ASSESSMENT OF THE FREQUENCY OF ICT TOOLS USAGE BY AGRICULTURAL EXTENSION AGENTS IN IMO STATE, NIGERIA

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ABSTRACT
In recent times, information and communication technology (ICT) has become relevant in the Nigerian agricultural sector. The extension service requires ICT for effective information delivery. This study examines the frequency of ICT tools usage by agricultural extension agents in Imo State, Nigeria. Data for the study was collected from 57 randomly selected extension agents. Data analysis was by the use of frequency, percentages, mean and t-test. Findings of the study revealed that only mobile phone and computer were frequently used by respondents. The overall mean of 0.89 suggests that ICT tools were not frequently used for extension services and this has grave implications for agricultural development. Based on the findings of the study, the following recommendations were made: there should be adequate provision of computers for all the extension agents. Adequate provision should be made for the maintenance of the ICT facilities and systems. That provision should be made in providing training programme for the extension agents in order to update their knowledge on the latest and new information technology. Government to establish policy programme as means of bridging our digital divide, creating digital opportunity for various users of extension services in the country. ICT enabled extension service must be able to define it's key stakeholders and audience and jointly determine their needs.

Key words: ICT tools, agricultural extension agents

INTRODUCTION
One of the main tasks functions of Agricultural Extension is the exchange sharing of information, knowledge and skills. Extension therefore is essentially communication, a process whereby various participants are linked and exchanged information, a critical requirement for sustainable development. The paradigms shift in development concept towards participation and sustainability coupled with revolutions in the information and communication technology has provided opportunities for extension and rural communities to move into the information age. Extensive review of literatures in agricultural development by Ojiambo (1995) and Kaniki (1995) showed that there is a direct relationship between research and the utilization of research findings Kipang'at, (2003). This a strong linkage complimented by flawless information flow enhanced by the effective use of ICT by the extension services will significantly boost agricultural production and improve rural livelihoods in developing countries. Front line extension workers who are the direct link between farmed and other actors in the agricultural knowledge and information system, are well positioned to make use of ICT to access expert knowledge or other types of information that could facilitate the accomplishment of their day-to-day activities (Adedoyin, 2005).

The 6th consultative expert meeting of CTA's observatory on ICT (CTA, 2003) listed the following as a potential ICT application in extension; Enhance farmers ability to collate demands, Collaborate learning, Exchange of time sensitive information e.g market price, diseases outbreaks, etc., Make extension systems and structure more efficient, Engage farmers in assessing own needs, solutions, Facilitating multi-stakeholders brainstorming, Exploring attentive production technologies facilitating access to markets and credits,

Training and demonstrations, Community learning, Search, select and compile information for individual clients, Peer to peer sharing and exchange among extension.

Several research studies conducted on extension organizations have revealed that the delivery of goods is affective when the grass root extension worker covers a small area of jurisdiction with multiple purpose. The existing system of large jurisdiction, each with a narrow range of activities, is less effective. However, broad basing required grassroots workers to be at the cutting edge of extension and master of many trades that is not really possible. ICT can help here by enabling extension worker gather, store, retrieve and disseminate a broad range of information needed by farmers.

ICT has many potential applications in agricultural extension. It can bring new information services to rural areas where farmers, as users, will have much greater control than before over current information channel. Access to such new information sources is a crucial requirement for the sustainable developing of farming systems. If extension agents will effectively and efficiently use ICT, it will make their work easier and moreover, facilitates their information delivery and after extension services. Computers will help them to analyze data and write scientific papers, help them to prepare plan of work and budgets, help trainers to produce curricula and handouts, reach out to farmers easily. They can send document through the document which could serve as a subject of demote in an internet discussion group, and they could be placed on a website for viewing. According to Wagor (2003) extension services in each province of Pakistan have developed communication separate unit that are equipped with visual equipment, with emphasis being given to the use of computers based communication technology for diffusion of research information to farmers.

The interest of extension is communication for development-defined as "an innovative way of reaching and interacting with people more effectively whenever they may be" (FOA, 1998) and ICTs become handy tools. The ICT tools that have great potential for use in agricultural extension include Radio, television, telephone (GSM), the web, search engines, packet digital assistants, cameras, video, email, computer, contact data bases and system, CD-ROM, DVD, current awareness, group ware, rural radio, etc. regardless of the tool, the focus must be on the people who with use the technologies and the content rather than the technologies themselves.

Experience has shown that for most developing countries extension agent have used all sorts traditional information communication technologies including radio, drama and video/television. Presently both the extension service and other service providers and their clients are experimenting with never digital opportunities that can be effectively used to exchange, process manage and communicate information and knowledge. The digital camera with video capabilities is becoming very popular because "a picture constrained by literacy to communicate, Maru (2003).

It follows from the foregoing that ICT are information transmission technology built on the political of electronic communication devices such as computers and telecommunication equipment, for connecting and accessing various ends. In the information pathway. The important feature of this system that makes it more useful to agricultural extension is the connectivity and communication services it provides. Networking is one major factor that contributes to active ICT facilitation. It is through this networking that connection of data information, facts and answer to questions are connected in the communicating devices. Chissenga (1997) revealed that networking has been very helpful, especially among researchers and academics that have to depend to a great degree on electronic communication instead of the face to face inter personnel model. Horton and Ilechewa (1995) looked at communication networking from the angle of the World Wide Web (www). According to them, the www, made possible by the internet, is increasingly

fashioning a new dimension in information networking among individual corporate organization and libraries. Data communication today rely on computers network and the internet works, it is exerting increasing impetus in information acquisition and utilization. If ICTs are adopted for use in agricultural extension deliver, they have the following important potential application, capacity to reach a large audience e.g use of radio, TV and internet. Can be effectively used for training and demonstrations e.g with the use of Television, video, VCD, DVD and CD Rom can be used to make the extension system and structure more efficient through better management of information and scarce resources. ICT may be used effectively for not only normal weather forecast also for a warning system for diseases/pest outbreak and other disaster.

ICT can also be used for community mobilization learning and action of with the use of radio, TV, public address system, the web. The main application of ICT in agricultural extension is seen in cyber extension, which has recorded a lot of improvement in areas in which it has been introduced. The present study assesses the frequency of ICT tools usage by agricultural extension agents in Imo State, Nigeria

METHODOLOGY
The study area is Owerri Agricultural Zone in Imo State, Nigeria. The sample size was determined from the number of extension agents that attended the fortnightly meeting (FNT) that holds at ADP, Owerri zones. Owerri zone of ADP has 69 extension agents comprising of 25 females and 44 makes. Out of the 69 questionnaires administered only 57 were returned.

Data were collected through primary and secondary sources as such structured questionnaire was the main source of primary data used while Secondary sources include seminar papers, workshop papers, journals, and published books. Materials were also gotten from electronic media programme and some ADP materials. Data analysis was by the use of frequency, percentages, mean and t-test.

RESULTS AND DISCUSSION
The table 1 shows that 59.60% of the respondent have been using ICT for the past 2 years, 29.80% of the respondents have been using ICT for period between the part 2-4years, 7.00% for the period between the part 5-6 years while 3.5% for the period between the past 7-8years.

Table 1: Distribution showing how long the extension agent have been using ICT

Duration	Frequency	Percentage
Less than 2years	34	59.60
2-4years	17	29.80
5-6years	4	7.00
7-8years	2	3.50
Total	**57**	**100.00**

The implication here is that majority of the respondents started using ICT just for the past 2 years, which means that the last 2 years recorded the highest usage of ICT by the extension agents. This is due to efficient awareness done on ICT ands it's application and importance and also following common use among the populace since last 2 years.

Table 2: Distribution showing the number of hours in a week extension agent spent on ICT.

Hours	Frequency	Percentage
3hours	28	49.10
4-7hours	12	21.10

8-11hours	10	17.30
12-16hours	2	3.50
Total	**57**	**100.00**

Table 2 reveals that 49.10% of the respondents who use UCT spent 3 hours in ICT in a week, 21.10% of the respondents spend between 4-7 hours, 17.50% spend between 8-11 hours in a week while 12.30% of the respondents spend 12-16hours on ICT in a week. This reveals that majority of the extension agents spend 3 hours on ICT in a week while less number of the extension agents spend 12-16hours on ICT on a week. This is a result of series of works that holds almost every week, either the fortnightly training (FNT) meeting or block meeting (BM) or visitation of the farmers including other follow up activities.

Table 3: Distribution of self rating the skill of extension agent on ICT.

Skills	frequency	percentage
Very high	8	14.00
Moderately high	14	24.60
High	9	15.90
Low	8	14.00
Very low	18	31.50
Total	**57**	**100.00**

Mean = 2.58

The table 4.2.12, shows 14.00% of the respondents rated their skill in ICT to be very high, 24.60% rated their skill moderately high, 15.90% rated their skill high, 14.00% rated their skill to be low and 31.306 rated their skill to be very low. A mean rating of skill 2.58 was showing that ICT skills was generally rated low.

Table 4: Distribution showing the use of ICT by extension agents in executing their job

Response	frequency	percentage
Yes	34	59.60
No	23	40.40
Total	**57**	**100.00**

The table 4 reveals that 59.60% of the respondents use ICT in executing their jobs while 40.40% of the respondents do not use ICT in executing their job. This implies that the number of extension agents who uses ICT in their extension services were relatively predominant during the survey. This may be due to benefits of using ICT in extension services which the extension agents have observed.

Table 5: Distribution showing frequency of use of ICT tools by extension agents.

Tools	VF	MF	LF	NF	Mean	Remarks
CD-ROM	2(3.5)	3 (5.3)	8 (14.0)	4 (77.2)	0.35	Less frequent
Television	10 (17.5)	16(28.1)	4 (7.0)	27 (47.4)	1.16	Less frequent
Computer	19 (33.5)	13(22.8)	4 (7.0)	21 (36.8)	1.53	Frequent
Internet	3(5.8)	13(22.8)	4 (7.0)	37(64.9)	0.68	Less frequent
Web	3 (5.3)	6(10.5)	9(15.8)	39(68.4)	0.53	Less frequent

Chatting	4(7.0)	10(17.5)	2(3.5)	41(71.9)	0.60	Less frequent
e-mail	10(17.5)	15(26.3)	8(14.0)	24(42.1)	1.19	Less frequent
Mobile phones	23(40.4)	9(15.8)	7(12.3)	18(31.6)	1.65	Frequent
Search engine	4(7.0)	5(8.8)	0(0.0)	48(84.2)	0.37	Less frequent
Overall mean					**0.89**	**Less frequent**

Source; field study, 2006.
VF = very frequent, MF = Most frequent, LF = Less frequent, NF = Not frequent,
Any mean ≤ 1.50 less frequent (LF), > 1.50 frequent (F)

Table 5 shows the frequency of use of the identified ICT tools such as CD-ROM, television, internet, web, chatting E-mail, search engines recorded less frequent use. This may be as a result of lack of operational skill, insufficient fund to procure these tools, not enough time because of other domestic and external engagements, especially in the area of CD-ROM were a lot technical skill is required in it's operation including search engine. The less frequent use of these ICT tools may also be form of these extension agents lives. They sometime have access to it whenever they come to town or places where these ICT facilities are present to make use of it.

The ICT tools that have frequent use include computer and mobile phones. This follows mostly the compatibility of these materials and their less expensive nature. For sometime, many homes and peoples can obtain a set of computers and also learn how to use. Mobile phones, is sometimes almost everybody has it because it can be use at any time and any where, also considering it's less expensive whereby everybody can use it to contact you even farmers as far as they have your numbers.

Table 6: T-Test showing gender differences in ICT tool usage

Gender	N	Mean	T	Df	p-value	Remark
Male	28	8.82	0.806	55	0.423	NS
Female	29	7.34				

NS: Not significant at 0.05 level

Mean frequent of ICT use for male was 8.82 while female was 7.34. The t - value of 0.806 was not significant at 0.05 level. This suggests that there is no significant difference between male and female extension agents. This so because both male and female were found to use ICT less frequently.

CONCLUSION
According to the study, the most frequently used ICT tools were only computer and mobile phones obviously because of their ease of use and wide coverage. ICT are important in contemporary agricultural extension system in Nigeria. Apart from meeting up the extension system in other parts of the world, ICT are a repository of information that can be used whenever desired they provide a large volume of information which could not have been stored anywhere but a virtual laboratory type of mechanism like the internet. This study explored and analyzed the utilization of ICT by extension agent in Owerri agricultural zone of Imo State. The skill of the extension agents were rated low which reveals that most of the extension agents have not gotten appropriate training on ICT skill and techniques and this according to the study reflects on the preference of the ICT tools by the extension agents.

RECOMMENDATIONS

Based on the findings of the study, the following recommendation are made;

- There should be adequate provision of computers for all the extension agents.
- Adequate provision should be made for the maintenance of the ICT facilities and systems.
- That provision should be made in providing training programme for the extension agents in order to update their knowledge on the latest and new information technology.
- Government to establish policy programme as means of bridging our digital divide, creating digital opportunity for various users of extension services in the country.
- ICT enabled extension service must be able to define it's key stakeholders and audience and jointly determine their needs.

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