

Information and Communications Technology Awareness and Use for Home Economics Curriculum Delivery in Anambra State: Teachers' Improvement Strategies

Olibie, Eyiuche Ifeoma,

*Department of Educational Foundations, Nnamdi Azikiwe University Awka, Anambra
State, Nigeria.*

utchackonsults@yahoo.co.uk.

Ezenwanne Dorothy Nkem

*Department of Home economics Nwafor Orizu College of Education,
Nsugbe, Anambra State, Nigeria*

Abstract

The purpose of the present study was to appraise the awareness and use of Information and Communications Technology by Home Economics teachers in Anambra State junior secondary schools. Four research questions were formulated to guide the researcher in carrying out the study. A sample of 234 Home Economics teachers participated in the study. The data collection instrument was a 35-item questionnaire Data collected were analysed using mean scores and standard deviation to answer the research questions. The findings indicated that there was a low extent of teachers' awareness of the potentials of ICT in Home Economics for curriculum delivery and the teachers did not use ICT facilities in Home Economics curriculum delivery. Findings also revealed some strategies perceived by the Home Economics teachers for improving their use of ICT in curriculum delivery include: provision of well equipped ICT libraries, use of ICT facilities in teacher education institution, provision of information on where to obtain ICT facilities by Heads of department, and purchase of ICT facilities by school. The implementation of the strategies identified in this study might contribute to a gateway to improving the use of ICT in delivery of Home Economics curriculum through professional development of teachers in ICT competencies. Principals, heads of Home Economics departments and supervisors from the State Education commission should sensitize Home Economics teachers on the potentials of ICT for curriculum delivery.

Key words: Information and communications technology, home economics curriculum, teachers, awareness, strategies.

1. Introduction

One of the strategies increasingly adopted by many countries in the world for the development of a productive and dynamic society is through the use of vocational subjects. Home Economics is one of the vocational subjects in school curriculum that is designed to promote a healthier home and society. Waudo (1993) defined Home Economics as the study of the relationship of people and aspects of their environment such as clothing, housing and finance. According to Uko-Aviomoh (2005), Home Economics is highly needed in Nigerian secondary schools to equip learners with the entrepreneurial skills needed for sustained nation building. The aim of Home Economics in schools curriculum is to teach learners how to strategically plan and use available resources in their environment to improve their homes, families and society life (Mosenson & Johnson, 2008; Pendergast, 2006; Nan, 2012). For Home Economics to achieve this aim, it requires effective curriculum delivery and utilization of innovative Information and Communications technology. The thrust of this paper is to appraise the extent of awareness and use of ICT by Home Economics teachers in order to provide insights on how the teachers utilize ICT to achieve the objectives of the Home Economics curriculum.

1.2 Home Economics in Secondary Schools Curriculum

Home Economics is a field of knowledge and services primarily concerned with strengthening the family life through educating the individual for family, living, improving the services and goods used by families, conducting researches to discover changing needs of the individuals and families and the means of satisfying these needs. Home Economics is a vocational subject in school curriculum that is designed to promote a healthier home and society. It is a broad field of study that is concerned with the improvement of individuals' welfare. It is a field of knowledge that helps to improve the home and family (Unomah, 2005; Mendoza & Ikezaki, 2006). Arkhurst and Anyakoha (2004) saw Home Economics as a discipline with a broad scope that covers virtually all aspects of an individual's daily living. Home Economics is a vocational subject that is designed to promote a healthier home and society. Home Economics is also therefore the study of the relationship of people and aspects of their environment such as clothing, housing and finance as well as the art and science of home management including household budgets, purchase of food and clothing, childcare, cooking, nutrition and the like.

Home Economics is one of the subjects studied in schools. Okeke (2004) noted that Home Economics is both a body of theoretical knowledge based on exact sciences, humanities and forms of technological practice. It is the study of everything that helps to improve the home, and the family. Home Economics draws knowledge from many disciplines such as biological, physical, and social sciences, and arts (Peterat & Khamasi, 1996). Badmus (2007) and Aburime and Uhomoibhi (2010) explained that it is entrepreneurial-based because it is a skill-oriented field of study that is expected to equip learners with saleable skills that make for self-reliance/self employment and paid employment.

Home Economics is among the vocational subjects taught in Nigerian secondary schools. Secondary education is the education that children receive after primary education (Federal Republic of Nigeria, 2004). It is a six year programme which is partitioned into two tiers: three years of junior secondary schooling (JSS) and three years of senior secondary schooling (SSS). At the junior secondary level, Home Economics is one of the pre-vocational subjects offered and taught as an integrated subject, which comprises food and nutrition, clothing and textile, and home management. The objective of Home Economics in schools curriculum is to teach learners how to strategically plan and use available resources in their environment to improve their homes, families and society life. Okpala (2005:172)

described Home Economics as a skill-oriented and a decision-making subject concerned with strengthening family life through:

- Educating the individual for family living
- Improving the quality of goods and services consumed by the families
- Conducting studies on the needs of individuals and families and the means to meet these needs.

The essence of pre-vocational Home Economics is to enable pupils to explore a vast array of occupations in Home Economics before making a career choice. Implicit in its objective is the expectation that the pupil who has made a choice now proceeds to develop the skills needed for successful entry into that occupation. Nan (2012) noted that the major objective of Home Economics is the production of manpower that possess the requisite knowledge, skill and attitude for human food, clothing and home resources and bringing them into co-operative relationships. Home Economics will help learners to develop aptitude for practical work, and acquire socially desirable skills to contribute to societal development.

Despite the importance of Home Economics as a vocational subject, it appears that achieving its objective has remained difficult in Nigeria. Ezenwanne (2006) lamented the inability of most secondary school graduates of Home Economics to effectively apply entrepreneurial skills to ensure productive living. As a result of this lack of entrepreneurial skills, students continue to lose interest and cannot perform successfully in their life careers. Thus, unemployment continues to soar, resulting in poverty and frustration. A review of some of these problems indicates that the delivery of Home Economics is beset with a variety of problems, which points to the parlous state of Home Economics instruction in schools. The problems synthesized from Osifeso (2004), Waudu (1993), Nwanna-Nzewunwa (2001) and Badmus (2007) can be summarized as follows:

- Poor background experience of learners, poor aptitude, ability and motivation, which may be generated by gender, and results in an atmosphere of disenchantment and indiscipline of a kind, which makes teaching and learning virtually impossible.
- Instructional impediments ranging from class size, physical setting, frequency of contact, dearth of stimulating materials, inappropriate methods, to lack of curricular skills among teachers leading to a blind reliance on basal series,
- Failure, to promote classroom interaction and students creative ability so that they might feel some sense of practical success,
- Poor attitudes among the teachers, learners and the wider society as to the feasibility and value of school Home Economics education and consequently, lack of a sense of purpose.
- Lack of any coherent policy, objectives or learning content leading to massive failure.

Unless these problems are addressed, students will not realize their full potentials and will inevitably experience failure. Under this unfortunate situation, teachers are being urged to use innovative approaches to teach Home Economics. Hence, the need for Home Economics teachers to use innovative approaches such as ICT to maximum benefits in facilitating the delivery of the subject curriculum.

1.3 Previous Studies on Information and Communications Technology for Home Economics Curriculum Delivery

Information and Communication Technology (ICT) is a combination of advanced technology that provides a rich global resource and collaborative environment for dissemination of knowledge and information. ICT Is the overlap of computer information and telecommunications technologies, and their applications. For Adesoji (2012) ICT

comprises computer and ICT materials and applications, which aid in information collection and dissemination, research and global exchange of ideas that are critical for advancing meaningful, educational initiatives, training skilled labour force, and understanding issues related to global development. In this study, the term ICT is used to indicate the whole range of technologies involved in information processing and electronic communications, including the computers, internet, e-mail, World Wide Web, Word processors, satellite, Global System Mobile Communication (GSM), and other allied electronic ICT needed for more efficient curriculum delivery in schools. According to Olojo, Adewumni, Ajisolam (2012), the introduction of Information Technology to the education systems is aimed at improving educational delivery and preparing children for a role in an information economy.

Recent advances in the contemporary world, especially in the area of computer technology, have heralded the development and implementation of new and innovative curriculum delivery strategies and particularly with the Internet revolution (Halat, 2008; Güzeller & Akin, 2012; Oye, Iahad, Madar & Rahim, 2012). In the world at large, it is acknowledged that ICT is growing at a rapid pace with emerging technologies continuing to develop. Information and Communication Technology (ICT) plays a vital role in the development of any nation. It has been an instrument for achieving social, economic, educational, scientific and technological development (Adedeji, 2010). ICT has greatly influenced the educational sector especially on curriculum delivery, learning and research. The application of Information Communication Technology (ICT) is not only emphasised in corporative business and the industrial sector, but it is an essential part of education at all levels. As Kuthlau (2011) observed, global interconnectedness enabled by information technology calls for new skills, knowledge and ways of learning to prepare students for living and working in the 21st century.

The impact of ICT on education has been fairly significant and is likely to increase more dramatically over the next few years. Optimizing the potentials of ICT are among the major pedagogical issues facing Home Economics teachers in junior secondary schools. The pervasiveness of ICT has brought about rapid changes in technology, which the Home Economics teachers cannot ignore. Lau-Ho (2005) noted that ICT is particularly useful in Home Economics as a tool for curriculum delivery, assessment, research, and hands-on-experience. Home Economics teachers need to use ICT to facilitate curriculum delivery, practical lessons, and follow-up of students' learning activities. For example, they can download relevant lesson plans for use in curriculum delivery, obtain on-line tests and quiz samples, guide students to read learning material on screen eg files, links, and even use computer simulations for demonstration lessons. Technology, such as the Internet, can be a resource to FCS teachers. Friesen, Chezem and Beals (2001) found many websites related to foods and nutrition to be reliable. In a study by Reichelt and Pickard, (2008) Family and Consumer Science educators felt technology would be of value to teaching the subjects. Lau-Ho (2005) reported that many ICT applications are useful in Home Economics curriculum contexts. Other studies found that ICT has impacted the field of Home Economics and has diverse implications for the teaching of the subject (Croxall & Cummings, 2000; Harrison, Redmann & Kotrlík, 2000; Mosenson, & Johnson, 2008). Aburime and Uhomoibhi (2010) noted that ICT could also be used to provide information about staff and participants, subscriptions for examinations, communication about the instructional process, collaborative learning, self-assessment and collaborative research activities.

As it stands, the global trend and standards indicate that there is no development without ICT and Home Economics education is approaching the point at which Information and Communication Technology (ICT) should play a part in nearly all phases of the educational process. To optimize service delivery in the implementation of the Home Economics curriculum, teachers of Home Economics in urban and rural junior secondary

schools in Anambra State are expected to be aware of the potentials and use of ICT facilities to enhance effective learning, improve students reading skills, interest and attainment of instructional objectives. It is against this background that this study seeks to appraise the extent of awareness and use of ICT among urban and rural junior secondary school Home Economics teachers in Anambra State.

1.4 Research Questions

The following research questions guided the study:

- 1) To what extent are Home Economics teachers in Anambra State junior secondary schools aware of the potentials of ICT for Home Economics' teaching and learning?
- 2) To what extent do the teachers use ICT facilities in teaching Home Economics in junior secondary schools?
- 3) What strategies did the teachers perceive that would improve the awareness and use of ICT in teaching Home Economics?

2. Methodology

This study adopted the evaluative descriptive survey design. Evaluative survey design is concerned with collecting data from members of a population in order to make judgements about conditions that exist, opinion that are held, processes that are going on and effects that are evident regarding phenomena. This design is appropriate for this study that collected data from Home Economics teachers in Anambra State with a view to appraising the extent to which they were aware of and used ICT for curriculum delivery in Home Economics.

2.1 Sample for the Study

The sample for this study consisted of 300 Home Economics teachers that were randomly selected from 100 state government–owned secondary schools in Anambra State. There were a total of 259 public secondary schools out of which 100 were randomly selected through balloting. Then all the Home economics teachers in these schools (N=243) participated in the study.

2.2 Development of Research Instrument.

The researcher constructed a questionnaire titled “Awareness and Use of ICT by Home Economics Teachers” (AUIHET) used for data collection in this study. The instrument consisted of three sections (Sections A-C). Sections A and C contained 10 items each on teachers' awareness of ICT and strategies for improving ICT use respectively. Section B had 15 items on ICT use. All the items were structured on a four-point scale of very great extent (4 points), great extent (3points), low extent (2 points) and very low extent (1 point). Cronbach alpha coefficients for the reliabilities of the three sections were 0.72, 0.86 and 0.83 respectively.

2.3 Method of Data Collection

The researcher administered copies of the questionnaires with the help of fifteen research assistants who were teachers in secondary schools in Anambra State. The researcher trained the research assistants. Training involved explaining the essence of the study, location of the teachers and formats for providing responses to the items in case of questions from the respondents. In each school, copies of the AUIHET accompanied by a letter of introduction were administered on the Home Economics teachers. Repeated visits were made for the collection of the completed questionnaires. At the end of one month, 9 copies were not

retrieved. Therefore only 234 copies representing 96.29 % of the total distributed copies were retrieved and used for data analysis.

2.4 Method of Data Analysis

The information from the field were collated and categorized based on category of the respondents. Responses to the questionnaire items were tallied and the frequencies, aggregate scores, and means were calculated. The researcher then used the calculated mean and standard deviation scores in answering the research questions.

A mean of 2.50 was taken as the cut-off point for accepting an item. The decision rule was that since the items were based on a 4-point scale, items which obtained mean ratings of 2.50 and above were regarded as accepted by the teachers to represent great extent, while those that obtained mean ratings below 2.50 were taken to mean low extent.

3.Results

Research Question 1: To what extent were Home Economics teachers in Anambra State secondary schools aware of the potentials of ICT for Home Economics teaching and learning?

Table 1:

Means Scores and Standard Deviation of Home Economics Teachers' Awareness of ICT (N=234)

S/N	Items	Mean	SD	Remarks
1	Computers and Internet can be used for whole class teaching.	3.62	0.64	VGE
2	There are instructional programmes in CD-Roms, computers and internet for Home Economics	2.45	0.63	LE
3	There are standardized Home Economics practical exercises on the internet.	2.27	0.58	LE
4	A teacher can use computer-assisted instruction and internet to individualize instruction	1.95	0.70	VLE
5	A teacher can use e-mail to ask teachers in other countries questions on effective instructional strategies	1.86	0.87	VLE
6	Teachers can use GSM and text messages to solicit information on class work from others.	3.06	0.40	VGE
7	Computer game and simulations can be used to engage students in practical Home Economics lessons	2.22	0.94	LE
8	A teacher can download or record lectures and books from the internet, which he/she could use for drills and memorization.	1.91	0.65	VLE
9	There are educational television programmes where they teach concepts and explain facts in Home Economics	2.75	0.66	GE
10	There are standardized Home Economics tests on the internet which a teacher can use to test and develop learning habits among students	1.83	0.67	VLE
Grand Mean		2.39	0.67	LE

Key VGE = Very Great Extent; GE= Great Extent; LE= Low Extent; VLE = Very Low Extent

Table 1 shows that items 2, 6 and 9 scored above the acceptable mean of 2.50. This shows that the Home Economics teachers were to a great extent aware of those potentials of ICT use. However, in the remaining items, they scored below the acceptable mean of 2.5 showing that their level of awareness was minimal. Therefore, there was a low extent of awareness of the potentials of ICT for Home Economics for teaching and learning among Home Economics teachers in Anambra State secondary schools.

Research Question 2: To what extent did the teachers use ICT facilities in teaching Home Economics in secondary schools?

Table 2:

Mean and Standard Deviation of ICT Facilities Mostly Used in Teaching. (N=234)

S/N	Items	Mean	SD	Remarks
11.	Key points from the internet	1.53	0.82	VLE
12.	Pictures and cartoons	1.77	0.43	VLE
13.	Films/movies	1.67	0.73	VLE
14.	Radio programmes	1.40	0.79	VLE
15.	Television Programmes	1.40	0.83	VLE
16.	Flash cards	1.31	0.78	VLE
17.	E-mail	1.52	0.65	VLE
18.	Tape recorders	1.47	0.43	VLE
19.	Stories, demonstration and simulation books download from the internet.	1.29	0.78	VLE
20.	Home Economics websites	1.36	0.75	VLE
21.	On-line practical and test exercises	1.67	0.78	VLE
22.	Computers	1.81	0.86	VLE
23.	GSM and text messages	1.75	0.86	VLE
24.	Technology newspapers and magazines	1.00	0.58	VLE
25.	Overhead projectors/power point projects	1.00	0.48	VLE
	Grand mean	1.46	0.65	VLE

Key VGE = Very Great Extent; GE= Great Extent; LE= Low Extent; VLE = Very Low Extent

All the items in Table 2 obtained mean ratings below 2.50. This indicated that in the opinions of the Home Economics teachers, they did not mostly use ICT facilities in Home Economics curriculum delivery. Therefore, there was a low extent of use of ICT facilities among Home Economics Teachers in Anambra State secondary schools.

Research Question 3: What strategies did the teachers perceive that would improve the awareness and use of ICT in teaching Home Economics?

Table 3: Mean and Standard Deviation on Strategies Perceived by the Home Economics Teachers that would improve their Use of ICT (N=234)

S/N	Items	Mean	SD	Remarks
26.	Government should provide well equipped ICT parks and laboratories in schools.	3.53	0.75	VGE
27	Teacher education institutions should used ICT facilities to teach home-economics teachers in training.	3.93	0.64	VGE
28.	Heads of department should mentor and provide information on where teachers will obtain ICT facilities	3.69	0.74	VGE
29	School authorities should source funds from the PTA and philanthropists and purchase the ICT facilities.	3.85	0.76	VGE
30	Learning resource centers should be set up in Home Economics laboratories where electronic media facilities should be installed.	2.69	0.47	VGE
31.	Government should provide adequate ICT facilities to school.	3.95	0.66	VGE
32.	Home Economics teachers should give students assignment that would involve the use of ICT facilities.	2.82	0.77	VGE
33	Home Economics teachers should be sponsored to ICT training.	3.97	0.72	VGE
34	Priority should be given to making ICT literacy a must for recruiting Home Economics.	2.28	0.77	LE
35	Incentives such as study leave with pay should be given to Home Economics teachers to attend ICT training.	2.42	0.90	LE
Grand Mean		3.31	0.72	VGE

Key VGE = Very Great Extent; GE= Great Extent; LE= Low Extent; VLE = Very Low Extent

Table 3 shows that only items 34 and 35 scored below the acceptance mean of 2.50. This indicated that giving priority to making ICT literacy a must for recruiting Home Economics teachers and incentives such as study leave with pay were not among the strategies which Home Economics teachers perceived would improve their use of ICT.

The rest of the items scored above the accepted 2.5 mean. This indicated that the statements in these items were perceived by the Home Economics teachers as strategies for improving their use of ICT in curriculum delivery.

4. Discussion of Findings

The findings revealed a minimal extent of Home Economics teachers' awareness of the potentials of ICT for teaching the subject. Specifically, the teachers indicated that they were only aware that computers and Internet can be used for whole class teaching, that they (the teachers) can use GSM and text messages to solicit information on class work from

others and that there are educational television programmes where they teach concepts and explain facts in Home Economics. The finding supports that of Mosenson and Jonhson (2008) where Family and Consumer sciences teachers showed an awareness of the potentials of ICT for teaching and learning. In these respects, the Home Economics teachers have demonstrated that they understood some of the potential opportunities of using ICT like the Internet, GSM and educational television. Although this is a little step in the right direction, as it would facilitate the professional development of the teachers in the use of ICT, one can still see that the teachers were unaware of the other potentials of ICT in this information age.

The findings of this study have also clearly indicated a low extent of Home Economics teachers' awareness of the empowering potentials of ICT in curriculum delivery of the subject. This finding is in line with Pendergast (2006) who noted that all over Africa, Home Economics teachers demonstrated a low level awareness of the benefits of ICT for curriculum delivery and learning of the subject. With the low extent of awareness, the stage has not been set for the teachers to maximize the various potentials of ICT in teaching Home Economics which the developed countries have been enjoying.

One is worried that the teachers indicated that they were not aware that there are instructional programmes, standardized Home Economics practical exercises, computer games and simulations in computers, internet and CD-Rom for Home Economics curriculum delivery. The teachers were also not aware that they could use e-mail to ask teachers in other countries questions on effective instructional strategies and even download or record lectures and books from the internet, which he/she could use for drills and memorization. With such low level of awareness, Home Economics curriculum delivery in this digital era might not be ICT-driven.

One of the reasons for the low level of awareness on ICT found in this study might be that some of the Home Economics teachers might have been hearing of the computers and Internet and might have considered ICT as a new discipline of study (Lau-Ho, 2005; Nan, 2012). Hence, they might not realise that they could use it to improve their curriculum delivery pedagogy and subject knowledge. If they did not know enough about the empowering options of ICT or did not understand them, they might not see many reasons to apply ICT to teaching and learning. Hence, if the teachers are to be exposed to ICT and digital information, they might become more aware of the limitless potentials of the ICT for curriculum delivery and learning.

In the opinions of the Home Economics teachers that participated in this study, they did not mostly use ICT facilities in Home Economics curriculum delivery. Therefore, there was a low extent of use of ICT facilities among Home Economics Teachers in Anambra State junior secondary schools. None of the ICT facilities investigated were mostly used by the Home Economics teachers.

This finding indicates that the status of ICT use among the Home Economics teachers did not reflect a revolutionary change in curriculum delivery. This finding is in line with Olibie (2008) who reported a low level of ICT integration in course delivery in Nigeria. The result reflects what was earlier stated by Uko-Aviomah (2005) that many Home Economics teachers teach the subject without instructional materials and instructional technologies. In contrast, Reichelt and Pickard (2008) found that in the Western European context, it is has become a widely accepted practice to integrate ICT in major logistical, organizational and educational processes of vocational subjects including Home Economics. Also Tabar and Khodareza (2012) found that the use of ICT is high among teachers in Iran. Olaitan (2008) warned that without the use of some materials, tools and ICT facilities in teaching vocational technical subjects in schools, certain skills that might be required for entry into some vocational occupational area might not be imparted.

This finding might be because of the dearth of ICT facilities in junior secondary schools in Nigeria. Uko-Aviomoh (2005) found that there was poor funding for ICT and IT infrastructures were not adequately provided for teaching and learning. Lack of ICT facilities would heighten teachers lack of awareness and hinder the use of ICT, thereby broadening the digital divide between Nigerian students and those in developed countries. As Oye et al (2012) rightly pointed out, in the absence of a high extent of use of ICT facilities for teaching and learning vocational subjects, digital technologies become more unequally distributed, thus heightening the technical divides between peoples and poor entrepreneurial skills development.

The respondents agreed that many of the designated strategies would improve the awareness and use of ICT facilities among them to a great extent. The teachers however disagreed that priority should be given to making ICT literacy a must for recruiting Home Economics and incentives such as study leave with pay should not be given to Home Economics teachers to attend ICT training. This finding might be because the teachers recognize that few home-economics teachers- in- training is taught practical and adequate ICT (Osisefo, 2004). Therefore if ICT literacy is made a prerequisite for recruiting the teachers, it would be difficult to find ICT literate Home Economics teachers. Besides, since ICT could be effectively learnt on-the job, there is no need to give teachers study leaves with pay to learn ICT.

These strategies perceived by the Home Economics teachers for improving their use of ICT in curriculum delivery include: provision of well equipped ICT libraries, use of ICT facilities in teacher education institution, provisions of information on where to obtain ICT facilities by Heads of department, and purchase of ICT facilities by school. Other strategies are setting up of electronic instated learning resources corners in Home Economics laboratories, Government provision of adequate ICT facilities to schools, giving assignments to students that would involve the use of ICT facilities and sponsoring Home Economics teachers to ICT training. This finding agrees with Aburime and Uhomoibhi (2010) that many strategies are needed for the use of ICT to boost instruction.

These strategies might yield expected results in creating awareness and improving the use of ICT among Home Economics teachers in Anambra State because they covered what is expected from the Home Economics teachers, their principals, teacher education institutions, PTA and philanthropists, Heads of department and the government could do to improve the awareness and use of ICT by Home Economics teachers. It should be noted that these strategies call for resourcefulness from the teachers, their principals and heads of Home Economics departments. Since this study have shown that Home Economics teachers were not fully aware of the potentials of ICT for effective curriculum delivery and learning of Home Economics and did not use ICT facilities to teach the subject, one is optimistic that these strategies are very timely and could be result-oriented if implemented.

5. Conclusion

Given the rapid pace of the information age occasioned by Information Communications Technology (ICT), nearly every educational institution in the world is trying to get to grips with ICT. ICT use by teachers is considered a key to achieving a breakthrough competitive advantage. However, the findings of this study have indicated that there was a low extent of teachers' awareness of the potentials of ICT in Home Economics for curriculum delivery and the teachers did not use ICT facilities in Home Economics curriculum delivery. Findings also revealed some strategies perceived by the Home Economics teachers for improving their use of ICT in curriculum delivery include: provision of well equipped ICT libraries, use of ICT facilities in teacher education institution, provision of information on

where to obtain ICT facilities by Heads of department, and purchase of ICT facilities by school.

In the face of low levels of awareness and use of Home Economics teachers, the adoption of these strategies for improving the awareness and use of ICT facilities by Home Economics teachers in Anambra is very important. The implementation of the strategies identified in this study might contribute to a gateway to improving the use of ICT in curriculum delivery and learning of Home Economics through professional development of teachers in ICT competencies. Principals, heads of Home Economics departments and supervisors from the State Education commission should sensitize Home Economics teachers on the potentials of ICT for curriculum delivery. Principals of schools that have computers should allow Home Economics teachers to use them for curriculum delivery. Government agencies, Ministry of Education, or Parents'-Teachers'-Association should organize seminars and conferences to sensitize and intimate Home Economics teachers' more on the empowering potentials of ICT in teaching and learning.

References

- Aburime, M. O & Uhomoibhi, J. O. (2010). Impact of technology and culture on home economics and nutrition science education in developing countries. *Multicultural Education and Technology Journal* 4 (1) 4-16
- Adesoji, F. F. (2012). Undergraduate students' perception of the effectiveness of ICT use in improving teaching and learning in Ekiti State University, Ado-Ekiti, Nigeria. *International Journal of Library and Information Science* 4(7), 121-130
- Arkhurst, A, P & Anyakoha, E.U. (2004). *Availability and Adequacy of educational facilities for the Implementation of the Senior Secondary School Clothing and Textile Curriculum in Southern Zone of Ghana*. Retrieved on 17th July 2007 from <http://www.moe.edu.sg/iteducation/edtech/papers/d1.pdf> .
- Badmus, D. M. (2007). Factors influencing students' achievement in junior secondary schools certificate examinations Home Economics in Nigeria. *College student journal* 41 (1) 1-12
- Croxall, K., & Cummings, M.N. (2000). Computer usage in family and consumer sciences classrooms. *Journal of Family and Consumer Sciences Education*, 18(1), 9-18.
- Ezenwanne, D. (2006). Self-concept and job satisfaction of Home Economics teachers in Anambra State. *Interdisciplinary education journal* 7&8, 149-168.
- Federal Republic of Nigeria (2004). *National policy on education: Revised Edition*. Abuja: NERDC press.
- Friesen, C.A., Chezem, J.C., & Beals, K. (2001). Using the electronic superhighway to "drive" your foods and nutrition curriculum: Recommended websites for foods and nutrition educators. *Journal of Family and Consumer Sciences Education*, 19(2), 19-25.
- Güzeller, C. O & A, A. Akın (2012). The Effect of Web-Based Mathematics Instruction on Mathematics Achievement, Attitudes, Anxiety and Self-Efficacy of 6th Grade Students. *International Journal of Academic Research in Progressive Education and Development*, 1 242-254
- Halat, E. (2008). A good teaching technique: WebQuests. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 81(3), 109-112.
- Harrison, B.C., Redmann, D.H., & Kotrlík, J.W. (2000). The value and usefulness of information technology in family and consumer sciences education as perceived by secondary FACS teachers. *Journal of Family and Consumer Sciences Education*, 18(1), 1-8.
- Kuhlthau, C. C. (2010). Guided inquiry: School libraries in the 21st century. *School Libraries Worldwide* 16 (1), 17-28
- Lau-Ho, L.K. K. (2005) *Information and communication technologies in Home Economics. What is the situation*. Retrieved from <http://repository.ied.edu.hk/dspace/handle/2260.2/8351>.

Mendoza, M.A. & Ikezaki, K. (2006). Home Economics Education in the Elementary Level in the Philippines. *Bull. Tokyo Gakugei Univ. Educational Sciences*, 57: 351_357 (2006)

Mosenson, A.B., & Johnson, J.M. (2008). Instructional strategies and resources: Exploring the use of technology. *Journal of Family and Consumer Sciences Education*, 26(3), 17-35.

Nan, S.Y. (2012). Meta analysis of the effect of practical reasoning instruction on student outcome in home economics education in Korea. *Asia Pacific Education Review* 13 (4) 649-664.

Nwanna_Nzewunwa, P (2001). Vocational education as a missing link in Nigerian technological development. *Nigerian Journal of Curriculum Studies and Instruction* (NJCSI). I 10 (5) 71-75.

Okeke, B.C. (2004). Enhancing enrolment in vocational programmes in colleges of education in Delta State of Nigeria: perception of academic staff. *Internal journal of educational research and development*.1 (1) 72-89.

Okpala, F.U (2005). Effective integration of population/family life education in Home Economics. In H.O.N Bosah, C.O Obiagwu, and K. A. Azubuike (Eds). *Refocusing Nigerian education for the nascent democracy* Onitsha: Ofona, publishers. Pp170-181.

Olaitan, S.O. (2008). Communication technologies for increasing consumer choice of goods and services in African environment. In B. G. Nworgu (Ed). *Education in the information age: global Challenges and enhancement strategies*. Pp 203-208. Nsukka: University Trust Publishers.

Olojo O., Adewumni, M., Ajisolam K. (2012). E-learning and its effects on teaching and learning in a global age. *International Journal of Academic Research in Business and Social Sciences* 2 (1), 203-210.

Osifeso, G. A. T (2004). Professional obligations of Home Economics towards a better national development in the 21st century. In A.O. Noah, D. Shonibere, A. Ojo & T. Olajuwon (Eds). *Curriculum Implementation and Professionalisation of Teaching in Nigeria*. Lagos; A-Triad associates. 305-314

Oye, N. D., Iahad, N., Madar, M. J. & Ab.Rahim (2012). The impact of e-learning on students' performance in tertiary institutions. *International Journal of Computer Networks and Wireless Communications* 2, 2,

Pendergast, D. (2006, May). *Sustaining the Home Economics profession in new times*. Paper presented at Home Economics conference held at University of Aberdeen Dundee. Retrieved on 3rd Nov 2006 <http://www.tki.orn.nz/r/nzcu>.

Peterat, L., & Khamasi, J. (1996). Home Economics/family studies curricula in Canada: Current status and challenges. *Canadian Home Economics Journal*, 46(2), 68-73.

Reichelt, S.A., & Pickard, M.J. (2008). Instructional Strategies and resources: Utilizing the Internet as a technology tool in family and consumer sciences classrooms. *Journal of Family and Consumer Sciences Education*, 26(1), 50-58.

Tabar, H. & Khodareza, M (2012). The effect of using multimedia on vocabulary learning of pre-intermediate and intermediate Iranian EFL learners. *Journal of Basic and Applied Scientific Research*, 2(12)12879-12891,

Uko-Aviomah, E. E., (2005). Evolving a dynamic curriculum for Home Economics in Nigerian schools. In S. O. Oraifo, G.C Edozie, and D.N Ezeh (Eds.) *Curriculum Issues in Contemporary Education. Book in Honour of Professor (Mrs). Ebele Maduewesi*. Benin-city: Da-Sylva Influence.

Unomah, E.N. (2005). The place of home economics in the survival of the Nigerian family. *Journal of Home Economics Research*, 6 (2), 101-105.

Waudu, J. (1993). Home Economics Education in Africa: Reflections and prospects. *Canadian Home Economics Journal*, 43(4), 150-152.

Information on Authors

Olibie, Eyiuche Ifeoma (Phd), is a lecturer in the Department of Educational Foundations (Curriculum Studies and Educational Technology Unit), Nnamdi Azikiwe University Awka, Anambra State, Nigeria.

Ezenwanne Dorothy Nkem (M.Ed) is a Lecturer in the Department of Home economics Nwafor Orizu College of Education, Nsugbe, Anambra State, Nigeria