

KNOWLEDGE, ATTITUDE AND PRACTICE OF EXTENSION AGENTS TOWARDS THE USE OF ICT FOR SERVICE DELIVERY IN ABIA STATE, NIGERIA

Igwe, C. O. K., Olojede, J. and Ekweanya, N. M.

ABSTRACT

Department of Rural Sociology and Extension, Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria. Igwe_clara@yahoo.com, igwecok@gmail.com, +2348063480927

The study assessed knowledge, attitude and practice of extension agents towards the use of ICT for service delivery in Abia State. The study described the socio-economic characteristics of the respondents; examined the level of awareness in the use of ICT by the agents and ascertained the level of knowledge, attitude and practice of the extension agents on the use of ICT. A total of number of ninety (90) extension agents were randomly selected from the three Agricultural Development Programme zones (ADP) of Abia State for data collection. Means, percentages were used to analyze the data. Most (50%) of the extension agents were within the age of 41-50years and was dominated by the male extension agents. Majority (65%) of the extension agents had household size of 1-5 persons and was educated with income level of N 101, 000-500, 000. Majority (70%) of the respondents were aware of ICT use in service delivery. Availability of ICT facilities, lack of technical know-how and cost of purchasing ICT facilities were mostly the factors that influenced the knowledge, attitude and practice (KAP)-gap in the use of ICT facilities in the study area. Extension agents should be trained in the use of ICT in service delivery.

INTRODUCTION

The attainment and sustenance of high levels of agricultural production and income is not possible without an effective agricultural extension services and appropriate tools that are relevant to farmers' needs. Various extension services strategies have been put in place over the years in the country and these efforts are meant to ensure that agricultural information communication technologies are made available to improve the productivity of farmers and to facilitate the role extension plays in national development (Akubuilu, 2009). Bolarinwa and Oyeyinka (2011) stated that there would be quick exchange of agricultural information between the extension agents and farmers if ICTs components were integrated in delivery of agricultural information to farmers in Nigeria. In the same vein, extension agents will relay farmers' information needs to researchers and rapidly access large amount of information from the researchers through mobile communication for onward dissemination to farmers. However, ICTs enable interactive communication unhindered by distance, volume, medium, or time.

Yahaya, (2003) reported that incorporation of appropriate multi-channel communication strategies into extension programs can improve the situation of farmers. Across the developing world, agriculture is a major contributor to GDP and to employment (Ahmed, 2003). For this reason, significant effort has been made in the past by different regime of government to increase the use of ICT in agriculture, especially with the aim of improving the economic status of small-scale farmers (Singh, 2006). The assessment of knowledge, attitude and practice of extension agents in using ICT facilities for service delivery is imminent. Rogers, (2003) describes a phenomenon called a Knowledge-Attitude-Practice Gap (KAP Gap) where knowledge of an innovation and a favorable attitude towards it does not necessarily result in "practice" (adoption of the innovation). The implication is that in most climes, this discrepancy (KAP-Gap) is associated with lack of technical know-how and procurement costs. Hence, they prefer their old method of accessing and dissemination of information in extension delivery. Therefore, the objectives of this study include; description of socio-economic characteristics of the respondents; ascertaining level of awareness in the use of ICT facilities for service delivery by the extension agents and examination of the level of knowledge, attitude and practice of the extension agents on the use of ICT facilities in the study area.

METHODOLOGY

The study was carried out in Abia State of Nigeria. The State is located in the south-eastern region of the country. It lies within approximately latitude 4° 40' and 6° 14' north, and longitude 7° 10' and 8° east. The State shares boundaries to the north with Ebonyi State, to the south and south-west with River State, and to the east and south-east with Cross River and Akwa Ibom States respectively. To the west is Imo State, and the northeast is Anambara State. Abia State covers an area of about 5,243.7 km², which is approximately 5.8% of the total land area of Nigeria. It has a population of 2,833,99 and a density of 450 person (NPC, 2009). The total rainfall decreases from 2200mm in the south to 1900mm in the north. The State is predominantly agricultural with yam, cassava, and oil palm being its main crops. There are three agricultural development zones in the State comprising of Aba, Umuahia and Ohafia. The study population comprised of agricultural extension agents in the three Agricultural Development Programme (ADP) zones of Abia State. Simple random sampling technique was used to select thirty (30) agricultural extension agents from the three ADP zones. A total number of ninety respondents were used for the study. Age, educational level, income level, years of experience and the knowledge of ICT use

in service delivery by the extension agents formed the areas of concentration for the study. Means, percentages, and frequencies distribution were used to describe the socio-economic characteristics of the respondents in the study area and to determine the level of awareness of the use of ICT facilities in service delivery. A 5 (1, 2, 3, 4 and 5) point scale decreasing order of attitude and practice in ICT use by the extension agents of use to ascertain the knowledge, strongly disagree, disagree, undecided, agree and strongly agree respectively. The cut-off mean score is 3.0. The mean likert-type scale is determined thus;

$$\bar{X}_S = \sum fn/N$$

Where; X_S = mean score; \sum = summation; f = frequency; n = likert nominal value; N = number of respondents

RESULTS AND DISCUSSION

Results on Table 1 showed that 50.1% of the respondents were within the age of 41-50 years and with the mean age of 46.7 years. This indicates that most of the extension agents were in their middle ages and can show a greater likelihood of investing in innovations (Yakubu *et al.*, 2013). However, younger extension workers may be more flexible and more likely to adopt new technologies. Majority (53.3%) of the extension agents were male, indicating that the extension agents in Abia State were predominately male. This may be connected with gender disparity found in the public service of Nigeria. It also agrees with Adedoyin *et al.* (1999) who reported that males dominated the agricultural workforce in Nigeria. The implication is that technology development and transfer will be gender biased (Salua and Saingle, 2008). The results also showed that 90.3% of the extension agents were married with 64.4% of them having a household size ranging from 1-5 persons. This implies that the larger the household size, the bigger the responsibility and less likely for the extension agent to purchase and use ICT. Majority (67.8%) of the extension agents had Higher National Diploma and Bachelor's Degree as their highest educational qualification, 22.2% had O' Level Certificate indicating that the extension agents in the study area were literate and could utilize ICTs to improve their work as change agent. The mean annual income was ₦325, 547. This reveals that the extension workers were not comfortable enough financially to acquire and maintain most of the ICTs facilities. However, 47.8% of them earned ₦501, 000-1000, 000 annually. The implication is that an increase in annual income is expected to have positive effect on adoption of innovations and increase the purchasing power of the extension agents (Yakubu *et al.*, 2013).

Table 1: Socio-economic characteristics of the extension agents

Variable	Frequency	Percentage
Age (years)		
31-40	20	22.2
41-50	45	50.1
51-60	24	26.5
>60	1	1.1
Mean age		46.7years
Sex		
Male	48	53.3
Female	38	42.2
Marital status		
Single	3	3.3
Married	81	90.3
Widow	5	5.6
Household Size		
1-5	58	64.4
6-10	31	34.4
>10	1	1.1
Educational level		
FSLC	2	2.2
WAEC/SSCE/GCE	20	67.8
HND/BSc	61	67.8
MSc	7	7.8
Income		
90,000-100000	8	8.9
101,000-500,000	39	43.3
501,000-1000000	43	47.8

Source: Field survey, 2016

Note: FSLC = first school leaving certificate; WAEC/SSCE/GCE = Senior Secondary Certificate Examination; HND/BSC = Bachelor of Science degree; M.Sc. = Master of Science degree

Awareness of ICT use in service delivery by extension agents

Result on table 2 showed that 70% of the respondents were aware of ICT use in service delivery in the study area while 30% were not aware of it. Ani (2007) recognized awareness as the first stage in adoption process, Agwu

and Chah (2007) also observed that it is important to recognize that awareness among policy makers on the potentials of ICTs is a critical element for its development.

Table 2: Awareness of ICT use by the respondents

Awareness	Frequency	Percentage
Aware	63	70.0
Not aware	27	30.0
Total	90	120.0

Source: Field survey, 2016

Knowledge, attitude, practice of ICT use in service delivery

Result on the Table 3 showed knowledge, attitude and practice in ICT use by the extension agents. The availability of ICT facilities (mean=3.93), lack of technical know-how (mean=3.16) and cost of purchasing ICT facilities (mean=3.34) were mostly the factors that influenced the knowledge, attitude and practice (KAP) gap in the use of ICT in the study area. This confirms with Roger, (2003) who reported that adoption of new ideas often entail obtaining the innovation in the form of product or service, which may not always be available to an individual or which may be too expensive for the individual to adopt. On the other hand difficulty in use of ICT (mean=2.65), time wastage during use of ICT (mean=2.37) and preference of old method of communication (mean=1.84) did not influence the decision of the extension agents towards the use of ICT in service delivery.

Table 3: Knowledge, attitude, practice (KAP) gap in ICT use

Variables	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Total	Mean
Availability of ICT facilities	26(130)	45(10)	11(33)	5(10)	2(2)	355	3.94
Lack of technical know-how	10(50)	32(18)	15(45)	29(58)	4(4)	285	3.16
Cost of ICT facilities	17(86)	34(18)	13(39)	15(30)	11(11)	301	3.34
Difficulty of use	4(20)	16(64)	21(63)	43(86)	3(3)	236	2.65
Time wastage in ICT use	0(0)	19(76)	12(30)	43(86)	16(16)	208	2.37
Preference of old method	1(5)	14(56)	5(15)	21(42)	48(48)	168	1.84

Source: Field survey, 2016

Mean score= 3.0

CONCLUSION

Based on the findings of the study, it was therefore concluded that most of the extension agents were aware and used ICT for service delivery in Abia State. Extension agents in Abia State lack the technical know-how in using ICT in extension service delivery. Training should be organized to provide adequate knowledge in the use of ICT facilities to enable these extension agents have a changed attitude and effectively utilize ICT in extension service delivery in Abia State.

REFERENCES

- Akubuilu, C. J. C. 2009. History of Agricultural Extension in Nigeria In: Akinyemiju, O. A. and Torimiro, D. O. (eds.) *Agricultural Extension-A Comprehensive Treatise*. Ikeja, Lagos: ABC Agricultural Systems Ltd, pp.109-120.
- Ani, A. O. 2007. *Agricultural Extension: A Pathway for Sustainable Agricultural Development*. 1st edition. Kaduna: Apani Publications, 179 pp.
- Agwu, A. E. and Chah, J. M. 2007. Access and utilization of modern Information communication technologies among extension personnel in Benue State of Nigeria. In: Madukwe, M. C (Ed.). *Agricultural Extension and the Challenges of the Millennium Development Goals (MDGs)*. Proceedings of the 12th Annual Conference of the Agricultural Extension Society of Nigeria (AESON). Maiduguri, 4th – 7th July.
- Ahmed, A. 2003. Technology Management in the Sudan: Strategic and Policy Challenges”, *Journal of Management Decision*, Vol. 41 No.3, pp. 267-273.
- Adedoyin, S. F. Fapojuwo, O. E. and Torimiro, D. 1999. Educational Communication materials in Agric. Technology promotion: A survey of extension agents in Ijebu area of Ogun State. Proceedings of the fifth annual National Conference of the AESON 12th – 14th April.
- Bolarinwa, K. K. and Oyeyinka, R. A. 2011. Use of Cell Phone by Farmers and its Implication on Farmers’ Production Capacity in Oyo State Nigeria. *World Academy of Science, Engineering and Technology* 51, pp. 653-658.
- National Population Commission (NPC). 2006. *Nigerian Agricultural Magazine* 4(3);22 August/September, 2010.
- Singh, S. 2006. Selected Success Stories on Agricultural Information Systems, Asia-Pacific Association of Agricultural Research Institutions

- Yahaya, M. K. 2003. *Development Communications, Lessons from Change and Social Engineering Projects*, Corporation Graphics Limited, Ibadan, p481.
- Yakubu, D. H., Abubakar, B. Z., Atala, T. K., Muhammed, A. and Abdullahi, M. K. 2013. assessing the effects of socio-economic factors on ICTs adoption among extension workers in north-west zone Nigeria. *International journal of agricultural policy and research*. 1(9):255-269.
- Salau, E. S. and Saingbe, N. D. 2008. Access and Utilization of Information and Communication Technologies (ICTs) Among Agricultural Researchers and Workers in Selected Institutions in Nasarawa State of Nigeria. 4(2):1-11.