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Extension Workers' Information Technology Use Characteristics and Training Needs in Nigeria

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Abstract: This study examines the ICT (Internet and CD Rom) use competencies of extension agents in Oyo State with the ultimate aim of establishing their level of appreciation of their importance for extension and rural development work and to identify their training and information needs. All extension agents in Oyo and Ogbomoso zones of the state were studied using questionnaire designed to elicit information from the respondents. Descriptive statistics namely frequencies and percentages were adopted in analyzing the data collected in the study. Findings in the study revealed that majority of the respondents do visit the internet, however, mainly for personal reasons. Only a small proportion uses it for professional purposes; similarly, most of them lacked the competence in the use of internet services. They were mostly assisted; however, they appreciate and are committed to being exposed to training and information in computer use, internet and CD-Rom operations for both extension and general academic information acquisition for professional development.

Key words: Internet services, CD-Rom, extension agents, training, information

INTRODUCTION

ICT and rural development: The rural community must not be left behind in the Government effort in creating a knowledgeable society in which ICT becomes the key to socio-economic development (Salleh, 2004). The need to bridge the digital divide in information technology aimed at building capacity of rural dwellers is now. For instance, most countries in Asia which are also developing nations exploit the opportunities offered by ICT for enhancing the income of farmers and other rural dwellers through improved knowledge about new ways of farming, fishing, animal production and home economics.

Marketing information is also made easy for producers to be linked directly with consumers. This will enhance better pricing. Apart from these benefits, it also enhances family living and information on alternative employments, apart from recreation (Saleh, 2004; Chowdhury, 2001; Mohan, 2001). The information needs of the rural poor depend, among other things, on geography and the stage of agricultural transformation at which a country finds itself (Chowdhury, 2001). This reinforces the poor policy implementation strategies adopted in Africa. Since, the Asian countries are far ahead in transforming their agricultural production from subsistence to market oriented mode of production. For instance, most countries in Asia have one ICT project or the other.

To mention a few, the Government of Malaysia, through the National Information Technology Council (NITC) has developed a National programme to provide basic Information Technology access for each segment of Malaysian society to local and global information and knowledge (Tap bin Saleh, 2001). Similarly, the rural phones program run by Gramophone in Bangladesh, the poor typically use cell-phone access as a production input (for example to keep in touch with market developments relating to perishable goods). Another example is the India's Tamil Nadu University of Veterinary and Animal Sciences in Collaboration with Cornell, University, is setting up a rural e-mails network to ensure speed and vaster reach, a much lower cost of providing service and wider interactivity (Chowdhury, 2001). It is for the reasons and argument adduced above that this study was set in order to confirm ICT use for rural development in Nigeria.

The necessity for professionalizing extension and rural development training and services suggest that the extension practitioners require up to date training and information to make them achieve effectively on the job. Apart from basic background training in the various areas of agriculture and rural development they need to update their knowledge. The solution to this is the development of effective educational media to support extension work the most prominent and current being ICT development.

Extension and Rural development training programs are key development strategy for countries with a large and broadly unsophisticated agricultural base. Nigeria has adopted various strategies like the one mentioned above. However, most if not all of the strategies failed Nigeria. This is justified by the fact that the tragic weakening of the agricultural extension system in Nigeria, first by under funding, neglect and mismanagement by the former military governments, combined with the ineffective and expensive World Bank Training and Visit system has resulted in a situation where it is difficult for agriculture in Nigeria to prosper (Johnson, 2003).

Similarly, Adedoyin and Taylor (2002) and Jibowo (1993), suggest evidences that support the above claims in their studies. In fact what is left today of most of these projects can best be described as debris of ineffectual institutions, structures and policies which have had more diminutive effects on agriculture and rural development, than the hypersensitivity which the sector is expected to feel (Oladosu, 1995). The preceding discussion accentuates the unorganized state of extension system in Nigeria. However, there is no gain saying the fact that the gains in the extension training strategies so far adopted have not justified the huge sums invested in their implementation (Oladosu and Ayanwuyi, 2003; Okunneye, 1985).

Arising from the antecedents provided above is the need for reorientation of extension and rural development trainings from their present levels of relegation to a peripheral position in the scheme of things in Nigeria (Adedoyin, 2000; Jibowo, 1993). Adedoyin (2004) affirms that it is widely known and recognized that sustained high level of agricultural production and food self-sufficiency cannot be attained without effective extension services. This problem is being solved by tapping from the existing challenges which are provided through ICT.

MATERIALS AND METHODS

The sample for the study is extension agents in Oyo State. All extension agents in Oyo and Ogbomoso Zones of the ADP were studied (30 respondents in all). The data collection centered on the level of awareness, ICT usage, Frequency of use and use competencies of extension personnel. Information was also collected on the types of information sourced for, on the internet. The data were analysed using simple descriptive statistical tools namely, frequencies and percentages.

RESULTS AND DISCUSSION

Extension agents' use and regularity of internet use: Majority (80%) of the Extension Agents interviewed acceded to the fact that they had access to the internet. However, only an insignificant proportion (7%) uses it regularly. About two fifth claimed to visit the internet sometimes while majority (13.3%) rarely does so. These findings attest to the claims of FAO (2000), that the uptake and harnessing of information is limited by the lack of trained personnel and/or lack of access to know-how. Similarly, Boeren (1994) argues that training in extension methodologies exclude the use of ICT. However, Wijekoon and Newton (2000), argued that without appropriate grounding in communication skills the technical assets of training programs can quickly become ineffectual. Similarly, Mohan (2001) warns that as the internet becomes the norm in commerce and information exchange in the developed world, the poorer countries will have little choice but to try to bridge the digital divide in all its forms. Since it has been justified by the old maximum information is power extension agents will only continue to be relevant if they acquire knowledge on the use of ICT for information management.

Purpose of visit: Results in Table 1 showed the distribution of extension agents on the purpose of using the internet. Equal proportions (27%) each claimed sending ordinary mail, seeking Academic information on agriculture and for the fun of it. The result demonstrate that majority of extension agents are not aware of the potentials of the internet for harvesting information for field activities.

The second section of the Table 2 presents the respondents' responses on the use of the internet for seeking extension information. Majority (53.3%) claimed that they rarely seek extension information; about one third (33.3%) sometimes seek extension information while a very small proportion do seek extension information regularly. The findings suggests the fact that if given more enlightenment and training, it will benefit them in the area of seeking field directed information for the use of farmers, since ICT is being used as a means for providing rural development service, including information and registrations, extension information and counseling and technical information (Crowder and Fortier, 2000).

ICT Use competencies of extension agents: Extension agents were asked to indicate their competencies in the use of two ICTs: namely, the Internet and the CD-ROM. The first section of the Table 3 indicates that majority (73.3%) of the respondents were assisted to use the internet. This shows that most of the extension agents lack the competence required for internet use. This supports the argument of Wijekoon and Newton (2000) that a key issue for extension trainers in developing countries is the lack of effective educational media to support their work. They argued further that agricultural

Table 1: Extension agents' regularity of internet usage

		Frequency	(%)
Internet visit	No	06	20.0
	Yes	24	80.0
Frequency	Never	04	13.3
	Rarely	13	43.3
	Sometimes	11	36.7
	Often	02	6.7

Source: Field Survey, 2007

Table 2: Purpose of visit to internet centre

Purpose	Frequency	(%)
Send mails	08	26.7
Academic information on agriculture	08	26.7
Fun seeking	08	26.7
No response	06	20.0
Frequency of seeking extension information seeks extension information		
Rarely	16	53.3
Sometimes	10	33.3
Often	04	13.3

Source: Field Survey, 2007

Table 3: ICT use competence of extension agents

Competency	Frequency	(%)
Internet None	04	13.3
Others do it for me	04	13.3
I am assisted to do it	22	73.3
CD-ROM		
None	24	80.0
Yes	06	20.0

Source: Field Survey, 2007

Table 4: Extension agents' ICT information and training needs

Training need	Frequency	(%)
Full internet training	06	20.0
Extension information	20	66.7
Extension related information need		
Report of research findings	12	40.0
General bank of information on agriculture	08	26.6
Extension information only	10	33.3

Source: Field Survey, 2007

organisations in developing countries have no formal training programs in the design and production of audio-visual materials.

In view of the ease of use ability of the CD-ROM as portable information conveyor and for the fact that useful information on agricultural production are stored and made available for the use of international audience. This can be played back using portable CD-players. Internet information may also be downloaded for the use of extension agents.

The responses shows that only about one-fifth (20%) claimed to be able to use the CD Rom for information management. Studies in some developing countries indicate the usefulness of the CD-Rom in training farmers. For instance, Wijekoon and Newton (2000) reported the significance of the CD-Rom for supporting agricultural extension training program in, Sri lanka. The CD-Rom packages were also produced in the local language. Similarly Mohan (2001) suggests that the CD-Rom and other ICTs could be used to acquire price information, production information and to boosting micro credit based sales via the web.

Extension Agents ICT information and training needs: Results presented in Table 4 indicate that the major capacity building area required is in computer literacy. This is suggestive, since the ability to use the computer is a pre-requisite for effective use of the internet and other ICTs like the CD-Rom.

The second section of the Table 4 indicates the type of information they will prefer on the internet. The results present a diversity of suggested rites. Majority (40%) prefer information on research findings related to farming. This suggests the need for general bank of information from where extension agents may draw for solving peculiar field requirements of farmers. Another one-third (33.3%) suggested extension information. This is relevant to their jobs and as such is required on the internet.

CONCLUSION AND RECOMMENDATIONS

The findings in the study provide evidences that extension agents in the area of study have poor internet use attitudes. They also lack the skill for its effective use. However, they appreciate the need for building capacity for computer and internet usage.

The findings further revealed the important training need for extension trainers to bridge the gap in the digital divide and harness this for the realization of training and information without tears to the farmers. The findings suggest the following recommendations:

- Extension workers should be given the requisite skills needed for information management.
- They should be exposed to practical computer training for the enhancement of ICT use.
- Small and cost effective systems like the CD-Rom and GSM sets should be encouraged among extension practitioners for information and training of farmers.

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