

Utilization of Information and Communication Technology (ICT) among rural women in Oyo State, Nigeria

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Abstract

Women are the driving force of agriculture in Nigeria and therefore need adequate and current information on agricultural activities and other aspects of their lives. This study assessed rural women's utilization of ICT to source development information. Three Local Government Areas were purposively selected from the thirty-three LGAs in the State while random sampling technique was used to select two hundred and forty respondents across the three States. Data were collected through the use of interview schedule and analysed using descriptive and inferential statistics. The findings from the study revealed that 40% of the women were within age range 20-40 years, 46.7% had no formal education. About 88.3%, 16.7% and 1.7% utilized radio, mobile phone and internet respectively. Illiteracy (75.0%), low income (66.7%), lack of power supply (75.0%) and heavy workload (65.0%) prevented rural women from using ICT effectively. Chi-square result shows that age ($\chi^2=29.400$), marital status ($\chi^2=76.133$), level of education ($\chi^2=30.167$) and occupation ($\chi^2=22.167$) were significantly related to ICT utilization. Adult literacy education using extension agents should be encouraged among the rural women and there should be rural development in terms of social amenities especially electricity because all these ICTs need these amenities to function well.

Keywords: Information and Communication Technology, utilization, rural women, infrastructure

INTRODUCTION

Information and Communication and Technology (ICT) can be defined as any product that will store, retrieve, manipulate, transmit or receive information in a digital form. It also consists of innovations that facilitate the capturing, storage, processing, transmission and display of information by electronic means. According to FAO (2005), ICT captures a multitude of equipment and services. These consist of satellite communication systems, mobile phones, phone booths, hand held computer, imaging and acoustic technologies, websites, radio, television, tape recorder, newspapers, fax machines, pamphlets, magazines, extension agents etc. (Nwakure and Ohagwu, 2009).

ICT has proven to be the most single powerful tool for development in the past decades, bridging communication gaps and creating common language for creation of opportunities, connecting people and creating channels for personal and country development (Ayman, 2007). It is an effective tool in the hands of women to enable them extend their participation in a variety of productive fields and providing them with an avenue to express the development of their personalities and capacities. (Kazanka and Dada, 2007).

Women who live in rural areas are at a particular disadvantage in the digital world, facing multiple barriers relating to both gender and location when compared to their urban counterparts. There is also a gender disparity in access to vital information and they are found at the consumer end of information chain which is believed to be a tool for agricultural development. This appalling situation of rural women lead to the catalytic role of ICTs in facilitating agricultural development to the world's poor.

Most poor women in developing countries are further removed from the information age and they need ICT to access information which is of importance to their reproductive, productive and community roles. Access to ICT will enable women gain a strong voice in their communities and can also be of particular value in fighting social isolation where they experience such. Access to ICT means physical access and utilization of it, it also refers to the ability to make use of the information and the resources provided. There is a critical gap between internet access and access to useful web content. It is the access to and ability to make use of information that will impact on socio-economic and agricultural development, not accessibility alone. (ICT update, 2009)

Radio as an example of ICT is common with rural women due to its ready access, affordability, appropriateness and due to the fact that they can still listen to it while they undertake their household activities (Eniola *et al*, 2007). However, the listening time of radio for women is limited because of the household chores, responsibilities for children and elderly and maximum concentration may also not be guaranteed. Unavailability of power supply and low income has made the use of television a pipedream for most rural women. Internet has fewer users among rural women who are illiterate because large areas are still not connected, and the installation costs are very high. Even though internet and mobile phone networks continue to spread rapidly throughout the world, it may still take many years before the most remote and rural areas are connected.

While the potential of ICT in stimulating economic growth, socio-economic development and effective agricultural production is well recognized,

the benefits of ICT have been unevenly distributed within and between countries and groups. Despite the great progress already made in the field of ICT, there are still economic and technological factors hindering universal access and effective utilization of ICT based in rural women activities. The factors identified as constraints to access and use of ICTs are poverty, illiteracy, language barrier and other social and geographical factors like location, mobility and social class. (Sandys, 2005)

Though rural women are lagging behind in the use of ICTs, there is assurance that this trend can be changed if ICTs will address the actual needs of rural women like hygiene, sanitation, water, disaster management, reproductive health. It is essential that the affordability, awareness, accessibility and ICTs appropriateness should be considered. If people on less than one dollar per day in a country like Nigeria cannot afford a technology, access it and adapt it to their social, economic and cultural needs, then they may never invest in it. It is on this background that the utilisation of ICT among rural women in Oyo State was assessed.

The specific objectives of this study are to determine the personal characteristics of rural women, examine the level of awareness of rural women on ICT, -assess the extent to which rural women have access to, and utilise ICT, identify the type of information that rural women obtain from different ICTs and determine the constraints affecting the use of ICT by rural women in Oyo State of Nigeria.

METHODOLOGY

The study was carried out in Oyo state which is located in South Western Nigeria. Oyo State is located between latitudes 6^oN and 9^o and between longitude 3^oE and 4^oE and covers a total landmass of 27, 24957km. The population of the study consisted of rural women. The area of study was stratified into urban and rural areas, out of which only rural areas was chosen for the study. Oyo state has 33 Local Government Areas, out of which three were purposively chosen due to their degree of rurality and they are Saki East, Ibarapa Central and

Surulere Local government Areas. Four villages were randomly selected from each Local Government Area giving a total of 12 villages. Twenty rural women were also randomly selected from each village making a total of 240 respondents that form the sample size for this study. Structured interview schedule was used for data collection while frequencies and percentages were used to describe the personal characteristics of respondents, awareness and utilisation of ICT and constraints to the use of ICT. Chi square was used to test the relationship between selected personal characteristics of respondents and utilisation of ICT.

RESULTS AND DISCUSSIONS

Table 1 reveals that 40.0% of the respondents fell between 20 – 29 age brackets followed by those in the age bracket 30-39 (16.6%). This implies that most of the rural women were in their active age and would still be in need of information that would be useful in several aspects of their activities. Also 73.3% of the respondents were married indicating the fact that they would be occupied with several household activities in order to take care of every member of the family, limiting the time to utilize several ICTs.

Table 1 also shows that 46.7% of the respondents did not have formal education limiting their access to the use of ICT even when they were available. Fifteen percent of the respondents had tertiary education. This will definitely help them to have better knowledge of the benefits of various ICTs which would enhance motivation for ICT use, hence, an envisaged improvement in their agricultural practices and other income generating activities with overall effect on their standard of living. About 28.0% of the respondents were earning less than ₦ 10,000 per annum from their various productive activities and 38.3% earned between ₦10,000 and ₦59,000 as shown in Table 1. It is clear that these rural women could not afford the purchase of different ICTs due to their low income which is not even sufficient to meet their livelihood needs.

Table 1: Distribution of respondents by their socio-economic characteristics

Socio-economic characteristics	Frequency (%)
Age	
<20	48 (20.0)
20 -29	96 (40.0)
30 – 39	40 (16.6)
40 – 49	28 (11.7)
50 – 59	28 (11.7)
Marital Status	
Single	12 (5.0)
Married	176 (73.3)
Divorced	52 (21.7)

Socio-economic characteristics	Frequency (%)
Religion	
Christianity	108 (45.0)
Islamic	132 (55.0)
Traditional	–
Level of Education	
No formal education	112 (46.7)
Primary education	32 (13.3)
Secondary education	48 (20.0)
Tertiary education	36 (15.0)
Adult literacy education	12 (5.0)
Occupation	
Trading	92 (28.3)
Farming	56(23.3)
Civil service	32 (13.4)
Artisan	60 (25.0)
Level of Income (per annum)	
Less than 10,000	68(28.4)
10,000 – 59,999	92(38.3)
60,000 – 109,999	48(20.0)
110,000 and above	32(13.3)
Household Size	
1 – 3	64(26.7)
4 – 6	112(46.7)
>6	64(26.7)

Source: Field survey, 2010

Table 2 reveals that most of the rural women were aware of various ICTs like radio (100%), television (96.7%) and mobile phone (83.3%); it is only internet that has the lowest percentage (41.7%). This implies that despite the progress in technology, most of the rural women are still not aware of internet may be due to the

complexity of its use and lack of interest. Extension agents and development agencies must enlighten rural women on the significance of internet as it is being used in several parts of Africa like Mali, Kenya, Tanzania and Uganda such as to strengthen and connect rural organizations as well as women in remote areas (Farming Matters, 2011).

Table 2: Distribution of respondents by their awareness of ICT

ICT	Yes (%)	No (%)
Radio	240 (100.0)	-
Television	232 (96.7)	8 (3.3)
Internet	100(41.7)	140 (57.3)
Mobile phone	200 (83.3)	40 (16.7)

Source: Field survey, 2010

The common ICTs utilized by rural women were radio (88.3%) and television (33.3%) as shown in Tables 3. Radio is the cheapest ICT that an average rural woman can afford especially transistor radio which will not have to depend on electricity but use of batteries. This corroborates the position of Farming Matters (2011) that radio is still the

cheapest and most efficient tool for spreading messages about a broad range of issues like farming, democracy or lifestyle. The significance of internet and mobiles phone should be emphasized as information from these ICTs will also be of great relevance to the rural women.

Table 3: Distribution of respondents according to their utilization of ICT

ICTs	Yes (%)	No (%)
Radio	212 (88.3)	28 (11.7)
Television	80 (33.3)	160 (66.7)
Internet	4 (1.7)	236 (98.3)
Mobile phone	40 (16.7)	200 (83.3)

Source: Field survey, 2010

Table 4 indicates information obtained from different ICTs which range from agricultural, health, educational, political, entertainment/sport information and nutrition/home management information. Of all the ICTs, rural women obtain information from radio than other ICTs which implies that radio workers and broadcasters should give relevant and timely information on all areas of feminine life as they will rely on information from radio especially in their local languages. Very few respondents (1.7%) received information on

agricultural, health and education through the internet implying a very low usage of this channel. This corroborates the findings of Oluwatayo and Ahmed (2007) that women's low level of income, limited education and non – involvement in ICT projects constitute significant factors that limit their use of ICT. This suggests that the use of ICTs by rural women can only be enhanced if they are gender sensitive and address the local needs and concerns of rural dwellers.

Table 4: Types of information obtained from different ICTs

Types of information/various ICTs	Frequency (%)
Agricultural Information	
Radio	152(46.7)
Television	20(8.3)
Internet	4(1.7)
Mobile phone	8(3.3)
Health information (e.g., HIV/AIDs, malaria, family planning)	
Radio	128 (53.3)
Mobile phone	40 (16.7)
Television	12 (5.0)
Internet	4 (1.7)
Educational Information	
Radio	160 (66.7)
Mobile phone	16 (6.7)
Television	20 (8.3)
Internet	4 (1.7)
Political Information	
Radio	120 (50.0)
Mobile phone	20 (8.3)
Television	40 (16.7)
Internet	-
Entertainment/Sport Information	
Radio	172 (71.6)
Mobile phone	40 (16.7)
Television	14 (5.8)
Internet	-
Nutrition/Home Management information	
Radio	100 (41.7)
Television	24 (10.0)
Mobile phone	40 (16.7)
Internet	-

Source: Field survey, 2010

As shown in table 5, low income (66.7%), heavy workload (65.0%), illiteracy (75.0%) and lack of power supply (75.0%) were the major constraints

to the use of ICT. They also identified un-affordability as part of the constraints to the use of some ICTs.

Table 5: Distribution of respondents by constraints to the use of ICTs

Constraints	Yes (%)	No (%)
Low income	160(66.7)	40(44.3)
Heavy workload	156(65.0)	84(35.0)
Illiteracy	180(75.0)	60(25.0)
Ignorance	80(33.3)	160(66.7)
Restraint from husband	12(5.0)	228(95.0)
Language barrier	72(30.0)	168(70.0)
Lack of technical know how	40 (16.7)	200(83.3)
Power supply	180(75.0)	60(25.0)

Source: Field survey, 2010

Chi-square result above shows that age, marital status, level of education, occupation and income are significantly related to utilization of ICT. This implies that older women may not be able to utilize ICT compared to younger women. Also,

education is an important factor for the utilization of ICT. The type of occupation engaged in also has a significant influence on the use of ICTs because of the different information needs.

Table 6: Chi-square result on socio-economic characteristics and utilization of ICT

Variables	χ^2 value	df	Sig. level	Decision
Age	29.400	4	0.000	S
Marital status	76.133	2	0.000	S
Income	17.860	3	0.000	S
Level of education	30.167	4	0.002	S
Occupation	22.167	3	0.000	S

Source: Data analysis, 2010

CONCLUSIONS

The study revealed that most of the rural women were married, and in their active productive years with low level of educational attainment and income therefore cannot afford ICTs usage. Radio, Television and to a lesser extent, Mobile phone were the ICTs that the rural women utilized. Women received agricultural, health, educational, political, and entertainment information from various ICTs with radio as the most frequently ICTs source used. Low income, heavy workload, illiteracy and lack of power supply were the major constraints to the utilization of ICTs. In spite of the constraints, rural women were still able to access useful information from the few ICTs available which they could afford for their self-development, and by implication, that of their communities. Age, marital status, income, level of education and occupation were found to have significantly affected the utilization of ICT.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

1. Adult literacy classes and trainings on ICT should be organized for rural women by extension agents and other government agencies. This will boost rural women's interest and involvement in the use of ICT.
2. Provision of infrastructures especially power supply and communication network should be emphasized in the rural areas.

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