

THE PLACE OF INFORMATION & COMMUNICATION TECHNOLOGY (ICT) IN TEACHING OF HEALTH EDUCATION

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Abstract

There is no growth and development of any sector without the use of information communication technology, health education inclusive. The teaching and learning of health education in various groups and society can be improved with the use of ICT. In this paper, it x-rays the place of ICT in health education sector. In other to achieve the aims and objectives of health education, information and communication technology has to be incorporated into health education

Keywords: Health Education, Information and Communication Technology

Introduction

How wealthy a nation is can be determined by how healthy the people are. The citizens cannot be healthy without knowing the right thing to do, healthful living, habits, attitudes cannot be healthy. The evolution of Information and communication technology (ICT) is really the best thing that has happened to humanity. Oliver (2002) argued that ICTs have impacted on educational practice in education to date will grow considerably in years to come. ICT will become a strong agent for change among many educational practices ICT is applied to every, fields of life. Again, Its application in health education will help to achieve its aims and objectives (Instilling in people the need for a healthy life, for quality living, that will ensure high productivity; Teaching people how to take care of their personal and community health; Changing people undesirable behavior to desirable ones; Encouraging people to use available health services; Making people to realize the need for preventing diseases rather than spending more time and money for treatment; and Encouraging people to continue with their local ways of live that promotes health

Concept of Health Education

Health education means different things to different people. Various authors have defined health education, according to their understanding of the subject matter. Health education involves among other things, the teaching, learning and inculcation of habits concerned with the objectives of healthful living (Obasuyi, 2010). Health is a reflection of your ability to use the intrinsic and extrinsic resources within each dimension of health in order to participate fully in the activities that contribute to the growth and development during each stage of the life cycle (Payn & Hahn, 1998). Health education is the science of human behavior, which seeks to inculcate health knowledge, which would bring about a significant change in the attitude of the individual (Nwachukwu, 2010). According to Ogbalu (1997), health education is concerned with peoples health behaviors towards common diseases and other health problems as well as with the educational processed used to bring about positive health behaviors. Based on the various definitions as given by some different authors in health education, Okafor (2011) summarized that:

“Health education can be regarded as the part of education- the responsibility of parents, the school, and indeed the whole community- which will help boys and girls as the grow up to minimize the risks associated with disease and injuries resulting wholly or in part from ignorance, habits and ways of living, and give them a basis of understanding of the functions of the community health services so that they may be able to use intelligently and efficiently and play their parts in reaching wise patterns of illness change”.

Objectives of Health Education

Health education aims at influencing behavior favorably and helping people to reach the stage of active conviction about matters relating to health (Okafor,2011). This implies that the purpose of health education is to help individuals to change negative attitudes and undesirable behaviors to positive and desirable ones in a matter concerning their own health (Samuel, 2010). Moronkola in Samuel, (2010) asserted that based on the various definitions of health education, the following can be regarded as the aims of health education.

- Instilling in people the need for a healthy life, for quality living, that will ensure high productivity;
- Teaching people how to take care of their personal and community health;
- Changing people undesirable behavior to desirable ones;
- Encouraging people to use available health services
- Making people to realize the need for preventing diseases rather than spending more time and money for treatment; and
- Encouraging people to continue with their local ways of live that promotes health.

Okafor, (2011) stated that in trying to achieve the objectives, individually, we carry on health education activities in three different settings, namely, home, school, and community health education. In this paper, efforts are made to look looking at the place of ICT in the three different settings mentioned above.

Concept of Information and Communication Technology (ICT)

Communication can be regarded as a two process of exchanging or shaping ideas, feelings and information (Afolayan, 2009),. He further stated that it is a process that paves way for desired changes in human behavior, and informed individual and community participation to achieve predetermined goals. Communication technology according to Jackie (2006), is defined as technologies that facilitate transmission and the processing, and transmission of information by electronic means. Commonly used application software include word processing data base management systems, powerpoint, excel and electronic spreadsheets. Electronic means of capturing, processing, storing and disseminating information (Obayelu & Ogunlade, 2006).

Information Technologies could be seen as

- old or traditional technologies.
- new technologies,

Old technologies are ICTs, which are primarily broadcast ones such as radio, TV, and video in health and development. New technologies include web based tools- the e-mail, websites, servers/ online discussions, and others, as well as also covering mobile telephony, wireless, satellite ,and innovation such as GIS, personal digital assistants(PAD), mapping systems and others. In this paper, the place of the new technologies is the crux of the matter. Computerized health information retrieved systems are effectively utilized, and have increased ones knowledge of health education practices across the globe (Obasuyi, 2010). In this paper, the role of these new technologies will be discussed, though the information process will not be complete without the combination of the old ones.

Health is at hearth of the MDGs, in recognition of the fact that health is central to the global agenda of reducing poverty as well as an important measure of human development. Three of the eight MDGs are directly health related.

1. Reduce child mortality (goal 4)
2. Improve maternal health (goal 5)
3. Combat HIV/AIDS, Malaria, and other diseases (goal 6).

A critical analysis of the aims and objectives of health education, and the millennium development goals, it cannot be achieved completely without the use of information communication technology.

Kennan (2009) stated that a technology is useful only if the systems are designed keeping the users perspective in mind; if the users are trained on those systems; users recognize the need for a system and users feel there is a need for such system.

Analyzing the stated objectives of health education, all the components have to do with the use of the ICTs. An individual's attitude, habits, knowledge towards health education will be enhanced through the applications of ICT in the program.

Applications software packages are defined as programs that direct the computer to solve specific problems for the user. Commonly used applications in health education program include word processing, data base management systems, electronic spreadsheets, Atutor, HPERIntern, etc. This application software when applied in health education will help to improve knowledge about ICT. ICT serve lots of purposes in the school, office at home and in the community at large. The following are the various services provided by ICTs:

- **Serial Line Protocol (SLIP):** A method for connecting a computer to internet using a telephone line and modem, once connected, the user has the same series provided to the user of a permanent connection.
- **World Wide Web (WWW)/Internet:** A programme that works through hypertext links to data, allowing you to explore network resources from multiple entry points
- **Multimedia and CD-ROM/CD:** Computers have integrated learning with multimedia presentations. Traditional encyclopedias and reference books have been replaced by compact discs with read-only memory (CD-ROM or CD) that contains pictures, sound, and video, as well as the standard text (McLean, 200).
- **Computers and satellites:** Computers are electronic machine or device that accepts data as input with the help of input device like keyboard and mouse etc, process the data in its central processing unit (CPU), Stores the data in its storage devices, example hard disk, diskette, etc, and finally give out the result as output(information) with the help of output devices like printer, monitor etc. Every setting of health education can now be connected using technologies that include computers, interactive television, satellites, and the internet.
- **Local area networks:** This allows computer users to communicate with each other without leaving their location or without the need of a telephone conversation.
- **E-mail:** E-mail stands for electronic mail and it is a way of sending message to other computer users. After the World Wide Web, it is the most popular internet service.
- **Gopher:** This creates menus that allows you to access network resources by moving an on-screen pointer. Gopher can point to text files, telnet sites, WAIS databases and a wide range of other data.
- **Usenet:** This allows automatic global distribution of news messages among thousands of user groups, called newsgroup.
- **Telnet:** This is an internet protocol that allows you to log on to a remote databases
- **File Transfer Protocol:** This is a set of conventions allowing easy transfer of files between host computers. This remains the biggest use of the internet, especially for software distribution, and many public distribution sites now exist.

Importance of ICTS in Health Education

According to Sanni (2007), an ICT infrastructure goes beyond general and academic considerations since it provide income generation. Sanni (2007) highlights the benefits awaiting every scholarly oriented person in the polytechnic community as

- I. Access to information that is unlimited,
- II. Education through ICT,
- III. The social side of learning, e-learning, read books and non-books,
- IV. Listen to radio programs from different countries, and
- V. take part in video conferencing without leaving ones local environment

Davies (1997, as cited in Sanni 2007) stated that the benefit of ICT usage include accessibility to learning opportunities and resources; economical delivery of institution; promoting an improved learning; and enables new instructional models.

Onu & Uche (2008) pointed out that “ICT has become an essential information and processing tool for researchers and everyone is becoming aware of its importance and capabilities”. There is no iota of doubt that information and communication technology empowers students and scholars in their research endeavors and make their intellectual life meaningful (Onu and Uche, 2008).

Role of ICTs in Home Health Education

Home health education is that type of health education that takes place within the home under the guidance of parents and other family members. The role of ICT in home health education include

- **Education:** ICT helps to educate the parents for instance, a parent who listens to health programs on the TV, radio can learn how to ensure proper and adequate nutrition, good personal hygiene, and then pass the knowledge to the children
- **Information:** with the help of ICT, parents can be informed of immunization schedule days coming up or any form of health program in his environment.

Role of ICT in School Health Education

School health education is that type of education that takes place in the school or through the efforts organized and conducted by school staff. It takes place through individual health appraisal, counseling, informed health teaching, in relation to daily experiences and formal or indirect health instruction (Okafor. 2010). The roles of ICT in school health education still involves the use of the ICTs tools as mentioned above in the day to day school activities that will enhance learning, these tools include

1. E-mail
2. Video and pod casting
3. Presenting tool
4. Collaboration and brainstorming tools
5. Blogs and Blogging
6. Online schools
7. Social networking
8. Wikis
9. Virtual worlds
10. Research

Oliver (2002) opined that extrapolating current activities and practices, the use and development of ICTs within education will have a strong impact on:

- what is learned;
- how it is learned;
- when it is learned;
- who is learning and who is teaching.

Role of ICTs in Community Health Education

Community /public health education is that part of health education, which takes place in the community (Okoafor, 2011). This is carried out through the activities of health departments, voluntary health agencies, health workers, etc. Computers can assist self and community care in keeping records, detection of risk, training in self-care and remote consultation and diagnosis (Afolayan, 2009). In community health education, ICTs plays the following roles

- ❖ supports more effective health research and dissemination and access to research findings;
- ❖ Strengthened the ability to monitor the incidence of public health threats and respond in a more timely and effective manner.
- ❖ Improve dissemination of public health information and facilitate public discourse and dialogue around major public health threats.
- ❖ Enable remote consultation, diagnosis and treatment through telemedicine;
- ❖ Facilitated collaboration and cooperation among health workers, including sharing of learning and training approaches;
- ❖ Community diagnosis and mobilization;
- ❖ Monitoring and evaluation of community health programs

Likely Health Consequences of ICTs

Frequent use of the computer can result to one living a sedentary live, rather than indulging in sporting or physical activities for exercise, especially among the children which might spend long hours playing video and computer games. The computer through the internet can expose individuals to pornographic sites

While adopting ICT innovation in teaching/learning process, the observed negative sides according to Ekwe (in Sanni, 2007) are as follows:

- (i) influence of moral and overall psychological development of the student,
- (ii) time consumption and wastage on watching programmes, films and worthless video CDs,
- (iii) logging on to websites dedicated to pornography, homosexual and social bad behaviors and
- (iv) Teaching student games of 'art to kill' among others.

Conclusion

The use of computer in this modern society is inevitable in the area of health education. Considering the crucial role of ICTs in various settings of health education, everyone in the field of health education is required to have the knowledge and expertise of computer technology through computer education. This includes learning a computer through reading and practicing. The knowledge obtained in computer education will enhance the achievement of health education aims and objectives, it will make health instructions easier for the teachers, richer, and more individualized instruction and less rote learning. At the community setting, community diagnosis, assessing the needs, monitoring, intervention and evaluations will be done, the

dissemination of health information more especially in the rural areas will be large in coverage; uneducated parents can learn and inculcate health habits and decisions to their children/wards.

ICTs play a vital role in health education, with the use of modern computer and networking systems teaching and learning of health instructions becomes easier, health education has to do with creating awareness and sensitization of the general public/people and certain health matters which may endanger the human body, for instance, when there is an outbreak of diseases health education practitioners would have to sensitize the public on the modes of transmission, the epidemiology of the disease and how to prevent the transmission of that particular disease. Thanks to God, the emergence of social media and other communication networks, countries like Nigeria and other African countries were able to combat the deadly Ebola virus which has the capacity of wiping the entire African race. Before the use of ICT in health, computations of vital health statistics seems to be time consuming even when its done manually, it is usually inaccurate. There is an increasing tension here and there. Presently the world is battling with so many emerging and resurgent diseases, ICT has enabled most countries to be aware of these diseases such as HIV/AIDs, Ebola, malaria etc, and their modes of spread. ICT will still go a long way in combating ailments and diseases all over the world.

In Nigeria today, most people have embraced the use of ICTs in various institutions of learning, therefore the health-care practitioners should as well improve their monitoring, evaluation and surveillance of health by making use of the modern-day technologies, ICT should be fully incorporated into the systems so as to improve health informatics

Recommendations

On this note, it is recommended that all settings, teachers, administrators and health educators should undergo proper training in computer technology. The government should improve the funding for use of computers in health education program. The health education professional associations such as NAPHERSD, NAHE, HEPRAN, etc. should embrace ICT by creating websites were the annual health conference publications, health information will be assessed all over the world, these will enable health educators, general public get the latest information on research, disease outbreak, control and prevention strategies. The health education teachers should enhance their teaching methods by encouraging often internet research activities, use of presentation tools for teaching, etc.

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