
Application of Information and Communication Technology (ICT) in Home Economics Education in Nigeria: Issues and Challenges.

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Abstract

This paper has reviewed some global challenges that impact on the family and implications for Home Economics Education. It has also identified strategies which Home Economists to appropriately fulfill its roles in the enhancement of quality of life for the family and contribute to the development of individuals, families and the society. The adoption of the suggested strategies will constitute a paradigm shift in Home Economics for effective contribution to development in Africa. Children with disabilities generally have special needs with regard to their education. Some of those needs can be met through information and communication technology. As the technologies become more advanced and more available, there is a significant opportunity to improve significantly the quality of life of this disadvantaged group. Conclusion and some recommendations were made.

Introduction

The use of Information and Communication Technology in teaching special needs children in Nigeria is yet to be fully in place, where as the use of it in development countries of the world has changed the face of education and has made teaching and learning easier, teaching and reading of IT in teaching the special needs children, teaching and learning will not sublime with modern technological trends.

According to Oxford Advanced Learner's Dictionary, IT is the study or use of electronic devices, especially computers for processing, analyzing, storing, and sending out information. In addition, the Oxford Advanced Learners Dictionary states that Communication is a method of sending information, especially through telephones,

radio, and computers etc. Therefore, Information and Communication Technology refers to the use of electronic devices, especially computers in processing, analyzing, storing, and sending out information. It can be applied to the education of special need children and normal children alike. The paper discussed the role of information and communication technology, the educational uses of information and communication technology, home economics and some challenges of the family in the global era and implication of the global challenges for home economics: the paradigm shift.

The Role of Information and Communication Technology.

Information is a fundamental commodity. It is through the discovery of new information, its dissemination and sharing that society advances.

Information and communication technology is concerned with imparting of information not just simple acquisition of declarative facts, but also procedural information such as how to do things, how to learn. A vital recent development in the ICT is the convergence of technology concerned with the processing of information with that which deals mainly with its communication.

This is clearly seen in the emergence of the internet whereby the processing power in each office and school can be connected and communicate with corresponding system anywhere in the world. It should not be forgotten that ICT is part of the curriculum in all developed countries.

The Educational Uses of Information and Communication Technology

Computer programmes can be used to teach the students directly. It has a number of benefits, as often requires a kind of individual attention of the learner. It is particularly useful in drill and practice lessons, where repetition is necessary in order for concept of skill to be learned. This can be most use to children with learning disabilities. When interacting with machine, there is no danger of annoying or upsetting another person, on matter how many times the drill and practice is done.

The use of Information and Communication Technology in Teaching the Deaf.

1. Enhances language improvement of deaf people through constant exposure to reading and retrieval of information system.
2. Improve grammar, spelling and overall sentence construction of deaf people since more time is spent on the screen with language tasks.
3. Encourages individualized instruction, which permits exploration, experimentation and self-discovery.
4. Exposes students to different texts of language variation used by people in the deaf child's immediate and far away environment, and provides exposure to learning processes, which cannot take place in the classroom situation alone.

Computer technology enables deaf people to express themselves and help the surrounding hearing people understand the deaf individual's thinking process, feelings and need.

The use information and communication technology is here to stay. Further research will be necessary to determine its effects on the education of deaf children.

Communication at a Distance

ICT can be used as part of distance teaching tool. This will be effective when [specialized] teachers are short in supply and have to be shared between geographically dispersed students and teachers different rates of information.

ICT can also form a useful communication medium between people with different sensory abilities. Combs (1995), shows how a blind teacher may be able to communicate with a deaf student despite their miss-match of abilities; thanks to e-mail.

While e-mail is normally used for communication between distant locations it can be used as a means of local face-to-face communication.

Types of Communication.

	Synchronous/ Asynchronous	Bandwidth (High,Medium, Low)	Direction(1- way or 2-way	Dispersion (1-to-1, 1-to- many)
Video Conferencing	S	H	2	m-m
Video broadcast	A	H	1	1-m
Audio broadcast (Radio)	A	M	1	1-m
Wedcast	A	M	1	1-m
Telephone	S	M	1	1-m
Telephone conferencing	S	M	2	1-1
Webpages	A	H/L	1	m-m
Chat	S	L	2	1-m
E-mail	A	L	2	1-m
Bulletin board	A	L	1	1-m
Newsgroups	A	L	1	1-m
Powerpoint				

The World Wide Web (www) is a particular form of communication, which has rapidly gained importance such that it is almost becoming an inevitable information source, not the least in education.

The Implementation

There are a number of points that have to be considered if the introduction and maintenance of ICT in special education is to be successful.

1. The need to train teachers well. While it may seem expensive to acquire the equipment, there will be no need buying them when there are no qualified teachers to operate them. Therefore it will only be adopted if the people who might use it are confident in its use and convinced of its usefulness.

2. There is a need for supportive staff to maintain and repair the equipment.

3. Constant monitoring at all levels is also vital. This applies to programmes of ICT use, so that the job is not over when the equipment had been obtained and teachers have been trained. They should not be simply left to get on with it but should be supported and monitored. As they develop

and learn, and as the technology also improves, there should be re-assessment and updating.

Home Economics and Some Challenges of the Family in the Global Era

It is necessary to point to the fact that the challenges of the family are indeed the challenges of its members and of the society too. The family is the basic unit of the society and many families constitute the society. The vital position of the family emphasizes the importance of the welfare of the family and its well-being/quality. The well-being of the family and society in its entirety is the critical concern of Home Economics. It is a profession that serves the family. High quality of life cannot possibly be attained by the family when there are poverty/hunger, flood/erosion/environmental disaster, unemployment, social vices such as abuse of human rights, terrorist, domestic violence, lack of social security for the aging generation and child trafficking. These problems pose various forms of challenges to the family. They need to be carefully identified, studied and consciously target for solution. Home Economics has a serious stake here. Perhaps, it is necessary to briefly review some of these challenges.

Poverty and Hunger: This is the bane of Africa including Nigeria. Available reports indicate that even though more people are working globally than ever before, the number of the unemployed remained high at 195.2 million in 2006 or at a global rate of 6.3% (United Nation Non-Governmental Liaison Service (NGLS), 2007). This report further indicates that Middle East and North Africa remained the region with the highest unemployment rate in the world at 12.2% in 2006. Sub-Saharan Africa rate stood at 9.8%, the second highest in the world. The region also had the highest share in working poverty with eight (8) out of ten (10) women and men living on less than US\$2 a day withy their families. Poverty manifests itself in various forms of problems such as acute malnutrition, living in squalor, shanties and slum; prostitution, human degradation, diseases including HIV/AIDS, etc.

Today governments have recognized the state of poverty in their countries (for instance, in Nigeria) and various efforts are on or being in place to alleviate it. Many families are, however, still being challenged by poverty need to be equipped with saleable skills, while poor families need to be helped with income generating opportunities, formation of viable cooperative groups etc. Home Economics ought to evolve poverty alleviation strategies through research and other activities.

Environmental Degradation and the Family: The family exists in the environment and the problems of the environment affect the family and should concern Home Economics. Some of these problems are global warming, ozone depletion, loss of bio-diversity, deforestation, soil erosion, desertification, various forms of pollution, urbanization, depletion of renewable and non-renewable energy, and waste management. United Nations Environmental Programme (UNEP) Executive Direction, AchimStainer (2007) said, “if rising standard and efficient methods of production and consumption intensify pressure on nature’s natural resources – from fish, freshwater and the atmosphere to forest and fragile environmental problems have continued to devastate families, in some cases rendering families homeless in other to rose to death

of family members etc. Members of families even abuse the environment in many ways, including indiscriminate dumping of refuse that result in floods, poor cropping practices, and uniformed use of chemicals. These situation call for viable Environmental Education (EE) for the masses, including the family members. Yet, Home Economics programmes as at various levels of education are deficient in EE. Many Home Economics remain uniformed in issues relating to the environment. There is no need for action by Home Economics to include Environmental education in Home Economics education at all levels.

Family and Information Communication Technology (ICT): The word is presently experience information technology revolution today, many families own microcomputers. Youth spend hours on Internet learning new things (both desirable and undesirable) all of which impact on the family and society. Knowledge has become the key issue in development, hence, the present concept of knowledge economy. New concepts and practices are evolving the permeating families, such as e-mail, e-commerce, Internet banking among others. Through ICT individuals can access information from any part of the world, giving rise to “the global village”. Computer literacy is the order of the day. Home Economists cannot be left out.

Acquired Immune Deficiency Syndrome (AIDS): this is the leading cause of death in many parts or the world including Africa. Human Immunodeficiency Virus (HIV) is the virus that causes HIV infection and AIDS. HIV infection is chronic, progressive viral infection that damages the immune system. HIV/AIDS is fast permeating and devastating families. Available report indicates that nearly 30 million of those infected with HIV are in Africa, where ADIS has become the leading cause of death. Sub-Saharan Africa is reported to be the hardest hit, where in some countries; 20-40 adults carry the virus (Insel and Roth, 2004). Intervention strategies emphasize prevention and care for people living with HIV/AIDS. Home Economists have important role to play here by providing IT to families because knowledge is power. Lack of it is presently perceived as poverty.

Human Right, Democracy and Civic Education: These are global. National and family concept today. The 1984 United Nation Declaration of Human Right enjoined all countries of the world to recognize promote and protect human rights. The 1979 Convention of the Elimination of All Forms of Discrimination against Women (CEDAW) and 1989 Convention on the Right of Child deal respectively, with the right of women and children. African countries are signatories to these conventions, yet various forms of violation of human right occur, such as domestic violence. Child abuse, human trafficking. Families and individuals often do not know their rights. Democratic processes are seriously abused. Human right education, civic education, law education and other related enlighten programmes are needed. Families should be targeted and Home Economics Education has responsibility here.

Ageing Generation/Security/Financial Education: Ageing is a challenge. It is, however, a normal process of development that occurs over an entire lifetime. It

happens to every one. It often comes with retirement, lower/sometimes no income, new and challenging roles and new social status. Successful ageing requires preparation. In Africa, old people's homes are not common; the extended family system often provides social security at old age. The system is, however, seriously ageing eroded by various forces. Deviant marriage and family forms are coming up while the care of the aged and less privileged by the family is seriously being over-looked. It necessary for individuals to evolves ways of making provisions for old age (Anyakoha, 2007). Investment and financial management education is necessary. Home Economic must be involve, for instance, Home Economist should be informed about stock exchange and viable investment opportunities and be able to teach such and educate families on the use of Information Communication Technology. There are other global challenges the impact the family and have implication for Home Economics. These include drug misuse/abuse and need for drug use education; gender issue, erosion of family values, terrorism and conflicts, use of information communication technology.

Implication of the Global Challenges for Home Economics: The Paradigm Shift

Home Economics is today operating in a global village where one can access information from any part of the universe by mere touch of a button. It is a vocational subject that can equip individuals with appropriate competencies for creative problem solving, entrepreneurship, job creation and self reliance. In doing these, it equips individuals and the families they constitute to achieve enhanced quality life and well-being. For Home Economics to do all these successfully there is need to review old practices and tools since the challenges of the global era cannot be solved with obsolete tools. This means review of various old practices, and evolution pf new ones, that is, a paradigm shift. Both the society and the family are dynamic, so Home economics and its practitioners must necessarily be dynamic. Some of the areas that need to be addressed include:

Image-Making Strategies: Badir (1992) contented that Home Economics has lived in the ghetto for many years in many countries. Other studies have also confirmed that Home Economics and its practitioners have image problems in many countries (Pepall, 1998; Anyakoha, 2001 and 2007). It is possible that in some of the technologically advanced countries, Home Economics may have graduated from the ghetto status into lime light. However, in many Africa countries, Home Economics remains in the ghetto. It is necessary to devise workable image-making strategies such as improving standard in skills, products/graduates, making voices of Home Economics to be heard in government and society through professional bodies, organizing programmes that impact positively on families, special groups such as children, youth, aged, and ensuring sustainability of such programmes. The specific image making strategies to use will depend on the environment/country. Serious effort needs to be made by Home Economics to gain recognition in their countries. Assignment which government should be given to other professionals. Home Economic should, for instance be able to contribute to family related policies. Home Economists must be part of the new information technology (IT) era.

Addressing Gender Stereotyping in Home Economics: Where gender role stereotypes exist, there are standardized ideas about the qualities or behaviour of a category of people and what they do. This is a common phenomenon in Africa and it features prominently in the family, school, society school subject and professional fields. Home Economics is a victim of the phenomenon. It is commonly seen as the field that focuses on roles socially vested on the females (Anyakoha, 2004). Where males are decisions that impart on the field the result is often insensitivity to the need of the field. Home Economics should evolve ways of addressing these problems through their orientation, curriculum materials, practices, activities and programmes, self image, etc. Home Economists must strive for Internet literacy. They should surf the Internet for new knowledge on regular basis.

Curriculum Review and Restructuring: These are critical at all levels of both formal and informal education. The implication of global challenges for individuals, families and society ought to be integrated into the present Home Economics curriculum at all levels of education. This is very necessary if the field is to equip learners to participate intelligently in the complex global environment. Possible themes/issues or areas that need to be integrated include:

- i. **Creativity and Entrepreneurship Education:** Home Economics Education should equip learners with knowledge, attitudes and skills (competencies) they require in order to explore situations/problems/challenges/opportunities, generate ideas and prepare for action/solution, go ahead and practice new business ventures. Home Economics should producer people with proper entrepreneurial mindset that enables them to achieve their potentials as they begin to “think business” and confidently explore their environment for opportunities.
- ii. **Financial Education:** This should teach how to build wealth through informed and goal-orientated financial management. They should learn about the stock market and how to invest, including how to buy and sell shares. The Home Economist should no longer be an illiterate in the capital market. A stock exchange enables companies to raise money for expansion. They do this by selling shares or stocks to investors. At the same time, the stock exchange gives investors opportunities to invest in the companies and benefit from any profit they may make (The Nigeria Stock Exchange, 2006).
- iii. **Environmental Education (EE):** This is vital so that students will be aware of their environment and its sustainable management. They should also be equipped to contribute their lot to the management of their environment.
- iv. **Family law Education:** The family exists in the society and there laws that guide people in any society. There are also rights and obligations for citizens. For instance, there are marriages, adopted, inheritance, laws, etc. The Home Economics Education curriculum should bed able to teach these and more.

- v. **The UN Millennium Development Goals (MDGs):** In September 2000, Un Millennium Summit was held in New York and world leaders agreed to set a time-bound (2015) and measurable goals and targets for combating global problems. These goals include?
 - a. Eradicate extreme poverty and hunger.
 - b. Achieve universal primary education.
 - c. Promote gender equity and empower women.
 - d. Reduce child mortality.
 - e. Improve material health.
 - f. Combat HIV/AIDS, malaria and other diseases.
 - g. Ensure environmental sustainability.
 - h. Develop a global partnership for development.
- vi Information Communication Technology (ICT) and Home Economics
 - a) Use of key board
 - b) Accessing information in the internet
 - c) internet literacy and utilization
 - d) up-dating of knowledge and skills

These global relate seriously to the family. Home Economics should be aware of them and appropriate Home Economics programme/practices/activities should promote the goals. Other issues are HIV/AIDS education, drug use education, ICT education, reproductive health education, voter education, etc. It is necessary to ensure on-going research activities on curriculum innovation in Home Economics Education.

Innovation, Practices and Review of Curriculum Materials: As curriculum is reviewed, modified or changed, there should be corresponding review of instructional techniques, methods and tools. Home Economics should respond to changes going on in the society via science and technology. For instance, students should become aware of existence of microwave oven even if they do not have the opportunity to use it. Old textbooks should be reviewed. The new texts should be gender sensitive. Teaching methods should afford the student appropriate opportunity to handle challenges.

Addressing Infrastructural and Funding Inadequacies: In may situations Home Economics Education and its practitioners have had to operate in position and environments where administrators and instructional framework do not favour the standard professional practices. This is because the authorities are yet to fully appreciate, embrace and promote the multifaceted nature of Home Economics. Its peculiarities and requirements. Efforts should be made by the practitioners to create awareness of the information communication technology (ICT).

Updating of Knowledge and Skills: The emerging global challenges, the needed curriculum review and corresponding requisite innovative, as well as review of curricular materials all require that Home Economics update their knowledge and skill on regular basis.

International Linkages: There are viable which Home Economics can build across the countries in West Africa and the entire continent. Any existing international linkages need to be strengthened, while serious efforts should be made at establishing new linkages. Here, research is also vital. Some possible linkages through academic activities include:

- i. Staff and student exchange programme
- ii. Encouragement of sabbatical leave for members of the Faculty of Home Economics from across countries of origin. This should be encouraged where institutional policies allow that.
- iii. Appointment of assessors for the promotion in the field of Home Economics from countries. This is bringing international perspective to assessment of senior academics in higher institutions.
- iv. Exchange of curricular materials and ideas, including textbooks, assessment manuals and instruments, teaching manuals, instructional packages, etc.

International Research Collaboration: Unexplored areas of Home Economics research abound as families face countless problems that cry for research and solution. Some of these require inter-country approaches. There is need for acquisition of improved research skills and collaboration with colleagues outside researcher' country. Cross-country research could attract international grants and unless professionals collaborate they can neither write such nor carry out studies. In this direction, Information communication Technology (ICT) becomes vital.

Directory of Home Economics and Home Economics Programme in the Sub-region: IHFE-Africa should develop a directory of Home Economics and Home Economics programmes. Such directory should be available in the Internet. IHFE-Africa should have a place on the IHFE website as IHFE-America and others. This will not only bridge information gap among practitioners in the region and continent but also globally.

Internet Literacy and Utilization: Home Economics is today operating in a global village where one can access information from any part of the universe by mere touch of a button. There is now a greater integration of the world economy than in the past. There is no doubt that the inter-dependence of countries will continue to grow as technological innovations evolve new products and new ways of doing things through technology. Home Economists must be part of the new Information a technology (IT) era and knowledge economy. As a matter of urgency, Home Economics must strive for internet literacy. They should surf the internet for new knowledge on regular basis. Through the internet they can build bridges across sub-region.

Models and Mentorship: For sustainability, it is vital that there should be new entrants into the field of Home Economics. The new entrants are expected to be young, inexperienced and may not be adequately empowered. But they are indispensable for the sustained existence of the profession. These young professional Home Economists need to be supported, motivated and encouraged across countries. They need mentors.

These mentors could be referred to as accomplished Home Economists who the young ones look to. The models have serious responsibilities. They should mentor others before they retire and ensure that they link the young ones up with international colleagues as a way of building bridges.

Viable Collaboration of Home Economics Association or Bodies across Countries

Home Economics associations exist presently in countries in the sub-region, but there are no forms of linkages across the countries. Efforts need to be made for associations that have similar missions and objectives to link up and work together. Possible ways of working together include exchange of research information such as reports, exchange of publications and inviting publishable articles from across the countries. For instance, research findings in a country should be encouraged to find its way into a Home Economics journal in another country. Associations in the country could invite keynote and lead paper presentations from other countries. At this point, the Home Economics Research Journal of the Home Economics Research Association of Nigeria (HERAN) is ready available to serve.

Conclusion

The family is the major focus of Home Economics. Today, the family is under the siege of global challenges. Yet, its survival is critical if the society is to survive. There is a need for concerted effort aimed at survival and well being of the family. Some of those needs can be met through information and communication technology. As the technologies become more advanced and more available, there is a significant opportunity to improve significantly the quality of life of family members.

Home Economics as a vocational subject which is properly positioned to enhance family well being and promote development. To do this it is necessary to make a paradigm shift. With internet, the world is a global village but parents have to guide and counsel their children very well because of the adverse effects of internets.

Recommendations

The following recommendations were made;

- 1) Computers should be used by Home Economics students at all levels of education.
- 2) There must be functional internet systems for Home Economics students for their research work in all aspect of their courses.
- 3) All Home Economics lecturers must be computer literate in order to teach the students with computers and power point.

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