

IMPACT OF INFORMATION COMMUNICATION TECHNOLOGY ON THE TEACHING AND LEARNING OF HEALTH EDUCATION

A.K Akinmusere

Abstract

This paper took a look at how Information Communication Technology (ICT) has been able to impact on the teaching and learning of Health Education in the secondary schools. The scope of ICT was discussed viz a viz education. How it could assist in making teaching and learning Health Education more effective was advanced. The imperatives of Information Communication Technology for teachers and students were also highlighted. Recommendations were made as to how information technology could be further used for more effective teaching and learning in the field of Health Education and Education in its totality.

Introduction

Tracing the world historically right from the stone age through the bronze age, to the Iron age, through the industrial revolution, and to the present age of information explosion, globalization and rapid technological advancement, health knowledge, skills practices and attitudes have been in existence and with gradual improvement in accordance to the level of the world's knowledge explosion. Health is very important and a very compulsory issue for the survival of any race, sex, religion, nation, continent and the world at large during these various technological advancement in which all the occupancies of the world are striving every seconds to maintain a very reasonable standard of living by engaging in all various aspect of health, such as; nutrition, recreation, first-aid treatment and so on.

Furthermore, health is a vital concept in the world issue which is defined by Bucher (1979) as the total state of a person which includes mental, physical, emotional and social health not only the absence of diseases or infirmity. The World Health Organization (WHO 1947) also defined health as a state of complete physical, mental and social well being and not merely the absence of diseases or infirmity.

Meanwhile, Health Education as a subject and a professional course is being contributed into by various individuals, government and organization by analyzing, researching, organizing and disseminating health topics and concerns for the betterment of people's health. One of the contributors to this field of study states that Health Education is a process through which individuals acquire knowledge, attitudes and practices which promotes their health and helps them to make wise decision for solving personal, family and community health problems (Fabiya, 1981).

This view is of the opinion that before people could be involved in the promotion of their health; they must be taken through an educational process of health knowledge, attitude and practices as well as skill development.

The 1970's marked the age of information explosion, globalization and rapid technological change, making knowledge a criteria determinant of competitiveness in the world especially in economy and education. There were always new findings, new methodologies, revisions, innovations and so on, keeping pace with knowledge explosion thus became a problem with globalization. There is need to communicating information as quickly as possible and over large distance. With the above mentioned challenge, coupled with the problem posed by this information age, nations must accord

high priority to building the capacity to effectively utilize technology in education and also conscious society had to free itself from fetters of space and distance. The world had to be reduced into a global village, thus, began the information and communication technology revolution which brought about a situation whereby everybody can interact and communicate easily without much fuss. More complex information can be collected, analyzed and used at both the school and system level. The rapid development of information and communication increased pressure to measure organizational performance and the adoption of school self management are leading to the development of powerful management information system (MIS).

The Concept of Health Education

The modern concept of health education deals with the contribution of the behaviour of people to their health status. This is concerned with the identification of health related behaviours compatible with the health standard of the people (Adeniyi, 1993). Also, Americana Encyclopedia (2007) explains that health education is a field whose goal is to help people live threatening or damaging conditions. As a discipline, health education draws content from the physical, biological, medical and behavioural sciences. Since it is concerned with mental and social, as well as physiological well-being, health education is broader than physical education.

Health education in the sense of information on how to keep well is being spread constantly. Families communicate, pass along traditions and attitudes. In many countries, radio, television, magazines, newspapers, books and other media bombard the people with advice on what to eat, what to avoid eating, how to care for the teeth, how to relax, how to be more alert, and so on. While some recommendations come from authoritative sources, there is no guarantee that all the advice is sound or that much of it applies to every individual. There is a need for the formal programs of health education given in the schools by specialized agencies. These programs present information and attempt to influence attitudes and promote action for the sake of improving the health of individuals, families and communities.

Furthermore, Fabiyi (1991) have defined health education as a process through which individuals acquire knowledge, attitudes and practices which promotes their health and helps them to make wise decision for solving personal, family and community health problems. This view is of the opinion that before individuals could be involved in the promotion of their health, they must be taken through an educational process of health knowledge, attitude and practice as well as skills development.

Other researches too, such as Fawole (1987) defined health education as a well sequentially planned programme of instructions focusing on health topic which aims at changing behaviour. Similarly, Udoh (1983), looked at health education as a process of providing teaching learning experiences and activities for the purpose of favorably influencing knowledge, attitudes, practices and conducts in respect of individual, family and community health problems. These two definitions see health education as a process that goes on in the school setting with the objective of using the learning experience within the setting to positively influence the individual and the community members on health matters. The implication here is that health education activities must be taught in the school setting, in the home, in the workshops, factories and on the field, if individuals must participate in the promotion of their health.

Conclusively, health education is essential in the development and attainment of health for all in the view millennium and beyond.

The Scope of Health Education

Akinbile and Ajayi (2003) explain that any standardized school health programme should present opportunities for students to understand themselves and the health problems prevalent in their everyday life. This field of health education is broad enough to encompass all aspects of health of an individual and the community at large. The scope of health education are as follows:

- a. **Personal Health Care:** This relates to the states of health of individuals. The habits and attitudes being expressed by individuals to stay healthy, e.g ability to enjoy good food, to maintain good posture, engaging in moderate exercises personal cleanliness and so on.
- b. **Nutrition:** This has to do with the acquisition of knowledge about kinds of foods, what entails balanced diet, the functions of good nutrients and the resultant effect of lack of them in our food.
- c. **Mental Health:** This is concerned with the quality of intellectual and emotional well-being. Ability to think clearly and constructively, maintaining maximum friction and conflicts with group, the ability to deal adequately with anxiety and stresses.
- d. **Community Health:** This deals with educating the people in order to change their behavior so as to make living conditions in the environment\ meet the optimum standard of healthful living.
- e. **Consumer Health:** This relates to all health articles, services and things consumed by the people. For example, health services like dentals clinics, health centres, primary health care, state ad general hospital and available health facilities. The people in the community should be adequately informed about the availability of such services and encourage the people to patronize them.
- f. **Diseases and Disorders:** These are concerned with the causes of infectious and non infectious diseases. The nature, source, transmission and distribution of micro-organisms. Prevention of infection and control of epidemic within a given community.
- g. **Use and Abuse of Drugs:** This touches on indiscriminate use and misuse of drugs. For example, alcohol, cigarette, cocaine, marijuana and their aftermath. This covers education on causes, problems, preventions and treatments.
- h. **Sex and Family life Education:** This concern human sexuality and family associated with sex education and the roles of the home and school in this aspect. For example, the problems of unwanted pregnancy, unwholesome relationship between male and female and so on.
- i. **Growth and Development:** These details on the process of maturation of the child. It touches puberty stages and its attendant characteristics and changes that occur in every stages of the child's life childhood to adulthood.
- j. **Safety Education and First Aid:** This is concerned with protecting the child from various hazards or accidents. It disseminates knowledge about safety rules while working or playing, emphasizes the importance of first aid during accidents, how to keep, use and dispose drugs.

These components of health education manifest clearly the importance of health education for every individual in the society and specially for the young ones in the school.

The Objectives of Health Education

Health education is broad in scope in order to give opportunities to every individual\ to derive certain benefits from participating in health education programmes. To this ends four keys words in the definition of health education give direction to the aims and objectives of health education programmes. These are knowledge, attitude, practices and skills programme. Any individual who participates in health education programme stands to derive such as: (Akinbile and Ajayi, 2003).

- a. **Development of Adequate Health Knowledge:** This is the ability to make decisions when faced with personal or community health problems and a change in behaviour that brings about a more lasting healthful living. It equally brings about awareness for people when adequate health information and instructions are given for example, knowledge of body function, knowledge about basic rules of health, about food and nutrition, about public community sanitation.
- b. **development of Desirable Health Attitude:** A body of knowledge is useful only when it is applied. Therefore, health knowledge acquired must be reflected in the recipient's attitude. In view of the information he has at his disposal, the individual should be able to make his own decision either individually or collectively when confronted with health problems
- c. **Development of Desirable Health Practices:** This education programme ensures that health attitudes acquired are made permanent and thus become the norms of individuals involved. It would not be enough to realize the importance of physical exercise, adequate sleep and rest, balanced diet and so on, to continued sustenance of healthful living but it becomes paramount to make such health information a routine throughout life.
- d. **Development of Skills:** This individual who has acquired adequate health knowledge, desirable health attitudes must equally develop a variety of skills for execution. For example, a child needs to learn that cleanliness of one's environment goes a long way to contribute to positive health. Thereafter, the child must be skillful in how to sweep and make his or her environment tidy. If the child has no opportunity to develop the necessary skills of execution, the health knowledge acquired becomes useless and his or her health may be jeopardy.

The world health organization scientific group on research in health education summed up these objectives and declared that the focus of health education is to develop in the people:

- i. A sense of responsibility for their own health and for the community
- ii. To develop a sense of awareness in the population
- iii. To bring about change with regards to health matters
- iv. The ability to participate in community life in a constructive and powerful manner with the hope that such responsible participation would be carried over to other spheres of life. Consequently, health education, simply stated focuses on people and on action that is, changing of behaviour.

The Concept of Information Communication Technology (ICT)

Telecommunication means communication over a distance and the word "tele" in Greek words means "far off" and this refers importantly to electronic materials such as radio, television, telegraphy, and so on (Akinmutimi 2009).

Moreso, information and communication technology (ICT) according to Iyekowa and Obuch (2005) states that it is the handling and processing of information as in instructions, graphs, texts and images for use in any means of electronics and communication devices such as computer and telephone.

Also, Agba (2001), explains that when the term technology is used without the plural markers (ies), it generally means the phenomenon of innovations in the information and communication industry, but when pluralized, it refers to the various technological devices. In that case, each of the devices is a technology. To be specific, information technology (IT) is used when one is generally referring to the latest trend and devices that enhances information but, when one has in mind the very process or act of exchanging or sharing news and information, using the existing technological facilities, one talks of communication technology (CT) except one is quite pedantic, one cannot see

any difference between the terms information technology and communication technology when used in isolation.

Furthermore, information technology (IT) is another internet tool that permits users browse and obtain information on the internet with little or no difficulty. Graffith and Smith (1994) define the term information superhighway as a system that involved telecommunication infrastructure that will link homes, business, schools, hospital and libraries to one another and to a vast array of electronics information, books, archives and many related internets and hundred of thousands of computers around the world. As a result of the interconnectivity, computer resources can be executed on remote systems. (Polayan and Akindola, 1996).

According to Abolade and Yusuf (2005), information and communication technologies are essential tools in any educational system for they have the potentials of being used to meet learning needs for individual students, promote equality of educational opportunities, increase self efficacy and independence of learning among students and improve teachers professional development. Other potentials of information communication technologies (ICT) in education include its ability to accelerate, enrich and deepen basic skill in reading, writing and understanding.

The Importance of Information communication Technology (ICT) to Education

Laudon and Laudon (1996) describe ten major areas where information technology can help any organization especially the education sector and these are:

1. **Transaction Processing System (TPS):** Computerized systems that perform and records the daily routine transaction that are necessary to conduct the business they serve in the operational level of the organization.
2. **Office Automatics System (OAS):** Computer system such as word processing electronic e-mail system and scheduling system that are designed to increase the productivity of data workers in the office.
3. **Knowledge Workers System (KWS):** Information system that aid knowledge workers in the creation and integration of now knowledge in the organization.
4. **Management Information System (MIS):** Information system at the management level of an organization that serve the function of planning, controlling and decision making by providing routine summary and exception reports.
5. **Decision Support System (DSS):** Information system at the management level of an organization that combine data and sophisticated analytical models to support semi-structure and unstructured decision making.
6. **Executive Support System (ESS):** Information system at the strategic level of an organization designed to address instruction decision making through advanced graphic and communication. Also, here some of the importance of information communication technology (ICT) to education. Akinpelu, (1999) and Heineman (1995) stressed.
7. **Improved Quality:** The introduction of new technologies increase the attractiveness and its effectives. This was supported the assertion 'tests have demonstrated that on improved quality of training and media increases the retention rate by 30-40%, which is not negotiable.
8. **Reduction of Training and Time Cost:** With the introduction, computer networks system can easily facilities digital learning materials. In essence, one can updates himself with necessary information in the area of study from other advanced country of the world without spending huge amount of producing traveling documents and the regour of producing the traveling document or cost of delivery.

9. **Complementing the Effort of Human resources:** The aspect of shortage of qualified human resources such as the teachers, will be reduced and particularly in the areas of discipline the required experts with new technologies, the problem will greatly reduce.
10. **Promoting Interaction:** With the introduction of cybernet into the information high way also with the recent proposal of introducing word exchange records system into the internet system in Nigeria, will greatly enhance interaction amongst informing the various participants both on the part of the teachers and the students.

The Imperatives of Information Communication Technologies (ICT) for Teachers and Students. (Peter Z.K. 2005)

In order to fit into new economic order, it is necessary for Africa, Nigerian secondary schools, and other individuals alike to develop a society and culture that place a high value on education and training. Thus, information communication technology (ICT) based technology like e-learning has great potential to supplement traditional learning. This is so because information communication technology (ICT) enhanced learning can provide new opportunities to explore high level cognitive activities such as autonomy, creativity, problem solving and team work while providing teachers with the means to take into account individuals needs of students especially while using web-based technology. According, in addition to some of the imperatives mentioned above, some of the definite and specific reasons for implementing information communication technology (ICT) based technology for teachers and students are:

- * New information communication technology facilities allow students and teachers to control manipulate, and contribute information to learning and teaching environment as interactive books, journal and the like, are usually made available via internet (Oxfam Education Report, 2002).
- * The use of the multimedia technologies and internet will improved the quality of teaching learning related activities not only in Nigeria but Africa sub-Saharan region as well.
- * As a social process it will facilitate interaction and collaboration not only among learners but among teachers as well both at local or global levels.
- * It will give opportunity to individuals who might wish to combine work and learning at his or her own pace, irrespective of location.
- * It enhances performance of lecturers in time of course materials delivery and provides maximum attention to students as they could meet through e-mail feedback facility or otherwise.

Thus with the evolution of the new information and communication technology, higher education institutions are able to provide a flexible and more open learning environment for students and teachers alike. In Nigeria, indications are that with increasing enrollments at all levels of education, distance or blended learning shall continue to grow which calls for immediate technology support (Kwache, 2005).

Advantages of Information Communication Technology (ICT) to Health Education Teachers. (Iyekowa Osara and Obueh H.O. (2005))

- a. Teachers are provided with ready materials for teaching health education.
- b. It provides easy production, storage, retrieval and modification of course materials
- c. It increase interaction time among health education teachers to exchange ideas at ant time and from any where around the world.
- d. The teaching of a large health education class is less stressful and more efficient.

Impact of Information Communication Technology on the Teaching and Learning of Health Education

- e. The Teachers have access to many libraries in the world.
- f. The stress of moving from class as well as moving from school to school to teach, the use information communication technology (ICT) encourages variation in the level of knowledge acquired. Students, however, receives instructions on different or various health education topics impacted by different experts who are trained with the appropriate methodology from different part of the world.

Advantages of Information Communication Technology to Health Education Learners (Iyekowa Osaro and Obueh H.O. 2005)

- a. It provide a rich source of a significant amount of reading materials through the internet.
- b. The learning process assists in self motivation
- c. There is added fun to the learning process that help to remove boredom
- d. It help students to be more creative
- e. It builds confidence in the learner
- f. It expose the learner to useful contributory ideas.
- g. Information communication technology has helped to produce a way to accommodation individuals differences among students by creating some opportunities for learners to have sequel to the brief advantages of information communication technology (ICT) to health education teachers, the new communication technology has eroded borders to time to the extent that the remotest villages and towns in Nigeria has the advantage and possibility of trapping a global store of knowledge.

Recommendations

The following recommendations were suggested based on this study.

- * Funds should be made available for training teachers on information communication technology
- * There must be opportunity for training of teachers in information technology
- * Development of strategies for information communication technology should be in the place and reviewed regularly.
- * Efforts should be geared towards the provision of infrastructure that supports information communication technology.
- * Instance access should be within the school premises.
- * The evils associated with ICT must be eliminated. For example browsing pornographical sites.
- * Building of institution framework and security guarantee.

In conclusion, the government should try to reduce import duties, tax and time it takes to clear information technology equipment at the various ports and to canvas to both private sectors to provide these project in schools across the country.

Conclusion

Attempts have been made to examine the concepts of health education, concepts of information communication technologies (ICT), the scope of health education, the objectives of health education. The imperatives of information communication technologies (ICTs) for teachers and students. The advantages of information technologies to health education to teachers and the advantages of information communication technologies (ICT) to health education students.

Studies by Akinmutimi, (2000), Iyakowa & Abeuh (2005), Laudon and Laudon (1996) among others revealed that the impacts of information communication technologies (ICT) to teaching and learning of health education are numerous and integral to the development of the general education process.

Although, studies in this review are many and almost conclusive, there is need therefore, to investigate the impacts of information communication technologies (ICT) in teaching of learning of health education in junior secondary school in Ondo West Local Government in Ondo Town.

The importance of this study was to ascertain the impacts of information communication technologies on teaching and the findings from this study are that.

The students are taught how to makes use of information communication technology in secondary schools but the teachers are not adequately taught how to make use of it, but they are aware of importance of the use of information communication technology remains indispensable in education research. The increasing dependency of education on information communication technologies in inevitable as it helps in including the needs of teachers and student. It provides better opportunity for individual instruction relevance of subjects matter.

The effects and impacts of information communication technology are still not significant in secondary schools. The teachers are ill-equipped in the act of utilization of ICTs in classroom management.

Lastly, information communication technologies are suffering from insufficiencies in most secondary schools because the provision of learning resources are mainly left to the teachers and students.

References

- Adeniyi, J.D. (1003), Effective teaching of health education in primary schools: *The challenge in the 90's Nigerian School Health Journal*. 8, 26-34.
- Agba, P.C. (2001), New communication technologies in broadcasting for enhancing national development in Nigeria. *A paper presented at the African council for communication education (ACCE) annual general meeting/national conference, held in Jos 2001.*
- Agba, P.C. (2001), *Electronic reporting heart of the new communication age*, Nsukka: University of Nigeria press.
- Akinbile, P.O. & Ajayi, R.O. (2003), *A textbook on health education and pertinent aspects of physical education for teachers in training, Ile-Ife.*
- Akinmutimi, T. (2003), Bankchriefflist, hurdles to information technology (IT) driven services *Guardian Tuesday, 15th Aug.*
- Akinpelu, B. (1999), *Fundamental of media utilization* Lagos: Zikag educational publisher Pp 10-13
- Bucher, C.A. (1979), *Administration of physical education athletic programmes*, St Louis: C.V. Mosby
- Ezehioral (1997), Communication challenges *Guardian Tuesday August 8th*

Impact of Information Communication Technology on the Teaching and Learning of Health Education

- Gusen (1995), The surveillance society information technology Bureaucratic social control the information gap, *Journal of Mars Communication Summer*, 39, 18-21.
- Heinemann (1995), Media technology and the Emerging World of Distance Education in Nigeria. *International Journal of Communication*, 2, 19-31.
- Iyekowa O. & Obuchi, H.O. (2005), *Information and communication technology (ICT)-A prerequisite for professional training of science teachers in the 21st century.*
- Laudon, K.C. & Laudon J.P. (1996), *Management information system, organization and technology*, New Jersey: Prentice-Hall
- Peter, Zakawa K. (2005), The imperatives of information and communication technology for teachers in Nigeria higher education, *A journal of educational innovation and development*, 1, 73-79.
- World Health Organization (1946): Healthy living: Everyone a winner Pp 2-4.