy, they become toxic, volatile or short-tempered, and can channel their mind to any vice because there is nothing to live for.
- b. **Poor Governance and Leadership Failure:** Has created political unrest and heightened national threat through hate-speech, separatist movement, electoral violence, corruption, ethnic violence and other vices, affect the socio economic instability in the country
- c. **Inadequate funding of research institution** (Christian, 2019), poses a greater threat to the socio economic development of the nation. Scientist leave for a better environment where their work will be recognized, while the frequent strikes cripple the knowledge-base of the nation, and the students taken to crimes and other vices. When the institution is underfunded, the country lacks the right Science

Educations to solve their problem and subsequently leads to brain drain of the country.

#### **Re-engineering Science Education to curb Socio-Economic and Security Challenges in Nigeria**

In order to address national security issues adequately; there is need to employ qualified Science Education teachers for acquisition of required skills and sound background in the following areas:

**Intelligence:** Every form of security apparatus in the country have to be supported by robust intelligence. The country needs intelligent monitoring systems, forensic laboratories, biometrics and speech-recognition systems to intelligent video and swipe-card in some important buildings and business (Dada, 2018). The country has to pay more attention to terrorist threats, political statements; ethno-religious threats which present immediate threat to national security. We need technology to pick up the information, analyze it and disseminate to the right quarters. If we do not get the right information to the right person at the right time, then the information we collect is useless (John, 2016). We also have to invest more in foreign language training to some of our security forces and acquire systems that translate languages.

**Information Technology:** The magnitude of crime in the country and its potential for destruction is the justification for using information technology (IT) to facilitate law and order. IT will identify potential threats, share information readily, provide mechanisms to protect the nation, and develop response capabilities. There are number of IT implementation systems ongoing in the nation such as the National Identification Number (NIN), Bank Verification Number (BVN), JAMB's Automated Fingerprint information System, Internet Banking, and Global System for mobile communication infrastructure in all parts of the country, and Geographical Information Systems. However, the problem is not the implementation but the sustainability of such implemented systems. Technology is used by many countries for security intelligence gathering, preempting crimes, busting those that are on-going while facilitating investigations of the negligible few that succeed (Abubakar, 2017)



**a. Three priority areas of information technology are:**

Information and Network security: Involves the use of rapidly evolving technological capabilities such as high-performance computing, remote sensing, RADAEs, next-generation networks, electronic and serial surveillance, and unmanned aerial vehicles, all of which depend on efficient system of signal transmission and processing, have become part of modern military operations and civil activities (Adams, 2016)

**b. Emergency Response Systems:** This offers a plethora of opt-in service that can push emergency messages to cell phones through text messages, E-mail accounts, instant message accounts, Voicemail systems, sirens, digital signage in buildings, alarm systems, Global positioning system (GPS), and mobile devices with Rave Guardian Software that activates timer on the devices and carry out surveillance, alerting of any trouble (Adeniran & Yusuf, 2016 )

**c. Integrating Information:** Which involves research in data and text mining, data integration, language technologies, image and video processing, and evidence combination plays a central role in the future prevention, detection, and remediation of security challenges. Government needs to create data warehouse and improve collection and sharing of data which is needed for timely and effective decision making. Also, the need to close gaps between science and research institutions and the higher institutions; and create a link between research institutions and the industry.

**Transportation System:** This sector has suffered many years of neglect in Nigeria, corresponding with the escalating urban population, has resulted in chaotic and disorganised system with no single transportation policy since independent, and has become an easy for criminal activities, which hampers economic development systems, cargo-passenger screening devices, sensor, surveillance systems, biometric identification cards, which cannot only be deployed to the airport but to all transportation and border points by trained and skilled scientist. Also, systems to detect the movement of illicit weapons and material could be most effectively deployed at a number of strategic transportation points such as critical border transit points, major global cargo-container ports, airports, and major interstate highways.

**Strong and Viable National Database System:** To sustain the national requires an integrated database system. The integrated database system will assist the security agencies to compare forensic with

capture biometrics. Nigeria has disparate database system collected from independent National Identity Management System (NIMC). These database need to be integrated into a single national database that will provide an easy access to citizens' information and share information between security forces to help combat crime.

**Toxi Chemicals and Explosives Materials:**

Toxic, Explosive, and flammable properties of some chemical make them potential weapons in the hands of terrorists. Many such chemicals (e.g., chlorine, ammonium nitrate, and petroleum product) are produced, transported, and used in large quantities (NAP, 2018; Mike, 2020). Hazardous chemicals, explosive (Improvise Device (IEDs) and person born IEDs) are gaining traction in Nigeria due to the relative ease of production and widespread availability of raw material (Jon, et al., 2016). Science has made it easy to use improved and expanded sensor to prevent the occurrence of this sort. United Nations (2018) notified that portable optoelectronic nose that uses sensor and handheld scanner detects and identifies explosives compound. Jamming devices and electromagnetic pulses can be used to jam frequency signals of other devices and detonate IEDs from afar.

**Energy Systems:** Include the country's electrical supply and its oil and gas facilities.

The oil and gas facilities warrant special attention because it supplies the required gas to power the electricity and also the major economic hub of the country. The country should invest in surveillance and sensor technologies to monitor the activities of pipeline vandals, encroachments on widely distributed oil, gas, and electrical transmission assets and also to defend against militant sector and key infrastructures such as the communication and transportation systems.

**Science and Technology Systems:** Proper funding of the research institutions will provide collaborations around the World which will result in advanced Science Education for national development and security. This will bring-forth scientist that think years ahead to what the security requirements might be and proffer solution using the right science knowledge or educations (John, 2016)

**Role of Science Education in Resolving Security problem in Nigeria:** Looking at the objectives, we can empathically say that Science



Education holds, a greater potential as averitable tool for resolving the lingering security crises. These objectives are far from being realized largely due to a number of factors, ranging from inadequate manpower, to shortage of learning materials to mention but a few. The problem is compounded by the large population in schools (Jegede, 2014). To achieve this, qualitative and functional science education is required. A field in science called particle material science could be used for internal security in countering terrorism. This new technology can detect smuggled radioactive (Bombs) material even when shielded in lead containers. Science education (Nuclear physics) could be used to develop nuclear power plants for electricity generation. When electricity supply is guaranteed, all factories and industries already closed down will reopen, and jobs will be provided thereby reducing unemployment among the youth. With the youths engaged, the incidence of crime would be minimized, consequently, improving the security situation in the country.

Science Education could be used to boost agricultural production in the country. The very latest technology called centre pivots irrigation system which rolls smoothly around, spraying out water and fertilizer in electronically controlled circle can be used in the agricultural sector (Adams, 2016). This kind of technology which is science based, holds a greater potential to boost food production, and could get youths engaged in agriculture, thereby reducing unemployment which is considered to be the greatest causative agent for insecurity in the country.

Another evidence of benefits of new technology is in dairy farming. Our cows are often skinny and malnourished but with new technology, hybrid cow is by milking machines which can milk 56 cows in 10 minutes. The cows are inseminated artificially using the embryo transfer technology. With this method, the number of offspring can be five times faster than in the normal traditional way (Onuoha, 2015). The above is possible by re-engineering science education to acquire employment skills:

### **Re-engineering Science Education: The Way forward**

Nigeria like other countries of the world had formulated a number of policies that could enhance the growth of science Education for

sustainable national development in order to produce capable science personnel who would stir the various technology-driven aspects of the economy. For more employment opportunities and self productivity in Nigeria, science education must be re-engineered and redirected towards skills development.

To re-engineer science education, the curriculum will have to be carefully designed with sound implementation to encourage creativity, independence, adaptation in the use of new teaching approaches, Annan (2019) saw curriculum as formal process by which learners acquire knowledge, understanding and develop skills, attitude, appreciations and values under the school. Similarly, Sockette (1976) in Annan (2019) viewed curriculum as a “program of activities designed so that students will attain certain specific aims and objectives. There is the need to know how appropriate, relevant, and current these curricula are. How well they have been able to impact the desired skills in the learner. In line with this, Opara (2019) stressed that there is need to adapt science curricula to equip learner’s with strategies, attitudes and skills to live effectively in society and enable them respond to experience that may arise from time to time. Okwu (2018) advocated the inclusion of several scientific manpower while Jegede (2014) has made call for inclusion of contemporary science issues and knowledge which control world affairs but which are not known to most science teachers and students at the secondary school level. Re-designing and implementing science Education for sustainable national development, science teachers would be required to increase emphases on the use of up-to date interactive teaching approaches such as constructivism, activity base and hand-on activities. Meaningful pedagogy should be used to bring students close to science and technology. Science Education should be taught based on our culture drawing examples from local environment. The teaching and learning of the subject matter require the use of discovery approach as well as innovative methods that stimulates students’ interest. Onose (2016) stated that the teaching and learning of science should involve activities and room given to students to think or reason about what they are doing in order to look for relationships which may enhance and build up a store of scientific technologies.



Adequate teaching and learning environments such as well equipped laboratories, functional libraries, classrooms, and the use of modern materials for teaching create more concrete knowledge and positive attitude towards the discipline; encourage the application of imagination thinking and link classroom science to everyday life in society. (2017-2010) stated that exposure to technological equipment in teaching such as computer and internet, video automated teaching etc will expose learners and teachers to think in the same direction as their counter parts in other nations of the world. This will definitely help in producing self-productive scientists.

Re-engineering science Education for employment and self-productivity in Nigeria; calls for a re-think in the mode of assessment of science of skill-oriented, creativity-laden and reasoning-related science outcomes do nothing but kill innovativeness in teaching, creativity and skill inculcation. The need for alternative process oriented and divergent assessment techniques in evaluating science outcomes leading to a radical departure from the age-long examination and elitist states of assessment has been suggested by Jegede (2014)

### Conclusion

Science education as a knowledge, enables innovation, and its integration into the nation, leads to sustainability of national security and development. To be among the great countries in the world requires keeping in mind the vision, creativity, innovation, and entrepreneurship spiriting of Science Educations. The country needs to develop and utilize robust systems for protections, control and intelligent gathering of our security forces. Modern scanning and sensor devices that detect toxic, chemical and explosives should be strategically placed at major locations of the country. There is need to adequately train the security agencies on national inclusive with good remuneration and timely payment to ensure loyalty, and to avoid leak of sensitive information to the wrong people, The paper makes a plea that to be able to re-engineer Science Education, the curriculum would have to be carefully designed and implemented. Call for greater and more purposeful funding of education for human resources development as well as energizing other aspect of national economy has been stressed. If

Nigeria is to develop and build a self-reliant nation, produce a self-productive individual emphasis has to be made continually on the development, growth and re-engineering of Science Education in the school system

### Suggestions

The paper recommends the following

- i. Science Education should be given priority in the National Educational policy so as to achieve the aims and objectives
- ii. Science Education policies should be implemented both ethically and globally by the Government in order to enhance national security.
- iii. Science laboratories and order infrastructural needed for effective implementation of science education curriculum for promoting National security should be provided.
- iv. Effort should be made by the Government and other stakeholders in the educational sectors to proffer solutions to such factors as inadequate funding, lacking/inadequacy of qualified science teachers, lack/inadequacy of science equipment, etc. which hinder effective utilization of science education for promoting National security in Nigeria.

V. Federal Government should show more commitment to the issue of national security by bringing to book anybody reported to be using inciting statements.

Vi .More emphasis should be placed on information communication and technology to meet the new challenges of science education. This can be done through exposing both the students and teachers to technological equipment such as computers, internet and video automated teaching.

Vii Finally, the security sector which comprises the militaries, and the police, directorate of security services (DSS), other intelligence agencies, and the prison should show more commitment to professionalism in the discharge of their duties, and also in combating security challenges in the nation, Nigeria.

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