

## ACCESS AND USE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN AGRICULTURAL AND RURAL DEVELOPMENT AMONG YOUTHS IN OBIINGWA LOCAL GOVERNMENT AREA OF ABIA STATE, NIGERIA

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### ABSTRACT

*The state of Information and Communication Technology utilization for agricultural and rural development by the youth in the rural areas has been very marginal. The study assessed the access and use of ICT in Agricultural and Rural development among youths in Obingwa LGA of Abia State. Data were collected with a well structured questionnaire, using purposive and random sampling techniques, a sample size of 124 respondents were sampled. Descriptive statistics such as tables, frequencies, charts and linear regression were used to analyze the data. The study found that majority of the respondents, (50.8%) were males, and 49.2% were female among the respondents. The result showed that most of the ICTs in the area were available and that many have access to these ICTs, the level of usage was moderate. There is significant relationship between the age ( $t=3.314$ ), marital status ( $t=-2.353$ ) and educational level of the respondents ( $t=-1.718$ ) and the use of ICT. The study concludes that the government should intensify efforts to stabilize power supply, improve connectivity (Bandwidth) and private telecenters to actively enhance ICT use for agriculture and rural development youths.*

**Keywords: Access and use, ICT, agricultural and rural development, rural youth**

### INTRODUCTION

Information and Communication Technologies (ICTs) are basically information handling tools a varied set of goods, applications and services that are used to produce, store, process distribute, and exchange information. They include the old ICTs such as radio, television, telephone, etc and the new ones like computer, satellite and wireless technology, internets, networking, etc (UNDP, 2001).

Agriculture has been defined as an art and a science as well as a business of cultivation of crops, rearing of animals for the production of foods for man, feed for animals and raw materials for industries, all for man's use (Onuekwusi, 2005).

Rural development can be seen as a process by which a set of technological, social,

cultural, and institutional measures are implemented with and for the inhabitant of rural areas with the aim of improving their socio-economic conditions in order to achieve harmony and balance both on the regional and national levels.

Different opinions prevail about the definition of the term 'youth'. While some people may view the youths as young boys and girls, some other people may see them as mature boys and girls. In different parts of the world, specific criteria are used to judge who is a youth and who is not a youth. The United Nations defined youths as individuals who are between the age range of 15 to 24 years (Onuekwusi, 2005). In the context of this work, youth is defined as the period in an individual's life, which comes between the end of childhood (12 years) and entry into the world of work (35 years) (Onuekwusi,

2005). The individual has reached the age of maturity, but he is yet to acquire the full rights and duties of adult life, like marriage and earning of livelihood both for self and for one's family.

Like any other developing nation in the world, majority of the people in Nigeria, about 70% live in the rural areas under poor socio-economic conditions (Nwosu, 2005). Illiteracy, disease, poor infrastructure and general underdevelopment often characterized these communities despite the abundant human and material resources in the rural area which have remained largely untapped over the years (Ajayi 2006).

Information as a tool for development positions individuals such that they possess the capability to take right decisions to foster well-being of persons and the community at large. The ICT is a veritable source of knowledge for all people and it also bridges the gap between any pair of persons, groups or nations (Shaik, 2004). To facilitate development in the rural areas therefore, it becomes inevitable that the resources should urgently be exploited through youth involvement in rural activities (Igbokwe, 2001).

There is also the need to carry the youth along and involve them in decision making process, to enable them to be acquainted with the use of ICTs in agricultural activities but also the available resources within their environment and how best to use these resources in improving their general welfare and here lies the critical and indispensable role of mobilization in the development process (Shaik, 2004).

The importance of ICT becomes very important as a means of getting information on local knowledge and practices as a baseline for generating appropriate development content and approaches. This is only possible when networks are efficiently established that enable communication cycles within and among different levels of communities (Paul, 2004).

The involvement of youths that have leadership potentials in rural development and agriculture is a means of finding a base for solid and better rural community development and agricultural technology transfer. In agricultural development, youths constitute a potent force, this is because, the youths have a number of characteristics which when nurtured and utilized, are invaluable assets to agriculture and rural development (Onuekwusi, 2005).

Involvement of youths and ICTs in rural development and agriculture has become imperative for higher agricultural productivity and rural development in the country.

Information and Communication Technology use plays a strategic role in development initiatives and improvement in rural livelihood. Similarly, youths make up the majority of people in the rural areas of Nigeria and play a central role in agricultural and rural development, issues of language, illiteracy, etc are compounded by their already heavy work load that limits the time available to use ICTs, and by cultural attitudes that prevent them from visiting public access points mostly frequented by others (Ajayi, 2002).

The state of Information and Communication Technology utilization for agricultural and rural development by the youth in the rural areas has been very low (Ajayi, 2002). Other important challenges include limited time availability to participate in training and use of ICTs, and lack of awareness of the opportunities available. (Ajayi, 2006).

The youth being a potential force for agricultural and rural development, there is need to assess the level of access and usage of Information and Communication Technology for agricultural and rural development in Obingwa LGA of Abia State.

### **Objectives of the Study**

The broad objective of this study was to assess the level of access and use of Information and Communication

Technology in Agricultural and rural development among youths in Obingwa Local Government Area of Abia State.

The specific objectives are to describe the personal characteristics of the youths, identify the types of Information and Communication Technologies (ICTs) available in the study area, ascertain the level of the accessibility of ICT in agricultural and rural development by the youths in the study area, and determine the level of usage of ICT by them.

### Hypothesis

H<sub>0</sub>. There is no relationship between some socio-economic characteristics of the respondents and use of ICT in the study area.

### METHODOLOGY

This study was carried out in Obingwa Local Government Area of Abia State. It has common boundaries with Isiala Ngwa South, Osisioma Ngwa, Ugwunagbo, Aba North, Aba South, Ukwa East LGA, as well as Akwa Ibom state. It covers a land area of about 358,191 km sq. (Ministry of Land, Survey and Urban Planning, 2006), Report submitted to NPC, Umuahia, Abia state). Presently, it has 21 autonomous communities which are made up of 223 villages.

Farming is the primary occupation of the people of Obingwa LGA. The major crops grown in the area include cassava, yam, maize, telferia, okra, garden egg, cocoyam, plantain, banana, pineapple, oil palm, coconut, mango, orange, guava and citrus. The major livestock reared in the area includes sheep/goat, cattle, pig, as well as poultry.

The study included all the youths between the ages of 12-35 years in Obingwa L. G. A. Agriculturally, Obingwa L. G. A is made up of two (2) blocks, Obingwa East and Obingwa West, fifteen (15) circles, with Obingwa East nine (9) and Obingwa West six (6). It has a total of one hundred and five (105) sub-circles.

A purposive sampling was employed in the sampling. From each of the ADP Agricultural blocks, a random sample of four (4) circles was selected, totaling eight (8) circles. From each of the eight (8), two (2) sub-circles were selected, and from each of the sub-circles, 10 respondents were selected. A total of 160 questionnaires were administered and 124 were recovered.

The major instrument for the collection of the data was by the use of a well structured questionnaire which was administered to the respondents in the selected sub-circles (primary data). Secondary data was by the use of agricultural journals, Extension rural development books, internets, magazines, bulletins, newspapers, etc.

The completed copies of the questionnaire formed the basis for the data analysis. Descriptive statistics used are tables, frequencies, percentages, charts. Linear regression analysis was used to test the hypothesis which looked at the relationship between some socio-economic characteristics of the respondents and the use of ICT.

### Linear Regression Model

$$Y = f(x_1, x_2, x_3, \dots, x_n) + e_i$$

Where Y = dependent variables ICT use (0 & 1), X<sub>1</sub> = Sex, x<sub>2</sub> = Age, x<sub>3</sub> = Marital status, x<sub>4</sub> = level of education, x<sub>5</sub> = Occupation, e<sub>i</sub> = error term.

### RESULTS AND DISCUSSION

#### Personal characteristics of respondents

Table 1, shows that 58.8% of the respondents were male and about 49.2% were female. This indicates that more males are much concerned in the ICT access and use. This is in line with Richardson (2001) who said that male youths participate more in ICT utilization in the country.

On marital status, 64.5% were single and (35.5%) were married. That is to say that they were mostly single, they have more time to access these ICTs. The occupations of the respondents show that most of them were students (47.6%), and a substantial proportion (39.5%) were still practicing

agriculture, civil servants are few (12.9%), this indicates that most of the respondents are students an indication that they are learned and they should be able to use ICTs.

Data on the age of respondents show that almost half of them (48.6%) were between 12 and 29 years of age while 26% were above 29 years of age (Table 1).

Data in Table 1 further show that the level of literacy was very high among the respondents; 71.8% were literate with 24.2% holding degrees while 21.8 completed secondary school. This indicates that the respondents were literate enough to handle these ICTs. This is in agreement with Paul (2004) that the more people are enlightened and educated, the more they make use of these ICTs.

**TABLE 1: Distribution of Personal Characteristics of Respondents (n=124)**

Variables	Frequency	Percentage (%)
<b>Sex</b>		
Male	63	50.8
Female	61	49.2
<b>Marital Status</b>		
Single	80	64.5
Married	44	35.5
<b>Occupation</b>		
Students	59	47.6
Farmers	49	39.5
Civil Servant	16	12.9
<b>Age (yrs)</b>		
12-17	19	15.0
18-23	35	28.0
24-29	38	31.0
>29	32	26.0
<b>Educational level</b>		
No formal education	35	28.2
Primary	32	25.8
Secondary	27	21.8
Tertiary	30	24.2

Source: Survey data, 2008

**Types of ICTs available in the area**

Table 2 shows that most of the ICTs were available in the area. Some of them are telephone (mobile/fixed) (90.3%), video player (90.3%), magnetic board (88.7%), print media (87.9%) and others. The situation therefore is such that the respondents have so far felt satisfied with the services they have enjoyed from ICT at least to the extent of their desires.

**Table 2: Types of ICTs Available in the study area**

ICTs**	Available	Not Available
Computer	106 (85.5)*	18 (14.5)*
Telephone (fixed/mobile)	112 (90.3)	12 (9.7)
Video Player	112 (90.3)	12 (9.7)
Radio	96 (77.4)	28 (22.6)
Digital receiver	104 (83.9)	20 (16.1)
Cable television	87 (70.2)	37 (29.8)
Internet	88 (71.0)	6 (29.0)
E-mail	104 (83.9)	20 (16.1)
CDROM/VCD/DVD	95 (76.6)	29 (23.4)
Multimedia hardware	90 (72.6)	34 (27.4)
Fax machine	89 (71.8)	35 (28.2)
Scanners	82 (66.1)	42 (33.9)
Magnetic board	110 (88.7)	14 (11.3)
Print media	109 (87.9)	15 (12.1)
Flash drive	115 (92.7)	9 (7.3)

Source: Survey Data 2008

\*\*Multiple responses recorded

\*In parenthesis are the percentages.

**Accessibility of ICT by the Respondents in the Study Area**

Table 3 shows that the respondents that make use of telephone (83.1%), video player (79%), radio (77.4), Computers (75.8%), Cable television (61.3%) and flash drive on daily basis are more, which means that they access ICT more on daily basis.

This is in line with the UN ICT Taskforce (2005), where it was discovered that the

accessibility of the basic ICT indicators is usually higher on daily basis following the

presence of telephone, radio, television, video player, computer, etc.

**Table 3: Accessibility of ICT by the Respondents in the Study Area**

ICTs*	Daily	Weekly	Monthly	None
Computer	94 (75.8)	21 (16.9)	5 (4.0)	4 (3.2)
Telephone (fixed and mobile)	103 (83.1)	8 (6.5)	4 (3.2)	9 (7.3)
Video player	98 (79.0)	14 (11.3)	4 (3.2)	8 (6.5)
Radio	96 (77.4)	15 (12.1)	8 (6.5)	5 (4.0)
Cable television	76 (61.3)	22 (17.7)	14 (11.3)	12 (9.7)
Digital receiver	52 (41.9)	36 (29.0)	20 (16.1)	16 (12.9)
Internet	42 (33.9)	37 (29.8)	19 (15.3)	26 (20.9)
E-mail	35 (28.2)	31 (25.0)	36 (29.0)	22 (17.7)
CDROM/VCD/DVD	54 (43.5)	39 (31.5)	20 (16.1)	11 (8.9)
Multimedia hardware	55 (44.4)	21 (16.9)	35 (28.2)	13 (10.5)
Fax machine	46 (37.1)	37 (29.8)	23 (18.5)	18 (14.5)
Scanners	40 (32.2)	50 (40.3)	25 (20.2)	9 (7.3)
Magnetic board	63 (50.8)	20 (16.1)	18 (14.5)	23 (18.5)
Print media	70 (56.5)	40 (32.3)	6 (4.8)	8 (6.5)
Flash drive	75 (60.5)	36 (29.7)	6 (4.8)	7 (5.6)

**Source: Field survey 2008**

\*Multiple responses recorded:

**Level of usage by respondents**

From Table 4, the mean average decision is 2.00 when looking at the average of each of these ICTs they are in line with decision, that is to show that level of usage of these ICTs are moderate especially those with higher frequencies which is in line with exposition of Farrell (2003), that the older technologies are still the mainstay of educational outreach

in many parts of the world because the state of infrastructure development has not allowed the same degree of adoption as has taken place in more developed countries. The finding from this table indicates a high potential for ICT as a means of information dissemination especially in agriculture and rural development.

**Table 4: Distribution of Respondents According to Level of Usage**

ICTs*	Always	Sometimes	Never	Average
Telephone (fixed and mobile)	32	25	7	2.69
Computer	69	50	5	2.52

**Table 4 (contd)**

ICTs*	Always	Sometimes	Never	Average
Video player	67	52	5	2.50
Radio	65	50	9	2.45
Digital receiver	59	57	8	2.41
Cable television	58	62	4	2.44
Internet	52	64	8	2.35
E-mail	55	57	12	2.35
CDROM/VCD/DVD	59	55	10	2.40
Multimedia hardware	56	53	15	2.33
Fax machine	58	50	16	2.33
Scanners	55	54	15	2.32
Magnetic board	55	41	28	2.21
Print media	85	32	7	2.63
Flash drive	70	39	15	2.44

**Source: Field survey, 2008**

\*\*Multiple responses recorded

Mean average decision = 2.00

Table 5, shows that age (t=3.314) was significant at 5% and positively related to the use of ICT, which shows that the age has a positive relationship with ICT use, the younger the people the more eager they are to use ICTs than the older people. Marital status was significant (t=-2.353) but negatively related to the use of ICT and also

the level of education (t=-1.718) is negatively related to the use of the ICT. This may be due to some constraints against ICT use like erratic power supply, socio-economic problems prevalent in the area and poor infrastructure to financial capacity of the respondents.

**Table 5; Linear Regression Analysis Showing Relationship Between some Personal Characteristics of the respondents and the use of ICT**

Variable	Standardized Coefficient	Co-Standard error	t-value
Constant			
Sex	.056	.385	2.902***
Age	.502	.116	.624
Marital Status	-.271	.015	3.314**
Educational qualification	-.221	.056	-2.353*
Occupation	.037	.015	-1.718*
R <sup>2</sup>	0.92		
R <sup>-2</sup>	.053		
F-ratio	2.381		

\*\* = 5% \* = 10% **Source:** Field Survey 2008

## CONCLUSION

The use of ICT by the respondents was moderate considering the available facilities and the ones used. This situation was related to the level of technological development of the country, the state of the economy and what infrastructure the system can support.

The information revolution is an intervention with potential to ensure that knowledge and information from these ICTs are in the right hands. The relevance of this revolution is supported by Balit (2002) who pointed out that the least expensive input for rural development is knowledge.

## RECOMMENDATIONS

1. More female youth should engage themselves in the use of the ICT in agriculture and rural development
2. There is need for the government to actively participate in enhancing ICT use by improving on the available infrastructure
3. ICT education should be provided and also by facilitating the establishment of more ICT centers should be facilitated across the country to help transform our rural areas.

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