Role of Information Communication Technology in teaching of Health Education in the Tertiary Institutions in Ekiti State

BY

Alade, T. T. Ph D

Department of Human Kinetics and Health Education,
Bamidele Olumilua University of Education, Science and Technology, Ikere-Ekiti
E-mail: dokitatope1@gmail.com 08138335965
Orcid No: https://orcid.org/0000-0002-0791-3916

Abstract

The teaching and learning process of health education concepts such as anatomy, first aids treatment (resuscitation process) etc can all be taught using Information Communication Technology (ICT) devices to enhance meaningful learning and transfer of knowledge when there is need for application of knowledge. The study thence, investigated the use of ICT in teaching and learning of Health Education in tertiary institutions in Ekiti state. The research design that was used for this study was survey design of the descriptive type of research. The sample size of eight hundred (800) respondents was sampled for the study using purposive random sampling technique. The respondents were drawn from two tertiary institutions in the state. The instrument for data collection was a self-constructed questionnaire. The split half method of reliability was used to ascertain the reliability of the instrument using Pearson's Product Moment Correlation and Spearman Brown's formula. A coefficient of 0.96 was obtained. The data collected were analysed using Chi-Square analysis. The findings of this study showed that the subjects have low know/edge of ICT in teaching health education during teaching practice and that the current use of ICT in the teaching of health education in schools will promote good mastery of the subject matter and motivate the learners in health education classes. It is therefore recommended that teaching of health education to the students should be based on the use of ICT and that ICT should be made a compulsory course for Health Educators in training.
Keywords: Education, Health, ICT, Leering, Teaching

Introduction

In the last decade, Information Communication Technology (ICT) applications have changed the focus of our teaching and learning in Nigeria today and as such, the health education teaching processes must lend themselves to technological intervention for better health education outcomes. Teaching is a form of interpersonal influence aimed at changing the behavior potential of another person (Rajani, 2017). Teaching is an arrangement and manipulation of a situation in which an individual will seek to overcome and from which he will learn in cause of doing so. According to Adigun and Alade (2012), teaching is to gie or impact knowledge or skill to learners.

The concept of ICT refers to electronic means of access, process, store and present communication and information using computers, internet, telephone, cell-phones, television, radio and slide projector. In that regard, ICT integration connotes both means and tool to relay communication data and information amongst and between users through the electronic hardware and software programme (Alazam, Bakar, Hamzah & Asmiran, 2012).

ICT incorporates electronic technologies and techniques used to manage information and knowledge, including information-handling tools used to produce, store, process, distribute and exchange information (United Nations ICT Task Force Tools for Development, 2013). When ICT combines with internet, it creates a channel for students to obtain a huge amount of human experience and guide students to enter the global community. In this way the students not only can extend their personal view, thought, and experience, but also can learn to live in the real world (Bhukuvhani, Zezekwa & Sunzuma, 2011) asserted that ICT helps teachers to perform their teaching profession more effectively.

Ezeani and Ishaq (2013) stated that poor performance of students in the field of ICT could be as a result of teachers' non utilization and application of appropriate ICT tools in classroom instruction. However, the utilization of ICT in teaching and learning of health education is determined by its integration and accessibility in the curriculum. Meanwhile, the integration of ICT into education generally and teaching of health education especially is still a critical issue (Bhukuvhani et al, 2011) that needs an urgent attention.

Health education according is any combination of learning experiences designed to facilitate voluntary adaptation of behaviour conducive to health. It is the process of teaching individual or learners with learning experiences which influence understanding, attitude and behaviour concerning individual home, school and community health (Alade, 2006).

The goal of health education according to Achalu (2001), is to provide information that individuals, family and community can use to improve or enhance their health status. It is aimed at promoting health, preventing disease and disability. The objectives of health education as reported by Alade (2006) are as follows:

- ✓ to acquire health knowledge

- ✓ to improve health attitudes

- ✓ to promote good health practices

- ✓ to change negative health behaviour

- ✓ to reinforce good health behavour

- ✓ to prevent disease and promote health of individual and community

Alade (2004) was of the view that, the overall aim of health education is to help people to develop attitude and practices of safe and healthy living through the understandings of scientific and accurate health information. It is now a common knowledge among Nigerians that better health education teaching like other field of study can be enhanced through the use of ICT.

The dynamic phase of the individualized humanistic system for facilitating the teaching of health education begins with the delivery system through which information is obtained. This consists of multi- media resources alternatives, so that learners can receive information in multiple ways: New technology will be considered as supplementary to instruction through books, teacher explanations and demonstrations. Nwokenna (2007) states that ICT can help students understand other curricula by helping them to think in new ways and thus improve intellectual power. Nowadays, schools or learning institutions provide computer and information technology as the learning materials to gain knowledge and experience. Students now have more understanding during teaching process.

This might explain why the National Policy on Education stated that all schools should be properly equipped with instructional materials for teaching to be very effective. Researches done by Ibrahim (2009) and Ikwuka (2013) explain that instructional materials are things or devices which in themselves have educational value used to facilitate teaching and learning and culminate in the achievement of educational goals and objectives.

Objectives of the study

1. to examine if ICT will enhance easy delivery of health education lectures

2. to find out if ICT will provide necessary health education information for the learners.

3. To evaluate if ICT will help the Health Education Students to avail themselves with the opportunity of acquiring current health education knowledge and skills.

4. To determine if ICT will foster interest and self-direction for the Health Education Teachers and Students.

Hypotheses

For the purpose of this study, four hypotheses were set as follows.

1. ICT will not significantly enhance easy delivery of health education teaching,

2. ICT will not significantly provide necessary health education information for the learners.

3. ICT will not significantly help the Health Education Students to avail themselves with the opportunity of acquiring current health education knowledge and skills.

4. ICT will not significantly foster interest and self-direction for the Health Education Teachers and Students.

Methods

A descriptive survey research design was adopted for this study. The population for this study comprised all Human Kinetics and Health Education (HKHE) students in the University of

Nigeria Nsukka, Ikere-Ekiti Campus and Ekiti State University, Ado-Ekiti, Ekiti State, Nigeria. *A* total population of 800 students was the focus for this study. A purposive simple random sampling technique was used to select 250 HKHE students from University of Nigeria Nsukka, Ikere-Ekiti Campus and 550 HKHE students' from Ekiti State University, Ado Ekiti. A self-developed close-ended questionnaire with Yes and No options was the instrument used for data collection. The questionnaire was given to two Health Education Experts for validation. The instrument was subjected to test-retest method of reliability and Pearson Product Moment Correlation (PPMC) Co-efficient was used to determine the value of (r). The value of (r) gotten was 0.96 was obtained.

The validated questionnaire was administered to the subjects in their various campuses, and was retrieved on the spot after completion with the help of two trained research assistants. The data collected were subject to inferential statistics of Chi-Square (x^2) at 0.05 alpha level.

Results

Hypothesis 1: ICT will not significantly enhance easy delivery of health education lecture

Table 1: Chi - Square Analysis of Data on ICT enhance easy delivery of health education teaching

S/N	Items	Yes	No	x^2cal	x^2table	df	Remark
1	Does the use of ICT helps in the effective teaching of Health Education in schools?	623	177				
2	Does ICT give rooms for easy delivery of Health Education for the students?	571	229	15.42	7.82	3	*S
3	Will the use of ICT promote good teaching of Health Education?	601	199				
4	Will the use of ICT helps to intensify health education teaching in schools?	492	308				

Note: x^2 calculated = 15.42, df =3, p 0.05, Table value = 7.82, * S = significant.
Source: Field survey (2021).

In table 1 above, the observed Chi-Square (x^2) value of 15.42 was obtained against the table value of 7.82 at 3 degree of freedom (df), 0.05 level of significance. The result of the Chi-Square (x^2) test therefore shows that, the hypothesis 1 which says that ICT will not significantly

enhance easy delivery of health education teaching was rejected. The hypothesis was significant.

Hence, ICT will enhance easy delivery of Health Education teaching in our tertiary institutions in

Ekiti State.

Hypothesis 2: ICT will not significantly provide necessary health education information for the

learner

Table 2: Chi - square Analysis of Data on ICT and necessary of health education information for the learners

S/N	Items	Yes	No	x^2cal	x^2table	df	Remark
5	Will the use of ICT help to provide adequate health education information for the students?	689	111				
6	Will the use of ICT help to provide legitimate alternatives to traditional classroom teaching?	705	95	42.48	7.82	3	*S
7	Will the use of ICT tools like computers become essential tool for the teaching of health education in schools?	624	176				
8	Will computer-based Health Education lesson provides the learners with open-ended learning by discovery information?	724	76				

Note: x^2 calculated = 42.48, df=3, p <0.05, Table value = 7.82,*S = Significant
Source: Field survey (2021).

From table 2 above, the Chi-Square value was 42.48, the table value stood at 7.82, with 3

degree of freedom (df) while 0.05 was the level of significance. The hypothesis tested therefore

was significant, thus giving the basis for rejecting the hypothesis 2 which stated that ICT will not

significantly provides necessary health education information for the learners. Hence, it was

concluded that ICT will provides necessary health education information for the learners in

tertiary institutions in Ekiti State.

Hypothesis 3: ICT will not significantly help the Health Education Students to avail themselves

with the opportunity of acquiring current health education knowledge and skills.

Table 3: Chi-square Analysis of Data on opportunity of acquiring current health education knowledge and skills

S/N	Items	Yes	No	x^2cal	x^2table	df	Remark
9	Will ICT help Health Education students to acquire health education knowledge, skills and practices?	630	170				
10	Will the use of ICT education classes promote the acquisition of necessary health education skills?	495	305	4.12	5.99	2	*NS
11	Will the Health education knowledge gained through the use of ICT help to promote the desirable health behaviour?	580	220				

Note: x^2 calculated = 4.12, df=2, $p < 0.05$, Table value = 5.99,*NS = Not Significant
Source: Field survey (2021).

Table 3 above revealed a calculated Chi-Square (x^2) value of 4.12 and the corresponding

table value of 5.99 with 2 degree of freedom (df) while 0.05 was the level of significance. The

hypothesis tested therefore was not significant since the calculated (x^2) value of 4.12 was less

than the table value of 5.99, thus giving the basis for the acceptance of the hypothesis 3 which

stipulated that ICT will not significantly help the health education students to avail themselves

with the opportunity of acquiring current Health Education knowledge and skills.

Hypothesis 4: ICT will not significantly foster interest and self-direction for the Health Education Teachers and Students.

Table 4: Chi-square Analysis of Data on foster interest and self- direction for health education teaching

S/N	Items	Yes	No	x^2cal	x^2table	df	Remark
12	Will teachers and students show interest in ICT for the teaching of Health Education?	715	85				
13	Will the use of ICT during health education lessons helps to give self-direction to the teachers and learners?	613	187				
14	Will ICT motivate health education teachers and students in schools?	624	176	23.45	7.82	3	*S
15	Will health education teachers and students have positive attitudes towards the use of ICT in the teaching of Health Education?	568	232				

Note: x^2 calculated = 23.45, df=3, p <0.05, Table value = 7.82,*S = Significant
Source: Field survey (2021).

Table 4 above, revealed that, the Chi-Square (x^2) value was 23.45 and the table value was 7.8, with 3 degree of freedom (df) at 0,05 level of significance. The hypothesis tested therefore was significant, thus giving the basis for the rejection of the hypothesis 4 which says that ICT will not significantly foster interest and self direction for the health education teachers and students. It was concluded that ICT will significantly foster interest and self direction for the Health Education teachers and students in our tertiary institutions in Ekiti state.

Discussion of Findings

The findings of this study from table 1 suggests that ICT will significantly enhance easy delivery of health education teaching in tertiary institutions in Ekiti State. This findings is in agreement with the view of Semidara (2005) that with the invention of computer, satellites the internet worldwide web (www), Local Area Networks (LAN) and specialized software, multi - media and CD - Rom for learning, information and communication with the aid of advanced modern technology. Many health education information and experiences can be sourced without much stress through the internet using the computer in multi - dimensional approach. Also, the

finding support the consideration of Ndongfack, (2015) who considered ICT as one of the pillars upon which quality education for all can indeed become a reality, because of its unique capacity to bring the world together even the most remote and disadvantaged of communities. The expansion of technology across a wide range of areas including educational institutions, schools and universities came with the main intention of improving the teaching and learning environment (Al-Qahtani & Higgins, 2012).

The findings in table 2 also revealed that, ICT will significantly provide necessary Health Education information for the learners. The finding support the conclusion of Yusuf (2005) who concluded fro the view of other authors that ICTs have the potential to accelerate, enrich, and deepen skills, to motivate and engage students, to help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change. The finding further concur with the assertion of Onyibe (2018) who asserted that the integration of information and communication technologies can help revitalize teachers and students. This can help to improve and develop the quality of education by providing curricular support in difficult subject areas. Another aspect of using ICT in health education is from the development of 2.0 technologies that have revolutionised the way people use the Internet, and the interest in their utilization in higher education is increasing (Papastergious, Gerodimos and Antonious, 2011). This is evident in the use of blogs, wiki's multimedia, social networks that allow for the extensive collaboration amongst its users.

From table 3 findings, it can be deduced that ICT will not significantly help the Health Education students to avail themselves with the opportunity of acquiring current Health Education knowledge and skills. This statement is based on the tact that ICT Knowledge base application are faced with many problems m Nigeria today such as high cost, of importing these

technological equipment, poor electricity supply in schools and communities, in availability of these facilities and equipment in schools, high cost of surfing the net by the users, length of training and lack of maintenance culture in Nigeria and many more. This saying was compliment by the indication of Tinio (2002) who indicated that effectiveness, cost, equity, and sustainability are four broad intertwined issues which must be addressed when considering the overall impact of the use of ICTs in education. Abraham (2005) is of the opinion that the use of new technology for effective teaching of Health Education is a right step in the right direction.

The findings from table 4 shows that, ICT will significantly foster interest and self-direction for the Health Education teachers and students. The findings supports the suggestion of Strambi & Bouvet (2003) who suggested that ICT provides flexibility of material and learning tool as well as an abundance pool of information. As a result, learners are offered with different learning styles and learning environments that could promote interactivity, and more exposure to authentic materials. The American Psychological Association (APA) (2005) states when learners are exposed to tasks, positive attitudes can be triggered towards language learning. The findings was further supported by the findings of Norlida & Supyan (2007) who finds that there are positive changes in students' motivation, confidence and anxiety level when students are exposed to such learning materials in writing classes.

Conclusion

In this paper, the indispensability of ICT in the teaching of Health Education in the tertiary institutions especially in Ekiti State, Nigeria has been examined. Since the teaching and learning interaction take place in schools between the teachers and the learners, and more so, that general approach has not been known by many teachers and students of health education. The researcher also agreed that electronic networking facilities and wide spread access to internet

which are new technologies will soon become absolutely indispensable as a means of linking the tertiary institution scholars in Ekiti State properly into international scholarly community and helping them to overcome some of the handicapping conditions posed by poor library and archival facilities. Hence, the use of ICT for better, effective and efficient teaching of health education in tertiary institutions in Ekiti State in particular and Nigeria as a whole cannot be overemphasized.

Recommendations

The following recommendations were made:

1. ICT should be made compulsory as one of the Health Education course for prospective Health Educators.

2. Government should make urgent and concerted effort to provide basic ICT tools:- in tertiary institutions for easy accessibility and utilization by the teachers and students.

3. Computer based education should be incorporated into primary and secondary school curriculum.

4. The government should ensure that 80 percent of lecturers in tertiary institutions and 50 percent of primary and secondary school teachers have access to private and functional information communication facilities and equipment which should be provided through Educational Tax Fund (ETF) and World Bank Educational Assisted Funds (WBEAF).

REFERENCES

Abraham, E.K. (2005); The Use of New Technology in the Teaching of health Education $_v$ through the active method. *Book of proceedings of the 6th national workshop on use of new technologies in teaching physical and health education* 35-47.

Achalu, E.L (2001). *Health Education Concepts, Methods and planning.* Lagos: Simarch.

Adigun, J. J. & Alade, T. T. (2012) Essentials of coaching, officiating and halth care maintenance in sports. Ajibola Publishers, Ikere-Ekiti, ISBN: 978-339-39-9-5. Pp1

Alade, T. T. (2006). The Relevance of Language m the Teaching of Health Education for National Development. In D, Owofobi; C,I.

Alade, T. T. (2004). Professional Health Education Curriculum Development and Innovations. Unpublished B.Ed Degree Manual.

Alazam, A., Bakar, A. R., Hamzah, R. & Asmiran, S. (2012). Teachers' ICT skills and ICT integration in the classroom: *The case of vocational and technical teachers in Malaysia. Creative Education. 2012*;3:70-76.

Al-Qahtani, A. A. Y. & Higgins, S. E. (2013). Effects of traditional, blended and e-learning on students' achievement in higher education. *Journal of Computer Assisted Learning, 29:* 220–234.

Bhukuvhani, C., Zezekwa, N. & Sunzuma, G. (2011). Students' Preparedness to Integrate Information and Communication Technology Tools and Resources for the Learning of Organic Chemistry. *International Journal of Education and Development using Information and Communication Technology (IJEDICT),* 7(2), 27-37.

Ezeani, N. S. & Ishaq, A. M. (2013). Emerging Issues in Business Education: A Panacea to Effective Utilization and Application of ICTs as a Toolin Business Education in Nigerian Universities. *Review of Public Administration and Management,* 1(2), 89-107.

Ibrahim, A. (2009). National conference of the Nigerian association of educational media and technology, Oyo.

Ikwuka, O. I. (2010). Development and validation of audio and video instructional packages for teaching oral English in senior schools in Minna, Nigeria. Unpublished Ph.D. Dissertation, Department of Science Education, University of Ilorin, Ilorin.

Ndongfack, M. (2015). Mastery of Active and Shared Learning Processes for TechnoPedagogy (MASLEPT): A Model for Teacher Professional Development on Technology Integration. Creative Education, 6, 32-45.

Norlida, A & Supyan, H. (2007). E-learning in a Writing Course at Tenaga National University. *TEFL Web Journal.* Retrieved February 10, 2006 from http://www.teflweb-j.org/v1n3/Alias_Hussin.htm

Onyibe, F. A. (2018). The relevance and utilization of ICT in teaching of Human Kinetics and Health education among students in Ekiti State University, Ado-Ekiti. An unpublished

bachelor degree thesis submitted to the department of human kinetics and health education department, university of Nigeria nsukka.

Papastregiou, M., Gerodimos, V. & Antoniou, P. (2011). Multimedia blogging in physical education: Effects on student knowledge and ICT self-efficacy. University of Thesaly, Department of Physical Education and Sport Science. Trikala, Greece.

Rajani, R. (2017). What is the definition of teaching? Retrieved online from https://www.indiastudychannel.com/forum/79268-What-definition-Teaching.aspx

Semidara, J. A. (2005). Some Expositions of Using New Technology for the Effective Teaching of Physical Education Theory and Practical. *Book of proceedings of the 6th National Workshop on use of New Technologies in Teaching Physical and Health Education.* 48-53.

Strambi, A. & Bouvet, E. (2003). Flexibility and Interaction at a Distance : A MixedMode Environment for Language Learning. Language Learning & Technology. 7(3), 81-102

The American Psychological Association (2005). Learner-Centered Psychological Principles: A Framework for School Redesign and Reform. Retrieved January 1, 2006, from http://www.apa.org/ed/lcp.html

Tinio, V. L. (2002). *ICT* in Education, Retrieved April 23, 2011, from http://www.googler.com.ng/#q=how+can+ICT+Expand+access+to+educa ion&hl=en&biw=l 280&bih=6 I 9&sa=2&fp=4193b342307c5d2b

United Nations ICT Task Force Tools for Development (2013). Using Information and Communications Technology to Achieve the Millennium Development Goals. Working Paper. December 2003. Available at http://www.itu.int/wsis/stocktaking/docs/activities/1103056110/ICTMDGFinal.pdf (accessed February 2013).

Yusuf, M. O. (2005). Information and communication technology and education. Analysing the Nigerian national policy for information technology. *International Education Journal, 6 (3)*, 316 – 321.