Rethinking Health Education Quality for the Changing Times: The Role of ICT

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Abstract

Purpose: *This study was embarked on to rethink Health Education quality in changing times and the role of ICT plays.*

Design/Methodology/Approach: *Descriptive survey research design was used. Three research questions guided the study. The population and sample consisted of 45 lecturers of health education from five universities in the south-East geo-political zone of Nigeria. The instrument for data collection was a questionnaire which was validated and the reliability determined. Weighted means and standard deviations were used for analyzing the data.*

Findings: *The following major findings emerged Health Education teachers have moderate capability in managing personal ICT space; they have very slight capability in managing shared ICT space, and have slight capability in ICT skills for teaching and learning.*

Practical Implications: *Government should make the study of ICT compulsory at all levels of education by including information technology education in the curriculum; the government to assist the teachers in purchasing personal computers and other ICT facilities to enable them function more effectively.*

Originality/Value: *The paper's contribution to knowledge lies in its empirical evidence to support the position that if teachers low capability in the management of ICT skills, they cannot flow with the changing times and in that process, health education and health generally, will continue to suffer.*

Key word: *Health Education, quality assurance, ICT, Nigeria, Leaders.*

Paper Type: *Empirical*

Introduction

Health is wealth. Good health is a very important factor in the life of every man. Many of man's health problems result from his inability to develop his full potential. Such inabilities according Ogbuji (2010) are due to lack of adequate health information and knowledge. One method of acquiring health knowledge is through health education. Health Education is a process of acquisition of a body of knowledge that may help an individual to appreciate and make sound decisions in matters of health (Amuchie, 2008).

Better health will be achieved not form mere acquisition of knowledge, but from its application. Health Education uses both Science and technology to provide services for mankind. One of the instruments for inculcating health knowledge is information and communication Technology (ICT). According to Onuzulike (2003), through ICT channels, factors that favour health, factors that are harmful to health and other harmful traditional practices have been effectively made known to the masses.

ICT has succeeded in reducing the world into a global village, better described as globalization. According to Ali (2004), ICT denotes the use of scientific tools and techniques for developing, documenting and communicating information when needed, especially as they concern solving problems or providing needed services in the various areas of human endeavour, which by extension ought to impact the society positively. Health and health education are saddled with a lot of problems that are begging for solution and there are many areas that need health services. For instance, a lot of diseases and illness abound, that need to be treated, services are needed in other various areas such as nutrition, environmental sanitation, water supply, among others. These problems cannot be solved in isolation. The masses (people) who are directly affected need to be informed on how to solve these problems. This is where communication and information technology is useful.

Onyeoma and Obiekezie (2000) affirmed that communication is the process of transferring an idea, skill or aptitude from one person to another accurately and satisfactorily. The science of communication is greatly applicable in health education for health activities, and indeed, it is an integral part of it. The primary goal of communication in empowerment and persuation, (Thayer, 19991; Dale, 1994). Other goals are of cognitive, informative, intellectual and emotional nature.

Generally, man communicates in order to influence or affect with intent. This purpose is in consonance with the goal of health education, which is to influence knowledge, attitude and behaviour relating to individual or group health.

This agrees with Okafor (2001) who defined health education as a process of influencing individual to adopt measures that enhances health and to reject those measures that are detrimental to health. People can only adopt or reject something if they are well informed concerning that very thing.Various methods are used in communicating knowledge to people.

Communication and information methods vary from place to place. They range from predominantly manual processes as used in underdeveloped and developing countries, like Nigeria to the highly mechanized process for disseminating health information in developed countries. Such processes include the use of gungs, guns, tattoos and town criers in the developing countries, to the highly developed ICT process of the developed countries.

ICT is defined as the mechanism used to process, store and transmit information, which can be numeric text and graphic form (Norton, 1991). ICT has moved people from the radio, television and print media to the computer age which enables one to process, store, retrieve and communicate information in any form. For one to be ICT proficient, he or she should be able to define, access, manage, integrate, evaluate, create and communicate information. The use of ICT in education programmes and health education in particular, is gaining a lot of momentum and interest throughout the world. There is the wide spread recognition of the potentials of computers in the classroom. The interest in the ICT according to the Federal Department of Education, science and Training (DEST, 2005) is associated with the developments in computing software and hardware, phenomenal growth of the internet, the standard movement in assessment in general and teacher's professional standards in particular. This brings us to the question, are teachers in health education conversant with these ICT techniques: if they are, how capable are they in using ICT?

Shanta (1998) opined that in the area of health, authorities and organizations concerned should provide people with information, motivation and supportive environment which will courage them to accept a healthy and safe living as a norm. ICT and health education have the same function which is the dissemination of information to the public. Health education gives out health information while ICT gives all types of information. This makes ICT a useful tool in health education for health information dissemination.

ICT assists Health Educators in the dissemination and access to health information. The internet enables Health Education to access and retrieve information at less cost than when using the conventional media. Information technology can help teachers monitor students' progress towards set goals; such as in health promotion activities. It provides opportunities to give feedback, and create ideal situations for assessment of students learning (Fiorentino Castelli, 2005). Many programmes include an option to print reports for students to see and share with parents. The ability to see results of their performance over time can also be powerful motivator for students (Mohnsen, 2001).

Some health based networks now use software that enables them provide targeted and personalized health messages and materials to subscribers via electronic newsletters and internet based health surveyors. This is the reason why x-rays of body parts can be done here in Nigeria using digital x-ray equipment, and the film sent to India through e-mail or fax machine. The film is read and interpreted, and drugs are prescribed and sent back the same way and the same day. This means that patients do not have to travel overseas all the time to consult a doctor. In this way, time, life and money are saved.

Through the internet, collaboration in health is made globally possible. This involves national partnership between governments, healthcare providers, voluntary organizations and industries involved in technology. According to Bake

(2002) the many advances in genetic research and fight against many healthy problems, such as HIV and AIDS would not have been possible without ICT that makes interdisciplinary collaboration possible. This implies that teacher education in Nigeria must change in its curriculum and teaching methods to keep pace with current technological changes.

The value of ICT in education generally and health education in particular cannot be over emphasized. The issue as for teachers of health education in high institutions is not whether or not ICT offers a better way of teaching and learning, ICT integration questions the traditional method of education. The problem is how capable or proficient are health education teachers in the use of ICT in teaching and learning and helping to solve health problems.

Infact, information of public health importance, according to Edejer (2000), flood the information highway. Most of these information are available to people who do not know how to use them and who cannot make intelligent use of information available to them for improvement of their health and the health of the masses. This makes the study very pertinent to find out if teachers in higher institution of learning are proficient in the use of ICT in order to fulfill their role in the changing times. The problem of this study therefore, is rethinking health education quality in this changing times and the role ICT can play.

Research Questions

1. What competencies do health Education teachers have in managing personal ICT space?
2. What competencies do health education teachers have in managing shared ICT spaces?
3. What competencies do health education teachers have in ICT skills for teaching and learning?

Method

The cross- sectional survey design was used for this study. This is a descriptive survey and it is considered appropriate for this study because it is usually interested in studying situations as they exist and in obtaining, summarizing and discussing information (Osuuala, 2001). The population of the study consisted of 45 health education teachers in five universities in south-East Geo-political zone of Nigeria that offer Health Education as a course. The universities are taken from Abia , Anambra, Ebonyi, Enugu and Imo States. There was no sampling since the population size is manageable instrument for data collection.

An eighteen (18) item questionnaire was used to collect data from the respondents. The questionnaire had three parts, all seeking information on ICT capabilities of the respondents. The five point Likert scale of very high capability (5), High capability (4), moderate capability (3), slight capability (27 and have no capability (1) was used. The questionnaire was validated by three experts, two from the Department of Health and Physical Education and one expert from the university of Nigeria ICT centre. The internal consistency estimate obtained for the questionnaire using Cronback Alph, was 79. The instrument was administered and collected after completion personally by the researcher to ensure maximum return.

The responses were analyzed using means and standard deviation. Mean of 3.0 and above was accepted as having ICT capability, while a score below 3.0 was considered as not having ICT capability.

Results

The results of the study are present under the research questions.

Research question 1:

What competencies do Health Education teachers have in managing personal ICT space?

Table 1 Mean ($\bar{X}$) Analysis of competencies of Health Education teachers in managing personal ICT space. N 45

Item	Mean ($\bar{X}$)	SD
Ability to operate a computer and software	4.16	1.01
Manage files, folders and handle other	3.93	1.96
Maintain a computer	1.34	1.06
perform basic tasks common to many software application	2.96	1.69
perform advanced tasks common to many software application	2.76	1.64
Grand mean	**3.02**	**7.36**

Table 1 shows that Health Education teachers have high capability only in operating computer and software and in the area of managing files, folders and other computer tasks as indicated by means of 4.16 and 3.93 respectively. The table also revealed that the teachers have slight capability in performing basic tasks with a mean of 2.96 and in performing advanced tasks common to software, with a Mean of 2.76. The teachers have no capability in maintaining a computer.

Research Question 2

What competencies do Health Education teachers have in managing shared ICT space?

Tablet2: Mean ($\bar{x}$) Analysis of the competencies of Health Education teachers in managing shared ICT space.

Item	Mean ($\bar{x}$)	SD
Navigate the internet	4.02	1.98
Access other digital resources (webCT)	4.02	1.98
Search and gather information from internet	3.75	1.91
Search and gather information from other Digital resources	3.60	1.87
Grand mean	**3.84**	

Table 2 shows that Health Education teachers have high capability in navigating the internet and accessing other digital resources as indicated by mean of 4.02 respectively. They have moderate capability in searching for and gathering information from the internet and from other digital resources with means of 3.75 and 3.60 respectively.

Research Question 3

What competencies do health Education teachers have in ICT skills for teaching and learning?

Table 3: Mean ($\bar{x}$)Analysis of the competencies of Health Education teachers in ICT skills for teaching and learning N=45

Item	Mean ($\bar{x}$)	SD
Ability to perform word-processing tasks	4.42	2.07
Perform advanced document formatting Task		
Create simple computer slide presentation	2.22	1.14
Design presentations with multimedia elements	2.96	1.69
Create simple images	2.25	1.51
Edit and design graphics	2.77	1.64
Communicate with other via e-mail and other Network tools	3.68	1.92
Publish and deliver the results of a research activity Using ICT presentation tools and network	2.73	1.63
Collaborate with others using various ICT tools.	2.24	1.48
Grand mean	**2.95**	

Table 3 shows that Health Education teachers have high capability in performing word processing task with a mean of 4.42. The table also reveals that the teachers have moderate capability in performing advanced document formatting and in communicating with others through e-mail, with means 3.44 and 3.68 respectively. The teachers had slight capabilities in all the other items with means ranging from 2.22 in creating computer slide presentation, to 2.24 scored in collaborating with others in using ICT tools.

Discussion of findings

The findings from the study revealed that Health Education teachers have moderate capability in managing personal ICT space as revealed by a grand mean of 3.02. However they showed high capability in the ability to operate a computer and software but totally lacked the ability to maintain a computer. This finding is surprising and was not expected seeing how ICT has eaten deep in every sector of human existence; bring the world into a global village.

However the finding agrees with Onuzulike (2003) who affirmed that relevant learning experiences that influence knowledge, attitude

and practice of health concept are acquired through effective ICT, but majority of Health Educator lack competence in the knowledge and skill of ICT. One wonders wheather the moderate capability in managing personal ICT space could be as a result of lack of ICT facilities because no one can manage what is not in existence.

The study also revealed that Health Education teachers have high capability in managing shared ICT space. This high capability was seen in the area of navigating the internet and access to other digital resources such as the web CT. This is very encouraging because it will be difficult for any academic to excel in any discipline without the shared ICT space. It is in the internet that most research work and other relevant materials are posted for all to avail themselves of these. It can, therefore, ease both teaching and learning difficulties in health education (Bane and Cole, 1995; Nzeagwu, 2003).

On health teachers competence in ICT skills for teaching and learning, the study revealed that the teacher have little or no capability in using ICT for teaching and learning as indicated by the grand mean of 2.24. They showed high capability only in word processing tasks. This is not enough. As Udo (2000) pointed out that when educational technology is appropriately used in health education, the teacher's role now changes from that of primary information giver to that of a co-ordinator of learning. To teach quality health education in schools, health teachers need an understanding of computer assisted instructions, they need to be familiar with modern technologies in terms of application and utilization of ICT in teaching and learning, research and evaluation. When the teacher possesses these capabilities in ICT, the benefits are many.

According to Ely (2006) educational technology is effective in reducing distraction and irrelevant stimuli, simplifies and reduces task directions, provides prompts and cues, breaking instruction into small manageable steps, delivering immediate reinforcement and frequent feedback.

Conclusion and Recommendations

The findings of the study have implication for rethinking health education quality in relation to the role of ICT in the changing times. These implications are that Health Education teachers have low capability in managing personal ICT space, in managing shared ICT space and low or no capability in ICT skills for teaching and learning. If the teachers have low capability in the management of ICT skills, it means that they cannot flow with the changing times as far as learning and teaching are concerned. This means that health education and health generally will continue to suffer.

They cannot join the global village which ICT has created since they cannot collaborate with scientist or other people from around the globe to manage and gain from the shared ICT space. This calls for a rethinking to move health education to meet up with the 21st century requirements. This can be achieved by making the health education teacher not just an information giver but a facilitator, a resource provider and a teacher who engages in critical and creative thinking in a collaborative learning environment.

Based on the findings, the following recommendations were made:

1. The government should institute a mass computer literacy programme at all levels of education system. The training should be for teachers and student from primary schools of universities.
2. Funds should be made available to schools and individual teachers to purchase their personal computers and other facilities needed to make one computer literate. This fund should be given first to university teachers who are trainers of trainees.
3. The health education teachers themselves have to modify their teaching method in order to take full advantages of this new cognitive growth.

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