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Importance of Information and Communication Technologies (ICTs) in Making a Heathy Information Society: A Case Study of Ethiope East Local Government Area of Delta State, Nigeria

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Introduction

There is widespread research interest in information and communication technologies (ICTs). According to Crede & Mansell (1998), ICTs are crucially important for sustainable development in developing countries. Thioune (2003) notes that for the past two decades most developed countries have witnessed significant changes that can be traced to ICTs. These multi-dimensional changes have been observed in almost all aspects of life: economics, education, communication, and travel. In a technology-driven society, getting information quickly is important for both sender and receiver. ICTs have made it possible to quickly find and distribute information. Thoiune (2003) indicates that many initiatives have taken at the international level to support Africa's efforts to develop a communication infrastructure and. These efforts are designed to enable African countries, including Nigeria, to find faster ways to achieve durable and sustainable development.

Helmut (1998), cited by Akpore (1999), states that of the technological changes that have influenced our lives in recent years, information technology (IT) has had the greatest impact. This will continue at least until the end of the first half of the century, when other major technological breakthroughs in the area of new materials, biotechnology, or energy, may provide entirely new ways of living.

An information society is one that makes the best possible use of ICTs. Martin (1995) supports this view by describing it as a society in which the quality of life, as well as prospects for social change and economic development, depend increasingly upon information and its exploitation. In such a society, living standards, patterns of work and leisure, the education system, and marketplace are all influenced by advances in information and knowledge. This is evidenced by an increasing array of information-intensive products and services (Martin, 1988).

Annan (2002) notes that the information society is a way for human capacity to be expanded, built up, nourished, and liberated by giving people access to tools and technologies, with the education and training to use them effectively. There is a unique opportunity to connect and assist those living in the poorest and most isolated regions of the world. Informatization of society is a major hurdle that most nations, especially developing countries, are encountering. The information society or information age is a phenomenon that began after 1950, which brings challenges as we seek to integrate and expand the

universe of print and multimedia sources. The two terms are often used to describe a cybernetic society in which there is a great dependence on the use of computers and data transmission linkages to generate and transmit information (Bruce, 1995).

The African Information Society (AISI) document (2005) argues that Africa should build, by the year 2010, an information society in which every man, woman, child, village, public and private sector office has secured access to the use of computers and telecommunications media. The objective is to provide every African with the possibility of using the communication and data processing services available everywhere else, just like any other citizens of the world.

ICTs for Informing Citizens

One of the identified agents through which the world will constantly experience change is technology. In the business of trying to make information available in the right form to the right user both at the personal and organizational levels, and at the right time, the bid to cope with great flood of information has led to the need for a more sophisticated way of handling information faster and better.

According to Anyakoha (1991), information technology is "the use of man made tools for the collection, generation, communication, recording, re-management and exploitation of information. It includes those applications and commodities, by which information is transferred, recorded, edited, stored, manipulated or disseminated". Hawkridge (1983) describes information technology as a revolution which has penetrated almost all fields of human activity, thus transforming economic and social life. UNDP (2001) asserts that even if sustainable economic growth facilitates the creation and diffusion of useful innovations, technology is not only the result of growth but can be used to support growth and development. ICTs are credited with the ability to transform, and deep and significant changes are expected from their widespread use in Africa. From this stand point Africans can take maximum advantage of the new technologies even if major challenges remain. These challenges include adapting ICTs to local conditions and uses in developing countries, and allowing each country understand those innovations and adjust them to their own development needs.

Therefore, development in Nigeria depends on the country's capacity to create wealth to significantly reduce poverty and to raise its capacity to create wealth at a sustainable level. In June 1996, the United Nations Commission on Science and Technology Development (UNCSTD) in collaboration with IDRC proposed five development indicators that focused on the improvement of the quality of life: education, health, income, governance, and technology (Crede and Mansell, 1998). If we consider these five as key indicators of development for Nigeria, ICTs can be socially beneficial only if they contribute to poverty eradication (higher income), improved health and education, better use and more equitable sharing of resources, and raising participation in the decision-making processes (and in this regard, access to information is crucial).

ICTs have been the basis for human existence from time immemorial and this has driven man to continuously seek ways to improve the processing of information and communicating such information to one another irrespective of distance and on a real-time basis (Ndukwe, 2002). Surviving in the information age depends on access to national and global information networks. ICTs are the bedrock for the survival and development of any nation in a rapidly changing global environment, and it challenges us to devise initiatives to address a host of issues such as reliable infrastructure, skilled human resources, open government, and other essential issues of capacity building (Federal Republic of Nigeria, 2001).

At the heart of technology lie two main or branches of technology: computing and telecommunication. The technologies covered are the computer system, Internet/electronic mail (e-mail), mobile phone, and fax machine.

Computers

Computers were originally used by scientists for calculating numbers, and have gradually become useful in offices and industries. In recent times, simplified models that can be used by almost everybody have become common in schools and homes for accomplishing many varied tasks and applications (Madu 2000)

Fapohunda (1999) lists the uses that computers are now commonly put to: writing letters, and reports, printing books, newspapers, and magazines, drawing pictures and diagrams, doing statistics, mathematics and handling financial records, controlling traffic lights, flying aeroplanes, making and playing music and video, sending messages anywhere in the world.

Internet

The Internet is a global collection of many types of computers and computer networks that are linked together. It is increasingly becoming the solution to many information, problems, information exchange, and marketing (Adesanya, 2002). Eseyin (1997) describes the Internet as a mixture of many services with the two most commonly used being electronic mail (e-mail for short) and the World Wide Web (www). It plays a significant role in education, health, political processes, agriculture, economy, businesses and newsgroups. Woherem (2000) states that with Internet connectivity, one can do business all over the world without physical contact with the buyer or the need for a business intermediary.

E-mail

Electronic mail (e-mail) is the exchange of text messages and computer files transmitted via communications networks such as the Internet (Nwosu, 2004). Fapohunda (1999) sees the e-mail system as the equivalent of postal mailing services, with the biggest difference being the time and cost involved. And not only written data, but all sorts of information in the form of video, audio, or photographs, can be sent via e-mail. Oketunji (2000) describes e-mail as an increasing popular method of communication, especially in the workplace.

Mobile Phones

Bittner (1989) defines mobile phones as a telephone system that can move or be moved easily and quickly from place to place. Mobile phones were once the tool of rich and busy executives who could afford both the luxury. Mobile phones are now the ICT that is reshaping and revolutionizing the communications globally. Its impact on the economic activities of nations, businesses, and small entrepreneurs is phenomenal. According to Marcelle (2000), the availability of this new technology has been reshaping the material basis of the society as well as bringing about a profound restructuring of economic, political, and cultural relations among states. Nigeria is not an exception.

According to Tiemo (2006) the importance of information cannot be overemphasized. People need information to plan and carry out their decisions. More than 90 percent of Africa's population could greatly benefit from information on better choice of food, safe water and basic nutrition, child care, family planning, immunization, prevention and control of endemic diseases. The combination of modern communication devices could play significant roles in the collection and dissemination of global information. Oji-Okoro (2006) supported this view by stating that mobile telephony usage by individuals enables them to communicate with loved ones, clients and business associates. For large businesses, it is a means of providing a service that leads to an increase in profits. For governments, revenues are gained through taxes and duties. As a tool for sustainable livelihoods, mobile telephones provide employment for many who could have been idle.

Fax machine

Telefacsimile systems permit the transaction of images (photos, printed images, maps, drawings) and their reproduction on paper at a remote receiver. Facsimile (fax) is not a new service; however, advances in digital imaging technology and microelectronics have caused a sharp drop in prices with a significant increase in capacities (O'Brien, 1996). "Long distance copying" might be an appropriate nickname for this telecommunication process. Any document, whether it is handwritten, contains pictures, diagrams, graphs, charts or typed text can be transmitted at a great speed for relatively low cost. The fax system is widely available; most organizations have at least one fax machine.

Methodology

This study uses a survey. The instrument for data collection is the questionnaire which consisted of two parts. Part A collects data on the personal characteristics of the respondents. Part B is ICTs.

A sample of 120 respondents was used. The respondents were drawn from the Ethiop East local government area of Delta state. Data was analyzed using frequency counts and simple percentages.

Findings and Discussion

Section A

Table I: Distribution of respondents by sex

Sex	Frequency	Percentage
Male	58	48.33%
Female	62	51.67%
Total	120	100%

More females (62, 51.67%) than males (58, 48.33%) responded to the questionnaire.

Table II: Distribution of respondents by age

Age	Frequency	Percentage
15-25	17	14.17%
26-35	29	24.17%
36-45	45	37.50%
46-above	29	24.17%
Total	120	100%

A majority of the respondents are between the ages of 36-45 years.

Table III: Distribution of respondents by qualification

Qualification	Frequency	Percentage
WAEC/GCE/NECO/SSCE	32	26.67%
OND/NCE/Diploma	28	23.33%
HND	19	15.83%
B.Sc	18	15%
M.Sc	15	12.50%
Ph.D	8	6.67%
Total	120	100%

Notes: WAEC: West African Examination Council; GCE:General Certificate of Education; NECO: National Examinations Council; SSCE: Senior School Certificate Examination; OND: Ordinary National Diploma; NCE: National Certificate of Education; HND: Higher National Diploma; B.Sc: Bachelor of Science; B.A: Bachelor of Arts; M.Sc: Master of Science; Ph.D.: Doctor of Philosophy.

A majority of the respondents are WAEC/GCE/NECO/SSCE holders (26.67%) and OND/NCE/Diploma holders (23.33%).

Table IV: Distribution of respondents by occupation

Occupation	Frequency	Percentage
Teacher	23	19.17%
Civil servant	23	19.17%
Petty trader	13	10.83%
Students	18	15%
Self employed	34	28.33%
Others	9	7.50%
Total	120	100%

A majority of the respondents are literate and can be able to use ICTs adequately.

Table V: Frequency of the use of ICT facilities

ICT facilities	Frequency	Percentage
Computer	107	89.17%
GSM/Telephone	120	100%
Internet	37	30.83%
Satellite technology	-	-%
Radio set	120	100%
Electronic mail	42	35%
Digital video disk (DVD)	30	25%
CD-ROM technology	25	20.83%
Fax	-	-%
Printer	42	35%
Scanner	57	47.50%

All respondents indicated use of GSM/telephone and radio set. A further analysis shows nearly 90 percent use computers, almost half use scanners, and a little more than one third each use the electronic mail and printers.

Table VI: Reasons/benefits of using ICT facilities

Reasons/benefits	Frequency	Percentage
Capacity building	81	67.50%
Health and sanitation	52	43.33%
Improvement of teaching conditions	108	90%
Increased income	111	92.50%
Job creation	70	58.33%
Improvements in agricultural production	72	60%
Greater involvement in community matters	60	50%
Better use of information	83	69.17%
Improvements in contact with relatives and friends	120	100%
Time saving	81	67.50%

Respondents use ICTs for capacity building, improvement of teaching conditions, job creation, increased in income, improvement of agricultural production, greater involvement in community matters, better use of information, improvements in contact with relatives and friends, and time saving. Although, health and sanitation were also benefits, fewer respondents used ICTs for those reasons.

Table VII: Problems militating against the use of ICT facilities

Problems of ICT facilities	Frequency	Percentage
Frequent power blackout	102	85.83%
High cot of connectivity	102	85.83%
Lack of ICTs skills	102	85.83%
Poor telecommunication infrastructure	98	81.67%
Obsolete equipment	74	61.67%
High cost of equipment	55	45.83%
Lack of basic education	75	62.50%
Urban-rural digital divide	96	80%
Interconnectivity problem	100	83.33%

There are several problems militating against the respondents' use of ICT facilities. Power blackouts, the high cost of connectivity, and lack of ICTs skills ranked highest, while interconnectivity ranked second, and poor infrastructure, urban-rural digital divide, lack of basic education, obsolete equipment, and high cost of equipment were also mentioned.

Conclusion

New ICTs can offer real opportunities to improve the quality of community life. It is also important to deepen our level of reflection on community dynamics and on the constraints encountered when introducing and using ICTs for development. A healthy information society is concerned with getting reliable and timely information to its members. Making people aware of the benefits derivable from the use of ICTs will help to make the society a healthy one.

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8

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