

# SCIENCE EDUCATION AS A TOOL FOR ECONOMIC RECOVERY IN NIGERIA

**Adeyemi Christianah Oluwakemi**

Federal College of Education, (Special), Oyo

School of Science Education

Biology Department

[christynimoyin@gmail.com](mailto:christynimoyin@gmail.com)

08039410438

*This paper examined how science education can be used as tool to recover economy in Nigeria. The facts that Nigeria as part of developing nation is facing a lot of challenges most especially in the areas of her economy is no more a news. Recently, it was aired on television and radio that Nigeria is facing dwindling economy. This generated a lot of discussions among researchers, elites and even politician on how to curtail this problem. The main thrust of this paper therefore was to see how science education can bail out Nigeria from this situation.*

Keywords: Science, Education, tool, economic, and economic recovery

## **Introduction**

Science, Mathematics and Technology Education is indisputably recognized worldwide as essential tools for effecting national development. The Federal Government of Nigeria enunciated the vision 20:20 programme of development aimed at catching up with the rest of the most industrialized nations of the world in year 20:20. The anticipated problem is whether this vision of government can be realized without science education. This program would be a mirage except science education takes the central role as focal points of the nation's educational sector (Ogodo, 2009).

Science fosters self-understanding improves quality of lives and raises people's productivity and creativity thus promoting entrepreneurship and technological advances. Science also plays very crucial roles in securing economic and social progress thus improving income distribution which may consequently salvage the people from poverty.

Science is an enterprise that builds and organizes knowledge in form of testable explanation and predictions about the natural world, it is a potent tool in the development of any nation. Science has been defined by several authors in several ways. Abimbola (2013) defined science as a body of knowledge, a way or method of investigating and a way of thinking in

pursuit of an understanding nature while Ogunleye (2000) observed science as a dynamic human activity that is concerned with understanding the working of the world.

Science education deals with sharing of science content and process with individuals who are not considered traditionally to be member of scientific community the individual could be students, farmers, market women or a whole community. Science education comprise of subjects such as Biology, Chemistry, Mathematics and physics which are combined with education. Biology out of this named science subjects is a subject that spreads across every aspect of human life.

Ahmed and Abimbola (2011) Affirmed that Biology is beneficial to human being in many ways. These include promoting understanding of relationship between humans and their physical environment. While some of the usefulness of Biology are also stated by Sarojiet (2001) as follows,

- i. Scientific research and development of tools and techniques which invariable improve, the quality of our live.
- ii. Finding applications in medicine, dentistry, veterinary, science agricultural and horticulture,
- iii. Biotechnology which include fields like genetic engineering and hybrid technology.
- iv. Dealing with ecological problems such as over population, food storage, erosion, pollution and diseases.

Many of the developed worlds were able to achieve so much with science education. Omosewo (2001), Supported these by identifying role of physics in the Launching of sputnik by the Russian government in October 4, 1957 would not have been possible if not for the position they placed physics in science. Over the years there has been a significant decline in industrial production, employment and wholesale or retail trade. The effect of the recession are far-reaching. Employment level fall, discretionally income falls and overall consumer spending falls leading to tough time for people of the nation. The case of the nations and fast economic recovery has shown that a deliberate and strategic policy implementation is a magic for achieving target goals and sustainable economic development. In Nigeria, the long neglect of science, Mathematics and Technology including poor finding of research and development are more responsible for her economic loose.

However, according to Okafor (2012), it is now clear that science Education have become part and parcel of the world's culture and every person and nation now need to use them maximally for adequate development and improvement of the society hence, the implication of this sector of education to the transformation agenda of the Federal Government of Nigeria cannot be over emphasized.

### **Some Causes of Economic Meltdown**

**Security:** Security issue in Nigeria has been worrisome for more than two years now because of insurgence of Niger Delta and Boko Haram as affirmed by Horsfall. The lives of nationals living in Nigeria are in perpetual danger of abduction or kidnapping. Lecturers and students don't know their fate every day until they retired to bed at night; even while sleeping they cannot sleep and close their two eyes because of armed robbers. Science infrastructures built with huge amount of money for schools has been destroyed while gas and oil installations vandalized; the resultant effects of these is on economy.

**Unemployment:** Nigeria is blessed with many natural resources on which her economy rest upon, however over dependent on-petroleum has seriously affected the economy. Accounting to all effort to shift focus of economy from oil industry to other economic activities has not yield positive result because of corruption. There are so many graduates of the nation's education system who are roaming about the streets as unemployment and Job — seekers (Nwachukwu, 2009). This situation is contrary to the aims and objectives of Nigerian education stipulated in the national policy on education (FRN 2004), which stresses the development of a self - reliant nation.

**Corruption:** corruption has eaten deep into Nigeria system and it is manifesting in every sector including education. In Nigeria today, it is not what you know but whom you know, that is why said recruitment to job is tied down to criteria such as political favoritisms, geographical area or quota system. Many of the teacher training institutions and Universities cannot boast of the best academic staff because the best probably do not have godfather who help them. Appointment is no longer based on merit but on whom you know and the amount you can offer for such job. Admission into higher institution of learning is not on merit but whom you know. Also, purchases of science equipment to schools are no longer done by experts. In this case, they neither supply the required specification nor the required quantity. In most cases, they don't even supply anything. Most of the science laboratories are empty building or buildings filled with

fake or obsolete science equipment which are useful for nothing but mere demonstration. All these bounced back on the quality of science education the nation produces.

**Health:** The state of health in the country is getting worst day-by-day because the hospitals are not equipped with adequate gadgets and drugs that can be used to manage some health crises. Instead our political leaders prefer travelling out of the country to get their treatments and this will definitely have a negative impact on the economy because it encourages foreign spending instead of keeping the fund within our economy.

**Science as a tool for Economy:** Recovery Science creates Employment Science is very important to the development of any nation in many areas. A graduate of physics education can be self-employed after graduating from school. Many of the physics graduate have some knowledge of electronic that is enough for them to be able to have a little period of training as apprentices and then stand alone as electronic technician. For instance, semiconductor is very important in the modern technology that if properly learnt it is enough for one to stand upon for a living; semiconductor physics is part of what any graduate in physics will learn and should learn. In semiconductor, is very important in a growing economy like ours in Nigeria; it is useful in ceramic industry and a well-trained physics education graduate can be well established in ceramic industry.

Biology education is very important to any growing economy like Nigeria. Many graduates of Biology education can be self-employed and be employers of labour; where people works and earn their living by implementing what they have been taught in the class room such as engaging in fish business, snail farming, bee farming, poultry, horticulture and rearing of different animals among others.

Plant and animals are useful to us as human in many ways. These ways include feeding poultry farming rearing of birds for meat, egg production and even their waste product also serve as food for feeding of fish an individual can engage on both small and large scale for commercial purpose. This will no doubt accrue revenue to alleviate the financial crisis of the individual (Achloonu, 2010). Insect rearing is another source of employment, very simple to rear or culture and it is not capital intensive. They are highly productive Moths reproduce very fast, complete their life cycle within four weeks also cost less labour and easy to manage.

There are colleges of education where students of chemistry department are taught how to make dye and chalk; graduate of these departments can establish their own business as soon as

they graduate, if supported with fund many schools do not need to buy chalk outside anymore and they can equally produce for other schools. Therefore students can take to some establishment by making use of knowledge and theories of science. This will tend to remove the barrier of ignorance, refocus the attention of students to certain areas and motivate them to embark on useful ventures (Oladeje, 2006).

**Provision of Security:** Security guards place managers are among the most used and discussed alternative forms of public surveillance aimed at reducing and controlling crime in public spaces. However, new and innovative solution that are beyond conversional method can be implored by the help of science, such as installation of closed - circuit television (CCT) across spaces to alert any criminal act, Crime detector street lighting, defensible space measures, A walk through metal detector also can be used for high - volume applications such as students, staff and guests entering a workplace, churches, mosque even big shops. This can handle high capacity ensuring that all individuals entering or leaving a particular place are scanned. Use of mobile robots made by knowledge of Science are now widely used in various security and surveillance applications. The contribution describes a design of the robot with function of the security system in the home. This robot can be controlled by mobile phone using DTMF of hobby RC system. In case of unavailability of operator, robot can operate in autonomous mode too. In this mode, robot automatically reacts to stimuli from the environment, if motion detector detects movements robot can automatically start recording video from camera, by using all this it will reduce the mortality rate and even vandalization of country's resources which tend to improve the economy.

**Its Provides Tourism:** Tourism is another important area that improves the economy of any nation. A research by Adejoh and Hyokyaa (2010) supported that Biology as a subject provides a lot of tourism potentials such as zoological garden with different animals, wild life parks, game reserve, botanical /biological gardens among others which can tend to serve as source of generating money for economic recovery.

**Health / medicine:** Medicine, various kinds of herbs getting from plant serve the purpose of performing one curative function or the other, in the body when taken in different forms. Practice of bee farming (Apiculture) with the knowledge of biology also help in economic recovery and it does not require much effort on the part of the farmer. The market for honey is readily available as it has medicinal value that can cure different horrible diseases in human and also used as antibiotic substance. In many part of the world people eat insects. They form source of protein,

vitamins and minerals for man. It consists of essential fatty acid which cannot be synthesized by the body contain low cholesterol therefore very good for health. i.e termites, grasshopper, crickets, beetles, moths caterpillar.

### **Conclusion**

Science Education is an indispensable tool to economic recovery. No economic recovery is possible without science education. A good knowledge of science prompts not only economic recovery, but productivity and generates individual income per capital its influence is noticeable at the micro level of an individual family whose combination makes up the nation. The paper has stressed out the critical roles of science in economic recovery of nation. It is now shows that a well — planned and implemented science education today would play a great role in the development of vital skills to individual that will enable them to be self-employed, hence the ugly situation of massive unemployment of graduate is tacked as well as increase the security of the country and reduce the loss of life and properties. Therefore, if the country can utilize science education properly it will definitely help in economic recovery.

### **Recommendations**

The following recommendation will help in the economic recovery of the country.

- i. Unemployed youth should be encourage to be self employed by using the knowledge acquired through science education from school rather than wasting time in seeking for white collar jobs.
- ii. Schools, colleges, universities either own by private, state, and Federal Government should take it as a point of duties to established botanical / biological garden, zoological garden and any other related tourist attraction which people can visit at their leisure time to serve as source of income.
- iii. Nigeria as a whole should embrace products of science in the country rather depending on imported goods.
- iv. There is need for shift of emphasis from certificate acquisition to the acquisition of practical skills and attitude needed for self - reliant life
- v. Government should be ready to invest heavily in STM Education. Good salaries/allowances should be paid to STM teachers, all the necessary materials/equipment and infrastructure needed should be made available, conducive atmosphere for teaching and learning should be provided. With this, the corresponding effect would be performance

according to expectations. Nigerian graduates would be properly equipped with all the necessary skills they need for self-reliant life. Hence, the dilemma of seeing uncountable number of unemployed graduates roaming on the street seeking for jobs will drastically reduce.

## References

- Adejoh, M. I. & Altyokyaa, F. M. (2010). Prospects for salvage from global economic meltdown: perspectives of the Nigerian Biology Teacher in N. A. Udofia (Ed). *Proceeding of the 51<sup>0</sup> Annual Conference of Science Teacher Association of Nigeria*. 58-62. Ibadan: HEBN Publishes pic.
- Ogunleye O. A. (2000). *Science education in Nigeria*, sunshine international Nigeria limited Lagos 2000.
- Ahmed, M. A. & Abimbola, I.O. (2011) influence of teaching experience and school location on biology teachers rating of the difficult levels of nutrition concepts in Ilorin, Nigeria. *Journal of Science Technology Mathematics and Education* , 7(2) 52-61.
- Nwachukwu, C. (2009). *The relevance of the science, technology and mathematics education (STME) to development of entrepreneurial skills*. *Proceedings of the 50 Annual Conferences of Science Teacher Association of Nigeria* 312 - 324 .
- Kafor, J. O. (2012). Transforming the Nigerian Nation Through Science, Technology and Mathematics Education. A paper presented at the 2<sup>nd</sup> Annual Conference of School of Science, Federal College of Education, Budu, Cross River State, Nigeria. 26<sup>th</sup> - 29<sup>th</sup> March, 2012.
- Aina, J. K Security challenges in Nigeria; Causes and effects on science education. Retrieved from <http://www.basearticles.com/Art/932483/39>
- Horsfall, A. K. (2012) Comprehensive and sustainable peace and security in plural society; Challenges to Nigeria internal security. A speech Delivered at two-day-peace and security summit in Abuja in article