

Information and Communication Technologies (ICTs) and Sustainable Development in Africa: Mainstreaming the Millennium Development Goals (MDGs) into Nigeria's Development Agenda

Festus Prosper Olise

*Department of Mass Communication, Delta State University, Abraka, Delta State, Nigeria
Mobile: 08032067241, E-mail: olisefestus@yahoo.com, oliseprosper@yahoo.co.uk*

KEYWORDS Communication. Developing Countries. New Media. United Nations.

ABSTRACT This paper examines the significance of Information and Communication Technologies (ICTs) for sustainable development in Africa arising from the fact that ICTs have not been put into the mainstream of development in Africa while analysing the possibilities of mainstreaming the Millennium Development Goals (MDGs) into Nigeria's development agenda by anchoring the study on the technological determinism theory and development media theory. The researcher used survey design to collect data from 300 respondents with the aid of a 13-item questionnaire. The respondents comprised of 200 academic staff and 100 postgraduate students purposively selected from Delta State University and University of Lagos in Nigeria. The findings reveal that there is a high level of awareness of MDGs in Nigeria; the MDGs can be mainstreamed into Nigeria's development agenda and that ICTs are veritable tools for sustainable development in Africa. Thus, the author calls on African leaders to formulate and implement policies that would enhance the deployment and development of ICTs in Africa with the aim of bridging the digital divide in a bid to actualize sustainable development in Africa while incorporating the MDGs into their development agendas.

INTRODUCTION

All over the African continent, plans, projects and programmes are formulated to improve the lives of her citizens, which are the core aim of development – empowering the people. Sadly, most of these plans, projects and programmes formulated in Africa are for short term purposes and are not totally implemented. Moreover, they do not touch all aspects of development which includes health, education, technology, politics, and agriculture among others. Hence, it becomes difficult for the African continent to get to the stage where she would be referred to as a developed continent. Africa can only be developed if and only if she works towards sustainable development.

Sustainable development as defined by Nwanwene (2007), is a global crusade movement. Amodu (2008) states that sustainable development is a process rather than an end goal. He further noted that this process requires constant evaluation and analysis of the emerging trends in the discussion so as to take the issue of sustainable development to the next level. Sustainable development simply put is developing for the present and future, the process of ensuring that

the present development is sustained and maintained for the future. It focuses on the need to improve the lives of citizens for the future, that is, building the nation for the future. To achieve and sustain development (sustainable development), revolutionary efficient, reliable and potential tools must be employed. These tools are the Information and Communication Technologies (ICTs) such as the Internet, mobile phones, e-mail, micro-computers among others.

ICTs are new technologies that cannot be ignored in Africa especially for development. This is because ICTs are one of the main driving forces stimulating development and change in the digital age. It was in the light of this that Emenari (2004) noted that “great transformations in the lives of the people are in part a function of advances in Information and Communication Technologies (ICTs).” Onwubalili (2004) added that “the magical changes are quite glaring in every facet of our lives and touches simplest of domestic services to corporate and limitless industrial applications”. ICTs like the Internet according to Nwajinka (2004) creates and meet demand which satisfies human and corporate needs. In fact, ICTs are what Africans need to climb to the heights developed continent has reached.

Apparently, ICTs are significant tools for sustainable development. However, African countries like Nigeria need to have a sustainable development agenda before ICTs can be fully utilised. This must have informed the declaration of President Yar'Adua's seven (7) point agenda for the development of Nigeria on assumption of office on May 29, 2007. This, most likely may have been in a bid to mainstream the eight (8) goals of the United Nation (UN) called the Millennium Development Goals (MDGs).

It is against this backdrop that a decision was taken to examine the significance of ICTs for sustainable development in Africa with an attempt to mainstream the MDGs into Nigeria's development agenda.

Problem Statement

Development, which encompasses the process of moving humans in all the strata of the society system forward in order to enhance the capacity of each of them to realise his/her inherent potentials and to effectively cope with the changing realities of life, has over the years, irrespective of the country, occupied a key position in government policies, projects and programmes. Moreover, since ICTs have been recognised as significant and key strategic tools for sustaining development, different governments, organizations, institutions among others in every country especially in developing countries especially in Africa, have begun to encourage her people to embrace and utilize the new technologies which have significantly changed the way people live their lives both at work and at home.

The United Nations (UN) and its member countries in order to further the progress made by these different countries, signed the millennium Declaration at the millennium summit in 2000, which lays out eight (8) goals called the Millennium Development Goals (MDGs) that align with UN's main function to be met by 2015. How then can the MDGs be incorporated into the development agenda of developing countries like Nigeria in which low development and deployment of ICTs have accounted partly for the poor Human Development Index (HDI) and low per capita income whereas in the developed countries, the deployment of ICTs have reached a saturated level leading to sustainable development and economic self-actualisation?

Furthermore, how many people especially in Africa (Nigeria) are aware of the MDGs and those who are aware, what is their attitude towards it?

Objectives of the Study

In a broader perspective, this study seeks to determine the significance of sustainable development in Africa with an attempt to mainstream the MDGs into Nigeria's development agenda, but in succinct terms, it is:

- (1) To examine the significance of ICTs for sustainable development in Africa.
- (2) To ascertain the level of Nigerians awareness of the MDGs.
- (3) To find out the attitude of Nigerians toward the MDGs.
- (4) To determine the various ways in which the MDGs can be mainstreamed into the development agenda of Nigeria.
- (5) To establish the various factors militating against the effective utilization of ICTs for sustainable development in Nigeria.

Research Questions

The following are the research questions posed to guide the study.

- (1) What is the significance of ICTs for sustainable development in Africa?
- (2) What is Nigerians level of awareness of the MDGs?
- (3) What is the attitude of Nigerians toward the MDGs?
- (4) In what ways can the MDGs be mainstreamed into the development agenda of Nigeria?
- (5) What are the various factors militating against the effective utilisation of ICTs for sustainable development in Nigeria?

LITERATURE REVIEW

The review of literature was done under the following subheadings: significance of ICTs for sustainable development in Africa; MDGs and Nigeria's development agenda, factors militating against the effective utilisation of ICTs for sustainable development in Africa and the theoretical framework of the study.

Significance of ICTs for Sustainable Development in Africa

Development is a necessary phenomenon for

man to survive in any environment. The nature of relationship therein either with man or nature (environment) completely depends on the level and sustenance of development. This development in its part is determined and influenced by the level of Information and Communication Technologies (ICTs) nations' control (Wogu 2006). In fact, for the mere fact that the introduction of ICTs in most areas of human endeavours all over the world is usually followed with improved and increased success is a proof that ICTs are very significant and useful for sustainable development. Nigerians will not be quick to forget the transformation brought about by mobile communication in 2001.

ICTs are "electronic technologies for creating, acquiring, storing, processing, communicating and using information" (Tiamiyu 2002). ICTs have the capabilities of creating changes in communication which are usually for the benefit of the people – Africans in this context. ICTs have the capabilities of providing the springboard for actualising developmental goals in areas such as education, health, global recognition and partnership, agriculture, business and commerce, mass enlightenment amongst host of others. We shall now briefly examine some of these points.

Education

Education as defined by Wilson (2005) is the social and technical transmission of knowledge from one generation to another, through formal and informal media of communication. Olise (2008) added that education is the direct means by which one sharpens his or her destiny in order to transform what one knows him/her to be into what he/she hopes to become.

Education is an important component in the life of every individual in every society and it is an essential component of sustainable development. Tiamiyo (2002) noted that literacy, education and skills development of citizens would increase the capacity for informal education of personal and social choices for gainful and sustained employment and for effective participation in governance. Essentially, with active deployment of ICTs in Africa, the people can be enlightened on the role of education for both human and sustainable development. Anaekwe (2008) posited that the application of computers in education has given rise to computer assisted instruction, computer programming instruction,

and individual instruction among others. These programmes, he remarked further, are usually designed to facilitate self teaching using the computer.

Furthermore, the introduction of ICTs in education has led to the computerisation of traditional learning materials like books, journals, newspaper, newsmagazines in the library. This is what is generally referred to as "virtual library". That we have white chalk boards and electronic board which have eased the learning process simply means that ICTs are significant tools for developing every aspect of the society. In addition, man can be educated without attending a 'four corner physical structure', regardless of geographical location through distance learning and electronic education which are indications that with ICTs, human development can be sustained.

Health

Any development agenda that does not include health care and health delivery system is no development. Child health, maternal health, disease prevention, etc., should be a primary concern in Africa, if the current development strides are to be sustained.

ICTs have the potentials to remove resistance to innovations of developmental nature as they relate to health. For example, by using satellite controlled computers and other technological devices to let a patient appreciate the risk inherent in the fibroid that is not removed on time, would boost and sustain the confidence of the patient on health services delivered. Akpan (1991) gave another instance when he said that "the stethoscope is one of the most powerful communication symbol used by doctors, unless the doctor uses it in many situations, people will not have the feelings that they have been examined by the doctor. The stethoscope can contribute to the effectiveness of the doctor message".

Furthermore, ICTs can contribute to the checkmating of some deadly diseases like HIV/AIDs, diabetes, cancer, Alzheimer, etc. ICTs have enabled medical staffs who are desirous of updating their knowledge to be Internet friendly so as to know the latest trend in their discipline. Above all, ICTs have and are still helping to improve the fields of healthcare and health delivery.

Global Recognition and Partnership

Africa needs to be recognised globally and also requires partnership with other continents globally. Unfortunately, reverse is the case because Africans are only known for negative acts globally. The current news flow imbalance is a proof to this. Agba (2002) gave one of the reasons for this as “the yawning gap in the levels of development between the developing and developed world. Countries of the North, he continued carted away much of human and natural resources of countries of the South (developing countries). Consequently, the developed nations leave the developing nations in poverty and with little to develop their technological level, which is the main factor for the North’s domination of world communication”

Dennis and Merrill (2002) argued however that “people worry that a few companies will dominate world communication but many small entrepreneurs entry into the communication market is easier than it has ever been in human history”. The question that arises here is how many of the so called “small entrepreneurs” are from Africa? Well, whatever the answer may be, the fact remains that Africa need to boost her technological level to get global recognition that will enhance her global partnership.

Agriculture

Economic and social historians have argued that most developing countries especially those of African countries, have not experienced the agricultural nor industrial revolution like the developed countries (Tiamiyu 2002). However, with ICTs, the windows of awareness for agricultural revolution in Africa are now opened. Imoh (2007) stated that for the past 50 years, development planners have used communication to support and promote agricultural development policies and programmes in a wide range of settings and condition with relative success. No doubt, ICTs can be used to sustain such success, and even improve on it.

ICTs can be used to give farmers access to information about plants and animals requirement and disease thereby improving productivity (Souter 1999). This becomes imperative because as noted by Mojisola (2007) achieving rural and agricultural development is a function of producing knowledgeable and well-informed

farming communities. This can be achieved with ICTs without much stress, because of the flexibility and portability of some of them such as the mobile phones.

Business and Commerce

The role of ICTs in business and commerce cannot be overemphasised. ICTs encourage international business among other things. It was in this regard that Souter (1999) wrote that international companies will choose to locate facilities in countries which most effectively provide the reliable communication links that are essential to their global business interest and bypass countries that do not.

ICTs have brought about what is called “online banking”, that is banking electronically through the Internet and Automated Teller Machine (ATM). This is one of the greatest developments in the business and commerce field. Online banking reduces the stress that was once associated with the banking sector. ICTs have also led to electronic commerce (e-commerce) – buying and selling electronically. Akpan (2004) noted that ICTs create exiting commercials or advertisement on television.

Mass Enlightenment

ICTs like the Internet, mobile phones, digital radio and television are potential tools for mass enlightenment. They are the main tools for the dissemination of information to a heterogeneous audience scattered globally. ICTs can be used to enlighten the public on development plans and strategies at a mass level. By the very nature of some ICTs, the services of an interpreter can be employed to deliver messages on local languages at a mass level.

For instance, since the advent of mobile phones in most African countries, communication has been improved greatly. This occurs irrespective of time, distance and geographical location, “whether they are in the rural areas, urban and even on the road as long as one was under the network coverage” (Olise and Igun 2006). With mobile phones, one single enlightenment message can be sent and will be received. Mobile phones have revolutionised communication thereby enhancing mass enlightenment.

Politics

ICTs aid political development in a number of ways. Baran (2004) noted that ICTs impact on political campaigns and voting was at the centre of some mass communication's earliest research. Unarguably, ICTs' impact on political campaigns and voting cannot be argued. With ICTs like microcomputers, voting can be done electronically. With the Internet, electoral processes can be disseminated to the audience.

This, no doubt, can bring about Behaviour Change Communication (BCC). For example, the people can be sensitised at a mass level on all the rules and regulations governing electoral practices. In addition, with ICTs, awareness about a candidate and his political abilities can be disseminated to a heterogeneous audience. This must have been the reason many political office holders in Africa now have websites where they post information to their people. Of course, ICTs like the Internet, among host of others were greatly used during the recent United States (US) presidential election between Barack Obama and John McCain. This is gradually becoming the practice in other part of the world.

From all indication, it is evident that ICTs can help Africa to achieve the long desired sustainable development. However, when utilized for development, ICTs must be employed in a planned, organised and systematic way, if possible, under the guide of a development agenda.

MDGs and Nigeria's Development Agenda

Millennium Development Goals (MDGs) was formulated at the beginning of this century in September, 2000 when a total of 192 members of the United Nations signed the Millennium Declaration at the Millennium summit. The MDGs is to be achieved between 2000 and 2015. It identifies eight (8) developmental goals as follows:

- 1) Eradicate extreme poverty and hunger
- 2) Universal education
- 3) Gender equity
- 4) Child health
- 5) Maternal health
- 6) Combat HIV/AIDs and other disease
- 7) Environmental sustainability
- 8) Global partnership

Olatunji (2008) stated that the sub-components of the first goals are the need to reduce by

the proportion of people living on less than one US dollar per day and to reduce by half the proportion of people who suffer from hunger. In the Nigerian situation, he explained that this will translate to reducing by half the number of people living on ₦126.00 per day or less than ₦3, 780.00 per month by the year 2015.

The MDGs also clamour for the provision of access to education for children since "through education, future generation will have the ability to reduce or put an end to world poverty and help to achieve worldwide peace and security", (Britney 2008, P. 2). Furthermore, the 2000 MDGs report sues for a reduction of inequality at the primary and secondary level but a pronounced disparity at tertiary level which gave rise to the need (Adeoye and Kalejaiye 2007).

The third MDGs, which is gender equity aroused because "in many parts of the world, poverty has a larger problem for women than it is for men simply because in some places women are not allowed to become educated or work outside the home to provide for their families" (Britney 2008). In a bid to achieve this, the UN hopes to assist by eliminating gender inequality especially in member countries with high level of sexism. Another goal is the reduction of child mortality in Africa especially because poor, inadequate health facilities, poor maternal care, etc are very common in member nations and this invariably leads to high child mortality. Also part of the MDGs is maternal health improvement because at 2001 maternal mortality stood at 1000 per 100,000 live births. No doubt, the case must have worsened in Africa where corruption appears to be a way of life especially in Nigeria.

Malaria, HIV/AIDs and other diseases have been a source of worry for UN, hence, the sixth goal, which seeks to halt the spread of diseases by using preventive means, providing education and free medication. The seventh goal – environmental sustainability, includes "integrating sustainable development in country policies, reversing the loss of environmental resources, reducing the number of people without access to clean drinking water by half and improving lives of slum dwellers" (Britney 2008). Finally, the eighth goals seek for global partnership between poorer nations and the wealthy nation. This kind of partnership ought to be mutual. But, how can this be achieved when the technological level of developed countries and developing countries is not equal? Until the digital divide is bridged,

global partnership will continue to favour the North-developed countries.

These eight Millennium Development Goals (MDGs) are to ensure that all the UN member states are able to attain sustainable development to the point that they will be referred to as being developed in all ramifications. It is against this backdrop that most government, especially in developing countries like Nigeria, have come out with different development agenda to enhance the quality of life for her citizens. Nevertheless, mainstreaming the MDGs into such development agenda will help to consolidate such developmental plans. President Musa Yar'Adua, as part of his development agenda for Nigeria declared a 7-point agenda for Nigeria upon assumption of office on May 29, 2007. President Yar'Adua's 7-point development agenda for Nigeria are as follows:

- 1) Critical Infrastructure
- 2) The Niger Delta
- 3) Food Security
- 4) Human Capital Development
- 5) Land Tenure Changes and Home Ownership
- 6) National Security and Intelligence
- 7) Wealth Creation

It is worthy to note that most of President Yar'Adua's predecessors like Gowon (1970-76), Obasajo (1978-1979), Shagari (1979-1983), Buhari (1983-1985), Babagida (1985-1993), Abacha (1993-1998), Obasanjo again (1999-2007) also had their own development agenda. Akpoveta (2006, pp. 210-212) recalled their development agenda as follows; Gowon was Accelerated and Rural Development (ARD), Obasanjo as a military head of state sought for feeding the nation through production of sufficient food; Shagari fought for revolution of the rural communities, Buhari was War Against Indiscipline (WAI), Babangida formulated a Directorate for Food Road and Rural Infrastructure (DFRRI), Abacha dreamt of family support programme (FSP) and Obasanjo in his first and second term as a civilian president focused on National Economic Empowerment and Development Strategies (NEEDS).

Most of these development agendas of past Nigerian leaders may not have achieved the desired result in Nigeria not because they were not well planned and implemented but could be because they did not take into considerations the general world view of development agenda which is the bedrock of the MDGs. This is why the MDGs should be incorporated into the

current development agenda of Nigeria. This is very necessary if Nigeria ever wants to achieve sustainable development. Take a look at the health report stated by Udoakah and Iwokwagh (2008) but reported by UNICEF (2001). The report stated that the prevalent HIV/AIDS rate in Nigeria among those between the ages of 15-49 has been rising steadily from 3-4 percent in 1993 to 4-5 percent in 1995, to 5.4 percent in 1999. The report of the National HIV/AIDS and Reproductive Health Survey (2003), they further stated, has also shown that the adult prevalence rate has increased from 1.8 percent in 1999 to 4.5 percent in 1996 to 5.8 percent in 2001. With this type of scenario, mainstreaming the MDGs into Nigeria's development agenda becomes paramount.

Still on health, president Yar'Adua may need to incorporate the 4th and 5th MDGs into his 7 point agenda since the rate of child mortality and maternal mortality is very high in the country. This notwithstanding, president Yar'Adua should be commended because most of the UN MDGs to be met by 2015, have already been embedded in one way or the other in his 7-points development agenda for Nigeria. Emphatically therefore, if Nigeria government alongside with the UN put all necessary measures to actualise these agendas, development would be at the door step of Nigeria. Nonetheless, some parties must play significant role, if the UN MDGs must be mainstreamed into Nigeria's development agenda. They are the government, the media/ICTs and the people.

Fundamentally, Nigeria government is the principal actor if the MDGs are to be mainstreamed into Nigeria's development agenda. This is evident in the fact that there is a strong link between governance and development. The power of development lies first with government as it has the financial power, legal power, and state and structure power to make development a reality. Government through a well planned development agenda can sensitize the people to development. Omofa and Omotola (2005) advised that government should place emphasis on accountability, responsibility, popular empowerment and participation as well as individual and collective rights and freedom.

Indeed, development strategies without the people have failed already. Once the people are sensitised towards development goals, they will help in ensuring that the development agenda becomes a reality. Once the people get informed,

development begins. The question here is; how can development messages get to the people in Africa, especially rural dwellers? One reliable means of transmitting development messages to the people is through the media, either old media – a one-to many channel of communication through which messages travel from source (newspaper/newsmagazine, radio, television, postal service, billboard, etc.) to the audience/receiver, or new media – advancements of the old media through digitalisation and convergence which have led to a many to-one, one-to-many and a many-to-many channel of communication such as the Internet, mobile phones, etc.

Apart from the government and the people, another party that has a role to play in sustainable development by mainstreaming the MDGs into Nigeria's development agenda is the media, either old or new. Commenting on this, Nwosu (1993) stated that the media's role can be seen in politicization, democratisation, forum for debate, discussion, rebuttals and feedback, rural development, re-orientation and mobilisation for governments. Mboho (2005) added that the media have been known worldwide to possess certain qualities that make their uses imperative if the communication is aimed at a wider and heterogeneous audience. The media can transmit the MDGs and Nigeria development agenda messages to the people and the government. However "since the media cannot be isolated in matters of development, it is expected that they become both participants and observers in development oriented programmes," (Ogunsuyi 2005).

It is worthy to note that even when these three main parties (government, people and the media) required are put in their proper frame of mind, some problems may still arise in the attempt to mainstream the MDGs into Nigeria's development agenda. Some of the possible problems are corruption, resistance to change, lack of basic infrastructure limited funds among host of others. This notwithstanding, the gains of mainstreaming the MDGs into Nigeria's development agenda far outweighs the likely problems.

Factors Militating Against the Effective Utilization of ICTs for Sustainable Development in Africa

No doubt, ICTs are reliable tools for sustainable development in Africa, however, there are

some factors militating against their effective utilisation for sustainable development. Some of these factors are poor funding, management problems, illiteracy and lack of technical know-how, low level of technology penetration, non-viable ICTs policy, and weak economy amongst others. We shall now examine some of these factors.

The acquisition and maintenance of ICTs require adequate funding. Unfortunately, Africa, though a rich continent, has not been able to earmark enough funds for ICTs. This is not surprising because of her weak economy which makes her appeal for different kinds of aids from developed countries. This explains why Mbachu (2003) wrote that "since the development of technology and its effective application, are both function of a given society's level of economy and social development, the ability of the Nigerian (African) mass media to absorb and deploy recent advances in technology has been hampered by the country's (continent's) continuing under-development". The newly emerging trends regarding ICTs globally, indicate that ICTs deployment and development in Africa will increasingly be left behind unless the continent breaks the chain of corruption and economic stagnation and achieves a higher level of development that guarantee its people a higher standard of living that will be a strong stimulus for production and consumption of ICTs. The question that arises at this point is can Africa ever break the chain of corruption and economic stagnation when it has a serious leadership problem?

One of the greatest problems in Africa is bad leadership. Most African governments are very selfish and only think of enriching themselves at the expense of developing their countries. Instead of thinking of development, as noted by Olise (2008), Africa leaders embark on projects that they believe will bring instantaneous money so as to increase their bank accounts. At other times, African leaders entrench themselves in office for life even when the citizens are dying of starvation. This scenario is apparent in Zimbabwe where President Robert Mugabe has refused to give another person a chance to govern the country after ruling the country for over 28 years. This situation has affected sustainable development in the country.

Another factor militating against the effective utilisation of ICTs for sustainable development

in Africa is illiteracy and lack of technical know-how. Commenting on this, Danaan (2006) wrote that there are low level of education and literacy among Africans thereby creating a great scarcity of skills and expertise. Illiteracy as viewed by Karikari (2000) hampers versatility in the use of ICTs. In fact, Mboho (2007) noted that "one of the challenges facing developing countries (Africa) is how to use modern mass media effectively to promote rural development.

Furthermore, there is the problem of low level of technology penetration in Africa. Danaan (2006) is of the view that "it will take Africa many decades to develop a systematic, efficient and reliable ICT enterprise that would promote the ideals of globalisation and development". This may be because there is gross dependency of foreign countries for the production and maintenance of most ICTs and the rate of foreign exchange is very high in relation to the currency of African countries.

Finally, most African countries do not have a workable ICTs policy. Policies are meant to act as guideline for the implementation of development plans and strategies. In a situation where these ICTs policies are not available or effectively implemented when available, can a continent or a nation be developed let alone having the necessary apparatus to sustain its development?

If all these problems are not tackled sustainable development cannot be achieved in Africa. However, recent efforts by most African countries in the deployment and development of ICTs show that there is hope for Africa. For instance, the launching of the Nigerian Communication Satellites (NIGCOMSAT -1) by Nigeria in 2007; the launching of DAARSAT communications by DAAR communications Plc. in 2008 are the signing of a multimillion dollar deal of internet connection by Rwanda in a bid to keep the citizens in both rural and urban areas informed with global trends; is a clear indication that there is hope for Africa.

Theoretical Framework

Theories are *sine qua non* to any empirical study because they provide the latitude for analysis aimed at predicting phenomena of any research. This study is achieved on development media theory and technological determinism theory. These theories were suitable for this study because they both aim at achieving development

through the positive uses of the media/ICTs which is one of the objectives of this study.

For instance, development media theory in the views of Folarin (2005) seeks to explain the normative behaviour of the media/ICTs in countries that are conventionally classified together as developing countries (of which is the focus of the study). The theory supports the use of the media/ICTs for national development so does this study encourage the utilisation of the media/ICTs for sustainable development.

On the other hand, technological determinism theory according to Lievrouw and Livingstone (2006) is the belief that technologies (ICTs) have an overwhelming power to drive human actions to development. This also is one of the points emphasised in this study as the study sees the use of ICTs to bring about changes that would lead to sustainable development in Africa. The UN formulated the MDGs to guide her members' states in their efforts to achieve their development agendas. Mainstreaming the MDG, in such development agendas becomes necessary. Thus, the government, people and the media/ICTs, are vital tools in this regard.

All these issues are part of the tenets of development media theory and technological determinism theory, and are exhaustively explored in this study. Apparently, the relevance of development media theory and technological determinism theory to this study is indisputable as they both provide the springboard on which the study rests upon

METHODOLOGY

Since the central aim of this study is to elicit the opinion of the people in order to determine the significance of ICTs for sustainable development in Africa with an attempt to mainstream the MDGs into Nigeria's development agenda, the researcher used the survey design to collect data from 300 respondents with the aid of a structured 13-item questionnaire. The copies of the questionnaire were administered on a face-to-face basis with the help of trained research assistants.

The sample consisted of 200 academic staff and 100 postgraduate students purposively selected from Delta State University and University of Lagos all in Nigeria. The respondents were selected on the basis of their expertise and position in society and their presumed knowledge of the topic being researched.

Data Presentation and Analysis

In a bid to answer the 5 research questions posed for this study through the analysis of the data generated from the field, it becomes imperative to first analyse the respondents bio-data for validity purposes. From the 13-item structured questionnaire with both open and closed ended questions, it was discovered that out of the 300 copies of the questionnaire administered, 298 copies were returned. Out of the returned copies, 245 (82.2%) respondents were male, while the remaining 53 (17.8%) were females. In addition, majority of the respondents, who were mainly academic staff were within the age bracket of 41-50, 196(68.05%) respondents. With more academic staff as respondents, it was not surprising that majority of respondents were masters degree and Ph.D holders.

RESULTS

All the 298 respondents see ICTs as significant tools for sustainable development in Africa, thus, they chose all of the above option. That is, they believe that ICTs improve education, increase efficient/effective health care service, aids mass enlightenment, promote global recognition and partnership and promotes agricultural development (Table 1). This findings agrees with Cutlip et al. 2000) assertion when they stated while quoting John Parvlik that journalist, public relation practitioners and advertiser all use new technologies to do their work more effectively. Moreover, new technologies enable communication and development professional to do things in new and creative even do entirely new things.

Table 2 shows that majority of the respondents are aware of the UN MDGs to be met in 2015. Out of the 298 returned questionnaire, 296(99.3%) said

they are aware of MDGs, while the remaining 2 respondents (0.7%) said they are not aware. One factor that may be responsible for this high level of awareness may be that the Nigerian media are performing their surveillance and mass enlightenment functions.

Table 2: Answer to research question 2: "What is Nigerians level of awareness of MDGs?"

Category of response	No. of response	Percentage of response
Yes	296	99.3%
No	2	0.7%
Undecided	-	-
Total	298	100%

As shown in table 3, 286 respondents (95.9%) have a positive attitude towards the MDGs, 5 respondents (1.7%) had negative feelings toward MDGs while 7 respondents (2.4%) are indifferent about MDGs.

Table 3: Answer to research question 3: "What is the attitude of Nigerians towards the MDGs"

Category of Response	No. of response	Percentage of response
Positive	286	95.9%
Negative	5	1.7%
Indifferent	7	2.4%
Total	298	100%

Majority of the respondents gave reasons for their attitude. Some of the reasons given for a positive attitude towards MDGs were: MDGs are relevant goals for developing countries; MDGs can improve the state of the nation; MDGs can lead to development of goals that are fundamental to any society and that developed nations that have similar goals which have made them developed amongst other reasons.

Those respondents who were negative or

Table 1: Answer to research question 1: "What is the significance of ICTs for sustainable development in Africa?"

Category of response	Total no. of respondents	No. of response	Total percentage	Percentage of response
Improves education	298	-	100	-
Increases efficient and effective health care services	298	-	100	-
Promote global recognition and partnership	298	2	100	0.67%
Aids mass enlightenment	298	-	100	-
Promotes agricultural development	298	-	100	-
All of the above	298	298	100	100%
None of the above	298	-	100	-

indifferent about the MDGs gave reasons such as past failure of such goals/programmes; lack of interest in Nigerian system to implement the MDGs, the absence of peace shows that the UN is not connected and that MDGs does not consider the prevailing situation in Nigeria.

Table 4 presents data gotten from an open-ended question in the questionnaire. Out of the 298 respondents, 169 (56.7%) said that MDGs can be mainstreamed into Nigeria's development agenda through the government, 65 respondents (21.8%) said through the implementation and incorporation of the philosophical basis of MDGs, 50 respondents (16.8%) feel it is through enlightenment and education while the remaining 14 respondents (4.7%) said with provision of necessary infrastructure, MDGs can be mainstreamed into Nigeria's development agenda.

This finding is in consonance with the submission of Omofa and Omotola (2005) when he noted that government should place emphasis on accountability, responsibility, popular empowerment and participation as well as individual and collective rights and freedom.

From item 11 in the questionnaire, it was proven that all respondents believed that there exist some problems militating against the effective utilisation of ICTs for sustainable development. Table 5 presents the data gotten from item 12 in the questionnaire. Out of the 298 respondents, 273 respondents (91.6%) chose the "all of the above" option, which implies that the problems

militating against the effective use of ICTs are poor network, poverty, illiteracy, poor power supply, etc. From the remaining respondents, 32 of them (10.7%) chose only poor power supply, 10 respondents (3.35%) saw poverty as factor, 9 of them (3.00%) gave illiteracy as a problem, 5 respondents (1.67%) while 2 respondents (0.6%) each chose high cost and lack of technical know-how as the factors militating against the effective utilisation of ICTs for sustainable development in Africa.

Other problems given by the respondents are corruption, bureaucracy, 'settlement' factor, politics, lack of access to rural people, ownership factors, commercialisation policies (people are out to make money), over centralisation amongst others.

Based on these problems, the respondents made recommendations such as: curbing corruption in Africa; discovering and rewarding honest people; making ICTs available; voting for responsible leaders; providing enabling environment for the people and good maintenance and power management of resources in Africa and others.

DISCUSSION

The data generated, presented and analysed revealed that ICTs are indeed significant tools for sustainable development in Africa as they help to improve education, increase effective health care delivery services, promote global recognition

Table 4: Answers to research question 4: "In what ways can MDGs be mainstreamed into the development agenda of Nigeria?"

<i>Category of Response</i>	<i>No. of response</i>	<i>Percentage of response</i>
Implementing/incorporating the philosophical basis of MDGs	65	21.8%
Enlightenment and educating the people	50	16.8%
Provision of necessary infrastructure	14	4.7%
Through government/ annual budget	169	56.7%
Total	298	100%

Table 5: Answer to Research Question 5: "What are the various factors (if any) militating against the effective utilization of ICTs for sustainable development in Nigeria"

<i>Category of response</i>	<i>Total no. of respondents</i>	<i>No. of response</i>	<i>Percentage of response</i>	<i>Total percentage</i>
Poor network	298	5	1.67	100%
Poverty	298	10	3.35	100%
Illiteracy	298	9	3.00	100%
High cost	298	2	0.60	100%
Lack of technical know-how	298	2	0.60	100%
Poor power supply	298	32	10.70	100%
All of the above	298	273	91.60	100%
None of the above	298	-	-	-

and partnership among others. In addition, the data got indicated that Nigerians level of awareness of the MDGs is relatively high as shown in table II, where 99.3% of the respondents said they were aware of the MDGs. This high level of awareness must have informed their positive attitudes toward the MDGs as they see the goals as being relevant for developing countries such as Africa. This notwithstanding, few respondents were either negative or indifferent in their attitude toward the MDGs because of past failures of similar goals amongst others.

Nonetheless, almost all the respondents believed that the MDGs can be mainstreamed into Nigeria's development agenda. This to them, could be through the government, implementing and incorporating the philosophical basis of the MDGs, enlightening and educating the people and through the provision of necessary infrastructure. Some factors were also identified militating against the effective utilisation of ICTs for systematic development in Africa. These factors included poor network, poverty, poor power supply, etc. Hence, the respondents recommended that corruption should be curbed, ICTs should be made available, proper management and maintenance of resources in Africa is essential among host of others.

CONCLUSION

From all indication, ICTs are veritable tools for sustainable development in Africa, especially when the MDGs are mainstreamed into Nigeria's development agenda. This is possible when the three parties involved in this regard – government, people and the media, work as a team in mainstreaming the UN's MDGs into Nigeria's development agenda, the country would have achieved a high level of human capital development. Furthermore, considering the fact that some factors were identified as problems militating against the effective utilisation of ICTs for sustainable development in Africa, there is the need for the researcher to propose some useful recommendations from which we can conclude our study.

RECOMMENDATIONS

The following are therefore recommended as a way forward into ensuring that ICTs are effectively utilised for development in Africa and

that the MDGs are properly annexed into Nigeria's development agenda. They are:

African leaders should as a matter of urgency formulate and implement policies that would enhance the deployment and development of ICTs for sustainable development.

African leaders need to create development awareness in the people through the media/ICTs. They should not forget to improve the standard of education in their country by incorporating ICTs in schools' curriculum.

Religious organisations like churches, mosque, etc should also endeavour to preach development messages to the people since the people are the starting point for sustainable development.

African countries like Nigeria, which has a serious power supply problem, need to declare a state of emergency on the sector so as to resolve the problem rather than depend on generators for power supply.

The time has come for African leaders to parley with Global System of Mobile Communication (GSM) network providers in their respective countries so that they can employ their services in sending developmental messages as part of their corporate social responsibility to the country. There is also the need for the government to insist on the GSM operators to extend their network coverage to rural areas in Africa and not just to concentrate on the urban areas. This is because development without the rural population is no development. All these must be accomplished with quality service delivery.

Above all, the government, the people and the media in Africa, need to merge resources together in ensuring that Information and Communication Technologies (ICTs) are effectively utilize for sustainable development while incorporating the Millennium Development Goals (MDGs) into the development agendas of Africa with the sole aim of bridging the digital divide in a bid to actualize sustainable development.

NOTES

Information and Communication Technologies (ICTs) are the driving forces for not just development but for sustaining development in Africa and the world in general. However, for any African country like Nigeria to effectively utilize ICTs for sustainable development, a developmental agenda must be in place. This developmental agenda, if possible, should incorporate the United Nations Millennium Development Goals (MDGs).

Fortunately, there is a correlation between the MDGs and the 7- point agenda of President Umaru Musa Yar'Adua of Nigeria, even though many Nigerians think the 7-point agenda should be reduced to three or four. This correlation makes the 7-point agenda essential if only its implantation can be strictly monitored. To achieve this, there is need to make ICTs such as the Internet, mobile phones among others available at little or no cost to Nigerians and other African countries that appear to be slow in their developmental strides, when compared to other countries categorised as developed country such as Britain among others.

REFERENCES

- Adeoye JA, Kalejaiye OJ 2007 .Youths, HIV/AIDs and MDGs: The Imperatives for Nigerian Youths. *International Journal of Communication*, 7: 419.
- Agba PC 2002. International Communication: Issues, Concepts and Perspectives. In: CSOkunna (Ed.): *Teaching Mass Communication: A Multidimensional Approach*. Enugu: New Generation Books, P. 258.
- Akpan E 1991. Use of Mass Communication Techniques in Preventive Medicine. In: S Unoh (Ed.): *Topical Issues in Communication Arts*, 3. Uyo: Modern Business Press, P. 23.
- Akpan CS 2004. The Impact of the Communication Technologies on the Broadcast Industry. *International Journal of Communication*, 1: 73.
- Akpoveta EE 2006. Communication as a tool for Sustainable Rural Development. *International Journal of Communication*, 4: 210-212.
- Amodu LO 2008. The Internet as Mass Communication. In: EM Mojaye, OO Oyemwo, R M'Bayo, IA Sobowale (Eds.): *Health Communication, Gender Violence and ICTs in Nigeria*. Ibadan: University Press, P. 28.
- Anaekwe MC 2008. Information Technology: A Tool for Sustainable Development in Science Education. *Global Communicator*, 1(1): 32.
- Baran SJ 2004. *Introduction to Mass Communication: Media Literacy and Culture*. 3rd Edition. Boston: McGraw-Hill.
- Britney A 2008. Millennium Development Goals: The UN Millennium Development Goals for 2015 (online). From <<http://www.about.com>> (Retrieved December 31, 2008.).
- Cultlip SM, Center AH, Broom GM 2000. *Effective Public Relations*. 8th Edition. New Jersey and London: Pearson Education.
- Danaan G 2006. The Growth of Information and Communication Technologies (ICTs) in Less Developed Countries (LDCs): Issues and Problems. *International Journal of Communication*, 5: 117.
- Dennis EE, Merrill JC 2002. *Media Debates: Great Issues for the Digital Age*. 3rd Edition. California: Wadsworth.
- Emenari OG 2004. Internet Broadcasting: Possibilities, Challenges. In: O Uwakwe (Ed.): *Media Technology: Issues and Trends*. Enugu: Afrika-Link Books.
- Folarin B 2005. *Theories of Mass Communication: An Introductory Text*. 3rd Edition. Lagos: Bakinfo Publications.
- Imoh GO 2007. Social Mobilisation and Agricultural Development. *The Nigerian Journal of Communications*, 5(1): 197.
- Lievrouw, LA, Livingstone S 2006. Introduction to the First Edition (2002): The Social Shaping and Consequences of ICTs. In: LA Lievrouw, S Livingstone (Eds.): *The Handbook of New Media*. Updated Student Edition. London: Sage, P. 3.
- Mbachu D 2003 .Changing Technologies and Nigerian Mass Media. In: RA Akinfeleye, I Okoye (Eds.): *Issues on Nigerian Media History: 1950-2000 AD*. Lagos: Malthouse, P. 175.
- Mboho M 2005. Mass Media Function in Rural Development. *Mass Media Review*, 1(1): 148.
- Mboho M 2007. Impact of Mass Communication on the Resident of Ehman Local Government Area: Implications for Rural Development Programmes. *LWATT- A Journal of Contemporary Research*, 4: 385.
- Mojisola AA, Mbibi J 2007. Knowledge Awareness and Attitude of Farming Communities towards the Use of ICTs for Rural Development: A Survey of Villages in Kaduna State, Nigeria. *The Nigerian Journal of Communications*, 5(1): 99.
- Nwajinka CO 2004. Information and Communication Technology (ICT) in Nigeria: The Internet and Allied perspectives. In: O Uwakwe (Ed.): *Media Technology: Issues and Trends*. Enugu: Afrika-Links Books, P. 76.
- Nwanwene TAM 2007. Communication and Sustainable Development in Nigeria: Implications for the Electronic Media. *International Journal of Communication*, 6: 434.
- Nwosu I 1993. *Mass Media and the Nigerian Society*. Nnewi: The Reader's Choice.
- Ogunsuyi S 2005. Mass Media Practice in a Developing Economy: Issues and Challenges. *The Crab – Journal of Theatre and Media Arts*, 1(1): 138.
- Olatunji RW 2008. Towards Achieving the MDGs in Nigeria: What Roles for Cooperate Social Responsibility? In: EM Mojaye, OO Oyewo, R M'Bayo, IA Sobowale (Eds.): *Globalisation and Development Communication in Africa*. Ibadan: University Press, P. 224.
- Olise FP, Igun, SE 2006. Historical Analysis of the Communication Patterns of major Mobile Companies in Nigeria – MTN, Vmobile, Glomobile and Mtel. *Nsukka Journal of Mass Communication*, 1: 2: 81.
- Olise FP 2008. Mass Communication learners' Response to Pedagogy: Problems and Prospects. *Journal of Arts and Humanities*, 5(1): 1-8.
- Olise FP 2008. The Impact of Networking in a Modern Society: Nigeria in Focus. *Journal of Science and Technology Research*, 7(2): 52.
- Omofa MNG, Omotola JS 2005 .Communication and Development in Nigeria, 1999-2003: An Overview. *Journal of Research and Contemporary Issues*, 1(2): 35.
- Onwubalili C 2004. New Emerging ICTs Social and Cultural Issues. In: O Uwakwe (Ed.): *Media Technology: Issues and Trends*. Enugu: Afrika-Links Books, P. 125.
- Souter D 1999. The Role of Information and communication Technology (ICT) in Democratic Development. *Journal of Policy Regulation and Strategy*

- for Telecommunication Information and Media*, 1: 8: 408.
- Tiamiyu M 2002. ICTs for social Development Issues, Options and Strategies. In: EO Soola (Ed.): *Communicating for Development Purposes*. Ibadan: Kraft Books, P. 35.
- Udoakah N, Iwokwagh N 2008. Communication and HIV/ AIDs Preservation among Adolescent in Benue State. *The Nigerian Journal of Communications*, 6: 1 and 2: 44-45.
- Wilson D 2005. *New Perspectives in Applied Communication*. Ibadan: Stirling-Horden.
- Wogu JO 2006 .The Relevance of Communication and Information Technology (ICT) to National Development: The Nigerian Experience. *International Journal of Communication*, 4: 183.