# Analysis of the Diffusion of Information and Communication Technologies among Rural Nigerian Women

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### Abstract

Regional initiative such as Africa Information Society Initiative (AISI) and some other related societies have all tried to encourage the building of Africa's information and communication infrastructure so as to speed up socioeconomic development across the continent of Africa. Many governmental and non-governmental bodies have also supported similar initiatives. This has led to a great improvement from what it used to be in the early 1990s and what it is today. But the question remains, who benefits from all these programmes – the urban – literate Africa woman or the rural-illiterate and poverty stricken African woman? Effectively used, ICTs can enhance development through the use of the Internet, to enable rapid marketing of products, to facilitate discussion among experts on critical development issues, to share strategies for poverty alleviation; to carryout research on the management and treatment of deadly disease and to provide other relevant information to the public; among many other things. The extent to which ICTs provide individuals and groups with the ability to interact and access ideas from each other depends on the availability and diffusion of ICTs among the group concerned. This is the bedrock of this study. It ascertains the level of diffusion and utilisation of ICTs among rural African women. Using rural Nigerian women as respondents, a total of forty-two group discussion were used as an instrument for data collection, using purposive sampling as the sampling technique. The data generated were analysed, using explanation building technique. Data generated indicated that an overwhelming percentage of rural women studied did not yet have access to ICTs. It was also found out that most of the rural settings lacked basic amenities like electricity and Internet facilities. The study recommended among others, that provision of basic infrastructure is sine-qua-non the utilisation and diffusion of ICTs among rural African women. It is also a key to the empowerment of women in rural African settings.

Keywords: ICTs, Empowerment and Rural Women.

## Background to the Study

This article considers the level of diffusion of ICTs rural Nigerian women. Access to Internet and computers draws the attention of this research work to how many women in rural settings have actually used the Internet and computer. The obstacles which prevent or limit rural women's access to the use of ICTs were also ascertained. In Nigeria, just like in most African countries, women who live in rural areas are at a particular disadvantage in the use of ICTs. They face multiple barriers relating to both gender and location (Kazanka and Dada, 2009; Mulama, 2007). Poverty, illiteracy and challenges of taking care of their households create problems for women and make them unfamiliar with new technologies.

Women in Nigeria represent the majority of the rural poor (up to 70 percent) and they play a major role in the survival strategies of rural households. Nigeria ranks 139<sup>th</sup> out of 157 countries on the Human Poverty Index; out of 108 developing countries, Nigeria ranks 80<sup>th</sup>. It also ranked 139<sup>th</sup> out of 157 countries for the Gender-related Development Index (UNDP, 2007). As subsistence farmers, Nigerian women are fully involved in agricultural production, harvesting, storage and marketing, yet their purchasing power parity remains at US\$652, whereas in males, it is US\$1, 592.

The significant role of ICTs in facilitating the development for the world's poor, disadvantaged and marginalised people is been widely recognised (SDC, 2005). For example, ICTs have played a positive role in promoting development of women's entrepreneurship in Kenya and the mobile phone in particular, appears to have had a huge impact on the effectiveness and efficiency of micro-enterprise owned by women (Munyya, 2009).

It is believed that with the coming of the new ICTs era, the world would become a global village in terms of the opportunities that the new technologies could bring. These opportunities, as thought or envisaged, would bridge disparities between the rich and the poor, the rural and the urban, the North and the South and encourage collaborative global work towards equality and empowerment for all (Ochieng, 2011).

The opportunity for development that ICTs suggested led some African governments to work tirelessly to set in place relevant requirements, including the expansion of infrastructure, in order to reach out to the populace. Regional initiatives such as African Information Society Initiative (AISI) have attempted to support the building of Africa's information and communication infrastructure, so as to accelerate socio-economic development across the continent (Kihoro, 2001). But the pertinent question that needs to be answered is, who benefits? This question necessitated the need for this study. Just as Ochieng (2011) noted, majority of women who have access to ICTs in Africa are those in academia, the ICT professionals and the elite activist from non-governmental organisations.

#### Statement of Problem

The unfortunate state of low development in most rural areas in Nigeria and Africa, as a whole is becoming unbearable, especially in this era of technology-driven world. Many governmental and non-governmental organisations have tried to help in the area of empowering African women through ICTs, but the question is: who benefit from these programmes? Is it the rural poverty-stricken African women or their urban-educated counterparts? Lack of ICTs in rural areas has been recognised as a major cause of the continuing under development of these regions of the world, (Okunna, 2004). How then the rural women could be empowered when these ICTs tend to be inaccessible to them. In this information age, the basis of modern ICTs is the computer and Internet and many studies have shown the inextricable relationship between economic development and computing technology (Fombas, 2002). In addition to the role of computer and Internet in enhancing economic development communication scholars (Wilkins ands Waters, 2000). These advantages notwithstanding the lopsided and lip service commitments of Nigerian government in finding and promoting ICTs programmes, tend to be identified as one of the horrifying challenges in bringing ICTs to the doorsteps of rural women (Asogwa & Igbokwe, 2010). This warrants the need for this study, to analyse the level of diffusion of ICTs among rural Nigerian women.

#### **Objectives of Study**

- 1. To ascertain whether rural women in Anambra state of Nigeria have access to ICTs.
- 2. To find out the factors that mitigate against rural women's access to ICTs.
- 3. To ascertain ways through which the mitigating factors to ICTs access could be removed.

Based on these objectives, corresponding research questions that guided the study were generated as follows:

- 1. Do rural women in Nigeria have access to ICTs?
- 2. What are the factors that militate against Nigerian rural women access for ICTs?
- 3. What are the ways through which the militating factors could be removed?

### **Theoretical Framework**

This study is based on diffusion of innovation theory. This theory was propounded by Rogers and Shoemaker in 1973. It explains the process of spreading any king of technical device, ideas or useful information.

This theory posits that "diffusion of any innovation follows four stages namely: information, persuasion, decision or adoption and confirmation" (McQuail, 2005 p.490). It generally follows an S-shaped pattern, with a slow start, an acceleration of adoption and a long tail. The "early adopters" tend to be untypical in terms of social composition and communication behaviour. The mass media have been found to play a secondary role in influencing diffusion, with personal communication, example and known authority sources being primary. Thus, the theory is relevant to the study.

#### **Review of Related Literatures**

A recent study conducted by Ruth Ochieng an ICT practitioner engaged in gender works in Africa; considers how rural women's access to computers and Internet have affected development in Africa. Ochieng (2011) stressed that majority of women who have access to ICTs are literate and are urban centred. And while ICTs have helped these literate and urban centred women make informed choice as individuals and on behalf of their illiterate and rural based counterparts, some tough questions like the following need to be asked:

- Why are most rural African women unable to benefit from available information concerning poverty alleviation and HIV/AIDS?
- Why are so many women not able to control the food insecurity in their households through using ICTs?
- Why is women economic rate of empowerment still severely stunted, despite the fact that ICTs have been rapidly circulating knowledge about effective marketing and networking for economic empowerment?

Answers to these questions uncover deeply entrenched structural and political hierarchies. As shown by many ICT experts and women activists in Africa, issues such as affordability and access, language and skills for operating ICTs and opportunities are to be fully addressed (Ochieng, 1998 and Ochieng, 2011). A group of professional women working in the field of ICTs in Africa undertook a study in 2009 to ascertain whether women in rural Mozambique use ICTs and whether ICTs empower the women. The report of the study according to Macueve, Mandlate, Ginger, Gaster and Macome (2009) show that majority of the women interviewed did not have access to computers or Internet and as such, the idea of empowerment through ICTs did not arise.

Reasons given include "they are not for people like us; in other words, a perception existed that uneducated or illiterate or poor women were automatically excluded from access to them. For others, selling in the market seemed more beneficial to them than learning new skills and access to information" (Macueve, et al, 2009). In Morocco, Tafnout and Timjerdine (2009) conducted a survey to find out how the rural women who are victims of violence in Morocco use ICTs. They found out that rural Moroccan women face numerous economic social and cultural challenges that prevent their access to and use of ICTs. It was also observed that the ICT sector is characterised by disparities between men and women and does not take into account gender and equity in development, when addressing social problems. Moreover, the ICT sector also limits the possibility of social and professional integration of women, especially those who are poor and illiterate (Tafnout and Timjerdine, 2009).

On the role of ICTs in reporting rural issues in Nigeria, Okunna (2004) observes that these new forms and processes guarantee greater speed, greater reach clearer vision and capacities for the two-way flow of information. She contends that given the number and urgency of development needs of rural Nigerians, pushing sophisticated ICTs to rural communities should be among the least in importance in the hierarchy of needs of rural areas. This lime of thought is also reflected in Gumacio-Dagron (2001) thus:

We have seen computers and Internet connections pushed into rural areas where drinking water is not even available in the name of an ill-defined 'right to knowledge' ... too many computers are parachuted into rural areas in Sri-lanka, Mali or Guatemala. Who will use them? Who will benefit from this patronising trend? Do people really desire to have access to telephones, electricity or safe water? Isn't it an enormous contradiction?

It is incontrovertible that poor, rural and poverty stricken rural women, with life threatening basic needs, could embrace ICTs. But paradoxically, these ICTs are needed for the rural communities to develop. It is therefore, imperative these modern gadgets or technologies be provided in rural areas for the rural poor.

#### Methodology

Anambra state of Nigeria is a state made up of 21 Local Government Areas.

It has a population figure of 4, 055, 048, according to 2006 National Population Census in Nigeria. It is blessed with rich natural resources, especially oil palm trees. Majority of the rural women in Anambra state are into the processing of palm oil which they sell in the rural markets across the state. Since there are 21 Local Government Areas in the state with rural communities, two women were purposively selected from each Local Government Area who are scattered in rural palm oil processing centres in the state. Therefore a total of forty-two women were studied from these 21 Local Government Areas: Aguata, Awka North, Awka South, Anambra East, Amabra West, Anaocha, Ayamelum, Dunokofia, Ekwusigo, Idemili North, Idemili South, Ihiala, Njikoka, Nnewi South, Nnewi North, Ogbaru, Onitsha North, Onitsha South, Orumba North, Orumba South and Oyi.

Indepth interview technique and focus group discussion were used as instrument for data collection. The fortytwo women were interviewed in palm oil processing centers. These techniques were used because majority of these women are illiterates and also because they induced social interactions akin to those that occur in everyday life (Denzin and Lincol, 2000). Explanation building technique was used in analysing the responses generated through interview and group discussions. This method of data analysis was employed because this study is qualitative in nature.

#### Findings

The women working at the oil processing centers were aware of their significance and their role in making change in their various families and communities. This gives them self-confidence and propels them to move forward, despite some limitations. They made effective use of cell phones in making contacts that helped them in their business. But on awareness of Internet or computer, veronica from Aguata, who is the leader of the group said:

We use only phones to call the operators or inform each other on availability of palm fruits and the prices of palm oil. But Internets or computers are not here, in short, I have not seen the Internet before. I have heard of computers, but I do not have any and even if you give me, I do not know how to use it, unless you will teach me.

Hundred percent of rural comities visited lacked Internet facilities. Some are still battling with the provision of basic amenities like portable water, electricity and health facilities. But on explanation on what the Internet is and how it could boost their business and fell the world about them, Felicia from Orumba North said: "such technology will help us in this area. We need it al least to draw people's attention to this area, because we have so many products to sell, but urban buyers do not know about us. We will welcome such a development". On the factors that hinder rural women's access and utilisation of ICTs, we were surprised at the strength and depth of expression. Mama Ngozi from Idemil North said, "the major problem we have here is electricity. Since this Internet or computer works with light, how can we use them without regular supply of power? we are ready to use the technology, but there is no light here".

Apart from electricity, other factors mentioned are lack of knowledge, illiteracy, poverty and some cultural limitations. Mama Ify, a woman from Anambra East said:

Internet is a very good thing. We will use it if it comes here, but who will bring it. They don't remember us when it comes to things like this. Even government seems to neglect us women that reside in rural areas. Although, we are not literate, if they teach us, we will learn; we are ready to learn. We want development. We want tot be like our urban counterparts.

On the cultural limitation, Nneka from Ayamelum said:

You know that this part of the world believe in male dominance and supremacy and this is affecting us. No matter what you do, you will not be appreciated. But based in what you said about this Internet' I am interested because it will liberate us. With more money in your pockets, no man will claim supremacy over you. They do so because we rely on them for financial assistance. We really want to show that women are important as well.

On the ways through which all these mitigating factors hindering access to ICTs could be countered, Mgbokwu from Ogbaru said:

Knowledge they said is power. If they teach us, we will learn. What you don't know is greater than you. Telling us about modern ways of life is good, just as you (the researcher) have done, but bringing these things to us is another. Are you sure you will come here again?

Other respondents spike on availability of power on regular basis, giving of loans to boost their business, removal of some cultural biases and benefits against women and provision of other basic amenities like good roads, potable water and health facilities.

# Conclusion and Recommendation

Through this research and encounters with the rural women respondents, it became clear that the level of diffusion of ICTs in rural communities in Anambra state is almost zero. The only ICTs they know of, speak of and enjoy is the mobile phone. This research set out to look into other ICTs like the computer and the Internet. It was clear that the respondents had no access to these two new media forms.

It also became clear that it will be hard to talk of rural women empowerment when they have no access to ICTs. Empowerment can only work in a context devoid of some limitations. And such limitations as revealed by this study are illiteracy, poverty, lack of knowledge of ICTs, lack of basic amenities like electricity, water, good road networks, health facilities, etc. This study also proves that there are still some cultural beliefs endangering women's empowerment; such as the belief in male dominance and supremacy was mentioned in the study. Only when these barriers are overcome, will rural women's empowerment through ICTs have a success story.

This study, based in the aforementioned findings therefore recommended that enabling environment be created in rural areas for the utilisation and sustenance of ICTs. Provision of basic amenities should be considered the first step towards the empowerment and development of rural dwellers, especially rural women.

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