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# THE NEXUS BETWEEN HEALTH EDUCATION AND TECHNOLOGICAL DEVELOPMENT IN NIGERIA

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## **Abstract**

*The nature of health education has compelled nations to accept its importance as machinery for national development. An all inclusive objective of health education is to help the individual reach his fullest, intellectual, physical, social, mental and emotional health through health instruction, practices and habit ( Ubi,(2011)inAchal, 1997). It is the best means by which an individual can acquire specialized knowledge and skills for functional and fulfilled life. "Health is wealth", the saying goes, and a healthy nation is a wealthy nation. For a country to develop technologically, the first consideration among other things is the health of the people. A quality health education system is therefore necessary for a country to produce healthy citizens that will be capable of contributing to national development. This is why every nation strive her best to provide adequate health systems for her citizens. Health and education are very vital and highly associated with technological development. This is because of the fact that only when an individual is healthy that productivity is enhanced. The crux*

*of this paper therefore, is to examine the nexus between health education and technological development in Nigeria. The authors therefore recommended as follows: that health education instruction be made compulsory in primary and post-primary schools; there is need to give health education teachers the appropriate professional preparation to make them qualify and efficient for their roles among others.*

**Keywords: Nexus, Health Education, Technology and Development**

The relevance of health education as a weapon of national development whether technological, political, economical or otherwise cannot be over emphasized. Health apparently is an essential element in national development. It is also a fundamental human right for every citizens of a nation to enjoy good health which is basic for the achievement of physical, social and mental competence of the individual. Nwana (2000) agreed that health problems undermine the stamina for prosecuting any development projects. Adamu and Umaru (2003) added that any nation that is interested in her continuity, stability and future development cannot afford to toy with the health, education and general foundation of her children.

One of the broad objectives of health education is to provide children and youths with adequate understanding of human biology and to develop positive health attitudes and practices. Ademuwagun (2002) believed that such qualities would be useful to the children as individuals and group at home, school and community to live a healthy life. Health education is known to influence knowledge, attitude and behaviour of individuals in a way as to promote and maintain health. Knowledge is crucial for the development of a nation. The teaching of health education in schools serves as bedrock on which a development of a healthy citizenry must lie. Health education in schools provides health ideas that prepare children and adolescents for healthy living. The teaching of health education in schools would provide solid foundation for the development of a healthy nation without which success productivity, growth and technological advancement cannot be attained. Health education is seen as a sine qua non for a healthy nation and consequently for national development.

The more man learns to use knowledge he steadily accumulates from scientific investigations, the greater facility he will have in understanding and solving his own problems. This is why Fawole (2003) maintained that the central theme that runs across all phases of the school health education programme is the preparation of every child to make the necessary decisions relating to his health. The recognition of health education as a full-fledged core subject among English Language and Mathematics in primary and secondary schools not only increase knowledge but will also avail students

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opportunity to acquire health information useful for the development of desirable health practices and attitude.

Samuel (2004) therefore advised that health teachers are very strategic in the promotion of healthy life style, which includes keeping fit, adequate nutrition, desirable weight management and avoidance of destructive habit, stress management, seeking medical advice and living in sound and supporting environment. Our children who are the future leaders of this nation cannot live and contribute meaningfully to the technological development of this country without a sound and adequate health care system that would manifest in their health outcome. This paper therefore examines the link between health education and technological development in Nigeria.

### **Concept of Education**

Education is the imparting and acquiring knowledge through teaching and learning especially at school or any similar institution (Ojerinde, 2011). Education is a continuous process and developed from the human struggle for survival and enlightenment. Its aim is to develop the capacities latent in the human nature and to coordinate their expression for the enrichment and progress of the society by equipping children with the spiritual, moral and material knowledge (Ojerinde, 2011).

Education pervades all essential components capable of functional development of man in accordance with individual potentials. Babatunde (2002) contended that the concept of versatility and diversification of curriculum of students in school system is of necessity, be it primary, secondary or tertiary institutions, if pupils or students are to be developed for optimal participation in the societal activities. A functional education in its entirety cannot safely ignore a subject like health education because it occupies a central point in determining the extent strength and limitations of human development. Health and education are important for a country to develop technologically because it is only a health individual that can function effectively and contributes his/her quota to the development of a nation. Education is an eye opener to new ideas in acquisition of desirable health habits, attitude and practice that are bedrock for maintenance of good health which is a potent arsenal for technological development. Education is an ultimate value and hence through the provision of social services it is an agent of change. Education is to a nation what the mind is to the body just as a diseased mind is handicapped in the coordination and direction of the bodily activities. The single most significant, complex of social control tools for nation development therefore is found in an education system in which health education is part and parcel of (Orobasa, 2010) . Education is the milestone of every type of development and provides all knowledge to do any work in a systematic way. With education, any country can develop its economy and society. Education develops the personality of the youth of a nation and makes people attain perfection by providing large number of skills. Education creates awareness in the population that makes them self –reliant and self –dependent. Orobasa further agreed that the essence of education,

whether formal or informal, is to produce a person who will be a useful member of a society. He maintained that education must engender in the individual a disposition of personal autonomy, responsibility and relevant forms of life thought and action. This will enable the learner to cultivate individual interest potentialities and ability to judge action, act and think accurately as well as rationally.

### **Concept of Health**

Health has been defined in so many ways. Obisanya (2006) defined health as the quality of life that renders the individual fit to live most and serve best. The term health has been conceptualized differently by various schools of thought. What is vital is not the different views but being able to put into practice what would actually lead to the maintenance of good health that could be attained through effective health education programme. This is so because health itself is a veritable tool for men's existence. Health could mean a state of one's good condition in relation to how one feels about himself and others. Health is related to the state of mind and wellness of an individual, which has to do with being able to carry out one's daily duties without stress or pains. Ajala (2005) defined health as the truth of the body, a way of life that enables imperfect human beings, to achieve rewarding and not too painful existence while they cope with an imperfect world. The World Health Organization (WHO, 2005) stated that it is ideally a state of complete physical mental and social wellbeing of an individual and not merely the absence of disease or infirmity. Opara, Odey Tawo (2011) in Iroegbu (1999) also agreed that it is that quality of physical, mental, emotional and social wellbeing that enables one to live effectively and enjoyable within a given society.

When health and education are put together, Ogharaerunu (2006) agreed that health education involves teaching individuals, families and communities what to do to be healthy and to avoid illness, this means that health knowledge highlight behaviour modification, use of appropriate learning experiences and processes that result in behaviour change from undesirable health practices. He maintained that when there is proper health knowledge, there will be improved sanitation, lower death rate, more healthy living and improved longevity. Health education knowledge would assist the people in taking necessary precautions against disease and other health problems thereby making the country a comfortable and healthy place to live in.

Ubi (2013) in Fabiyi(1998) defined health education as a process through which individuals acquire knowledge, attitude and practices which promote their health and help them to make wise decision for solving personal, family and community health problems. This indicates that health education is important and necessary before people can be expected to be actively involved in promotion of their own health. Ajala (2005) viewed health education as a process of providing teaching/learning experiences and activities for the purpose of favourably influencing knowledge, practices and conducts with regards to individual, family and community health.

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Ubi (2011) noted that health education encompasses the following:

1. Health education is an essential part of any activity for promotion of human well-being.
2. Health education develops awareness in the people involved in promotion and protection of their health.
3. Health education potentially brings about positive changes in behavior of the people.
4. Health education brings about prevention intervention of ill-health by making people avoid those phenomena that give them health problems.
5. Health education often motivates and mobilized the community for concrete health development action.

### **Concept of Technology**

Technology according to Asu-Nandi (2014) incorporated those sets of activities related to and possibly within a locality, which brings materials benefits in the form of goods and services to the society at acceptable socio economic transformation. Asu-Nandi(2014) in Abimbade (1997) believed that technology applies to solving societal problems and integrated organization of men, machines ideas and procedures to achieve a desired goal. Gimba (2006) also viewed technology as a tool for achieving self-reliance for controlling one's destiny, ones environment and for solving ones socio-economic problems. He maintained that technology is used to improve the quality of life through the development of tools, the drudgery in agriculture, food processing, construction, health delivery, transportation and defense etc. In the same vein Donald (2004) agreed that technology includes tools machines, utensils, weapons, instruments, housing, clothing, communication and transporting devices and skills by which we operate and use them. He saw technology as applied science especially among scientists and engineers. In this context, it is the current state of humanity's knowledge of how to combine resources to produce desired products, to solve problems, fulfill needs, or satisfies wants. It includes technological methods, skills processes, techniques tools and raw materials.

Animalu (2003) asserted that the fundamental issue in science and technology agenda for Africa is the acknowledgement that science and technology are credible tools for solving our problems both economic and political. Supporting this assertion Andural and Agishi (2006) said that technology is the processing ideas into solution to human problems.

Microsoft Cooperation (2006) held that technology is the application of devices, machines and techniques for manufacturing and productive purpose. Technology has to do with design, production and the use of implements with the sole aim of solving problems, thereby making life easier for man. Technology is valuable and indispensable in all spheres of life. Technology based education is therefore very vital to students future economic contribution. There is no single nation that has made

tangible economic process without technology. The Japanese economic prowess, the US economic super power, the Chinese manufacturing revolution etc. are all traceable to high technological growth and awareness by the citizens.

The concept of development as opined by Hornby (2010) is the gradual growth of skill to become more advanced products. Thus technological development is the transformation of ideas to practical, skills, which are concerned with the transformation of raw materials into finished goods (Kayode, 2010). For Onipede (2003), technological development pertains to development witnessed through industrial activities and these activities involve the processing of manufactured good on a large scale using extensive plant and equipment which were all products of technology.

However technology development needed to build a virile nation that will reflect in the transformation agenda cannot be achieved without advances being made in health care and increase health expenditure, commitment to disease prevention and health promotion through health education knowledge.

### **Corigin of Health Technological Advancement and Disease**

Evidently, most health and disease control programmes, the world over, are championed through advances made in health technology. In the past many diseases organisms or pathogens were not known until after the invention of microscope by Anthony Leewenhock (Ibor, 2013). Today, advance in medical technology has given man a larger and healthier life.

One of the first developments in the fight against diseases took place in 1795, when Edward Jenner used scientific method to discover a vaccine that could prevent small pox. In the late 1800s Louis Pasteur and Robert Kock found that germs cause many disease and infections. Joseph Lister, influenced by Pasteur's work developed the method of antiseptic surgery. His work made surgical operation safer. The development of Penicillin by Alexander Fleming in 1828 gave doctors a new weapon to fight diseases. Production of this antibiotic from fungus penicillin was very little at this time. Today, new species of penicillin have been found which can make 200 times more penicillin than the penicillin notation (Ibor, 1997) in Jenkin 1977.

The commonest diseases in our environment today are malaria, sleeping sickness, onchocerciasis or river blindness, sexually transmitted infections such as gonorrhea, syphilis, HIV/AIDS etc and the most dreaded disease of our time (Ebola disease) causing pain to the whole world. Other diseases also very common to us that are causing the death of young men and women these days are hypertension, cancer, diabetes, etc. However, health information and advancement in medical technology has helped man to control and prevent or cure most of these diseases in our environments.

As observed by Olumba (2004), Nigeria cannot have a competitive workforce, prosperous economy, vibrant communities, technological-know-how, active and involve citizens unless there is quality health education system for all levels of the education system. Perhaps, this could be a reason why UNICEF (2002) emphasized

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that every child (learner) should be equipped with the basic knowledge and skills for a healthy lifestyle, socioeconomic survival, self reliance and self-sustenance. To achieve these, there should be emphasis on the utilization aspect of health education and the acquisition of right attitude, skills and values to facilitate the assimilation and retention of the knowledge learnt.

**Health Education and Technological Development: the Nexus**

Technological development of our nation cannot exist without an effective education foundation. An individual can only function optimally and be productive only on the condition of having good health and healthy personality. That is to say that what make a virile nation is the individual or individuals who must be ready to practice the principle of a healthy life-style. Evans (2001) opined that productivity is a function of emotional, social, mental and physical well being of an individual. Without good health productivity cannot be attained. To drive positive transformation vis-à-vis national technological development, the health of the citizens cannot be toyed with. This provides the necessary tools needed to build a strong and efficient nation. Basic knowledge of preventive approaches to common illnesses like hypertension, stroke, stress, malaria, fatigue, mental and emotional health problems would ensure qualitative living and productivity necessary for technological advancement. This is the more reason why emphasis should be on effective health education programme, so as to build a healthy society capable of producing very healthy citizens.

To achieve any technological process the health of the nation must be guided adequately, no matter what it takes, so as to be able to control disease, prevent mental health problems, nervous problem, seek emotional, social and intellectual stability, secure appropriate growth and development of children and youths (Opara, Odey and Taiwo, 2013). The dependent of technology and health is that each supplements the other. One must be healthy to contribute to the technological development of a nation. No nation will like to invest in a country where sickness and epidemic abound. The citizens will be living in abject poverty and Gross Domestic Product (GDP) will be low which will in one way or the other, impede technological development.

Health values and knowledge motivate the individual to take information received and to do something with it in order to keep himself healthy by avoiding actions that are harmful and by forming habits that are beneficial. The citizen of our country must be aware of the importance of health education knowledge to be able to keep fit and healthy to support the country military, economically, politically, technologically and educationally. To produce healthy individuals for the nation, all hands must be on deck to ensure that medical test, fitness clinics and effective personal hygiene are conducted at various levels of our education system. To buttress this point, Opara, Odey and Taiwo (2013) quoted the late President of America, President J.F Kennedy, stating: “the strength of our democracy is not greater than a collective wellbeing of our people”. The vigor of our country is not stronger than vitality and well

country men. The level of physical, mental, moral and spiritual fitness of every American citizen must be our constant concern. This statement by implication shows the nexus between health, education and national development in all ramifications. This is because a healthy nation will make for very strong and capable individuals who will provide the necessary expertise needed for national development. This is the more reason why emphasis has to be on establishing health education programmes and services that will pave way for the emergence of vibrant citizens, through which the nation can achieve fitness and technological development.

### **Conclusion and Recommendations**

This paper looked at the concept of education, health and technological development and tried to outline ways by which each of these keywords are linked together and also serves as vital instrument for national development. It comes to the conclusion that health education is fundamental in acquisition of desirable health habits, attitude and practices that are bedrock for maintenance of good health which is a potent arsenal for technological development. The recognition of health education as a core subject in primary and secondary schools is therefore necessary to provide solid foundation for the development of healthy citizenry that will contribute to the growth and technological advancement of our nation.

In line with the above discussion, therefore, the researchers recommend the following:

1. The recognition of health education as a full-fledged core subject among English Language and Mathematics in primary and secondary schools is necessary as this will not only increase the knowledge of students but would avail them the opportunity to acquire health information useful for the development of desirable health practices and attitude.
2. Priority attention needs to be given to teachers by government at all levels of education, especially primary and secondary school teachers since they carry much load in terms of caring for the very young ones. A hungry man is an angry man, prompt payment of their salaries and allowances should be the topmost priority.
3. There should be public enlightenment to enable people to appreciate the value of living healthfully in terms of taking necessary precautions against diseases, improved sanitation, good nutrition, regular exercise of the body and positive life-style.
4. There should be proper provision of infrastructure, equipment, facilities and learning resources for health science.
5. Government should ensure effective grass roots health care delivery system by making sure that health education programmes commence effectively by employing and posting health educators, sanitary health personnel and doctors



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to all pre-primary, primary and secondary schools in the country for effective nation building.

6. “Health is wealth”. An effective health education curriculum can eliminate many problems that adversely affect young people, adults and the society in general. An effective curriculum should be also correlated and integrated with other subject areas, in order to produce an individual that can fit in and function well in the society. It is only when an individual is in good health that he can be productive and contribute to the technological development of a nation.

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