TRAINING NEED ON COMMUNICATION SKILLS AND ICTS IN AGRICULTURAL EXTENSION; AN EFFECTIVE APPROACH TO RURAL DEVELOPMENT

Udemezue, J.C.

National Root Crops Research Institute, Umudike, pmb 7006 Umudike Abia State, Nigeria

ABSTRACT: *The increased use of information and communication technologies in extension requires continuous training of personnel of extension service delivery in any country. The advent of ICTs in agricultural extension is that which can boost the collection, processing and transmission of data, as well as quality information to more farmers in a bottom-up and interactive channel of communication. However, ICTs may be the only way in which farmers can access a variety of information sources that are accessible, affordable, relevant and reliable. In some developing countries, application of ICTs in communication and other farmers 'need may assume repugnant to their daily use as a result of the complexity of the innovation. This means that these individuals are disadvantaged and lack the basic skills required to harness the benefit of ICTs. In this case, assistance of intermediaries such as extension agents may thus be required and this calls for the training and retraining of such personnel so that they can give their best services to the rural farmers to enable them improve on their production capacity. In view of these, this paper used analytical approach to review the following; Concept of ICTs, training Types of Training, Process of Training Phases, determinants of the areas of training programme, selecting a training method and Constraints to training of extension personnel. This paper recommended that there is need for capacity building orientation and training of extension worker at all levels to be able to provide more customized information to meet each user's needs.*

KEYWORDS; trainings, communication skills, ICTS

INTRODUCTION

Generally, agriculture is an information-intensive industry. It relies upon continues flow of information from local, regional and world market (Akinbibe and Alabi, 2011 in Ogunu – Ebiye,2018). Information and communication technologies (ICTs) are new technologies that cannot be ignored in Africa especially for development in all sectors, agriculture inclusive. This is because (ICTs) is one of the main driving forces that can bring about development and change in this present digital age(Ogunu – Ebiye,2018).This is because how far farmers progress in whatever they do depends largely on the awareness, accessibility, utilization and relevance to accurate and reliable information.

Communication is a process by which information is passed from source to receiver .All

Technologies developed from research institutions are passed on to the clients through the communication process. Therefore, all categories of extension personnel should be trained in acquisition of communication skills which can help them to interact freely and pass innovations to the end user effectively (Hazel man and Flor 2004). Training constitutes a basic concept in human resource development. It is concerned with developing a particular skill to a desired standard by instruction and practice. Training is a highly useful tool that can bring an employee into a position where they can do their job correctly, effectively, and conscientiously(Edwin,2018). Therefore, training is the act of increasing the knowledge and skill of an employee for doing a particular job. The success of any programme depends partly on the effective use of communication skills by the extension agents. Information communication technology (ICT) refers to all information and communication system and technologies inclusive not only of digital formats such as the internet or the world wide web but also interfaces with radio, cable, and wireless television video, cellular phones, print media and others (Hazel man and Flor 2004). FAO (1993) defined ICT as technologies involved in collecting, processing, storing, retrieving, disseminating, and implanting data and information using micro-electronics, telecommunication and computer. It means technologies that facilitate communication and transmission of information by electronic means. It also encompasses the use of radio, television, telephone, faxed mobile or telecommunication (GSM) Global System for mobile Internet etc.According to Agbamu (2006), any communication must possess the following characteristics: good verbal and non-verbal communication skills, knowledge about the subject matter, ability to understand the target audience in terms of their educational level, cultural norms and beliefs, possession of a favourable attitude towards the information and the received awareness of the time, not to overburden an audience with too much information within a short time. Experience have shown that for most developing countries extension personnel have used all sort of traditional information technologies including radio, drama, and video/television. Presently both the extension and other service providers with their client are experimenting with new 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 is worth a thousand words and will enable even those constrained by literacy to communicate. The effective use of these ICT requires continuous training of extension personnel if the end users of technologies are to benefit maximally from them.

Agricultural extension systems in most developing countries like Nigeria and other African countries are underfunded and this makes its focus unrealizable. Much of the extension information has been found to be out of date, irrelevant and not applicable to small farmers need, leaving such farmers with very little information or resources to improve their productivity. ICT helps the extension system in re- orientating itself towards the overall agricultural development of small production system. With the appropriate knowledge, small-scale producers can even have a competitive edge over large operators. When knowledge is harnessed by strong organizations of small producers, strategic planning can be used to provide members with least-cost-inputs, better storage facilities, improved transportation links and collective negotiations with buyers.

The ICT can also play an important role in bringing about sustainable agricultural

development when used to document both organic and traditional cultivation practices. Developing countries can create traditional knowledge digital libraries (TKDL) to collect and classify various types of local knowledge so that it can be shared more widely. These libraries could also integrate widely scattered references to Indigenous Technical Knowledge (ITK) systems in a retrievable form. Thus, ICT could serve as a bridge between traditional and modern knowledge systems. Some agricultural development services that can be provided in the developing world using ICTs are outline below:

E-commerce for direct linkage between local producers, traders, retailers and suppliers. The facilitation of interaction among researchers, extension(knowledge) workers, and farmers, question and answer services where experts respond to specialized subject, up to date information, supplies to farmers as early as possible about subjects such as packages of practices, market information weather forecasting, input supplies, credit availability, etc.Creation of data bases with details of the resources of local village and villages, site specific information system, expert systems etc.Provision of early varying system about disease/pest problems, information regarding rural development programmer and crop insurances, post harvest technology, etc.Facilitation of land records and online registration services. Improved marketing dairy products, services providing information to farmers regarding farm business and management. Increased efficiency and productivity of co-operative societies through the computer communication network and the latest data base technology. Website established by agricultural institutes, making the latest information available to extension (knowledge) worker and obtaining their feedback.

Duncombe (2001) supported the above idea by saying that more reliable and more accurate information and knowledge allows people and organization to be more productive. For example effective and efficient information and knowledge expand the choices in which decision are made and assist in poverty alleviation. They have become useful assets for development. He further said that agricultural extension personnel can more effectively access and share local and global knowledge on crops, pest's management, irrigation and other aspect of small scale agriculture relevant to the needs of the poor with the help of ICT. Richardson (2000) posited that ICT could act as a bridge between traditional and modern systems. ICT serves as a means for transferring different resource both financial and knowledge based. It is also dramatically less expensive, less time consuming and dangerous than the physical transportation of people and information.

Right from inception of ADP, the development support communication component of the strategy has made very significant contribution to the country agricultural development. It started with mobile cinema vans, going from village to village supported with minimum extension publications in local languages. Although the major ICT used in agricultural extension in Nigeria is radio, most of the organizations in the National Agricultural and Extension System (NARES) now have computers for information and data management, which require training for effective handling, According to Manu (2003) ICT tools in extension is based on these guideline; target audience with peculiar needs and media preferences, level or ICTs infrastructural development in the country and the rural communities, accessibility and cost.

Madukwe (2006) opined that the increased use of information and communication technologies in extension requires continuous training of personnel of extension service delivery in any country. He stressed further that the promise of ICTs in agricultural extension is that they can energize the collection, processing and transmission of data, resulting in faster extension of quality information to more farmers in a bottom-up and interactive channel of communication. Thus, ICTs may be the only way in which farmers can access a variety of information sources that are accessible, affordable, relevant and reliable. Also, increasing the use of ICTs in agricultural extension will narrow gender disparities in terms of access to agricultural information. The interest could be used to enable farmers to become part of the information flow process and even to instigate the process of information to be presented to them via radio, T.V., news papers, news letter, bulletins and other ICTs such as internet/computer, and so on. Parker (1999); Coke and park (2001) identified faster and easier access to records and accounts, cheaper running cost in communication, help in decision through decision support system. They also identified rapid access to vast store of information through world web. Also internet provides opportunities for distant education and training, thus overcoming some of the problems of location and lack of time.

Arokoyo (2005) ascertained the need for capacity building reorientation and retraining of extension worker at all levels to be able to provide more customized information to meet each user's needs. ICT has many potential applications in agricultural extension (Zip, 1994). It can bring new information services to rural areas where farmers are users and will have much greater control than before over current information channel. Access to such new information source is a crucial requirement for the sustainable development of the farming systems (Shaik,Meera, and Rao, 2004). According to Arokoyo (2003), the major ICTs used in agricultural extension delivery in Nigeria have been radio and television. The establishment of National Communication Commission (NCC) in 1992 has revolutionized digital communication in Nigeria. Call phones and Internet services are now available for use to enhance information transfer, data collection, analysis, storage of data, etc which the extension personnel should have knowledge and be able to use effectively if their work with the rural setting within Kogi State will produce tangible result. Therefore, the essence of training need of the extension staff of ADP in ICTs especially in computer/Internet.According to Mundy and Sultan (1999) computers have changed how information is obtained, managed and distributed which require up to date knowledge of extension personnel through training.

A revolutionizing communication and information access in developing world comprise of computer and telephone with E-mail services. The Internet has great potential brining agricultural extension closer to its clientele anywhere. The effective use also requires training of the extension staff if they are to be competent and efficient in performing their job and fulfilling the organization goal of ADP. Mansel and Welien (1998), contended that literacy is a fundamental barrier to participation in knowledge societies. A large proportion of the rural population of developing countries/nations, majority of which are women, illiterate and most pictographic and audiovisual information usually has some text that goes with it. This means that these individuals are disadvantaged and lack the basic skills required to harness

the benefit of ICTs. The assistance of intermediaries such as extension agents may thus be required. This call for the training and retraining of such personnel so that they can give their best services to the rural farmers to enable them improve on their production capacity. However, this study has no doubt that, despite the world-wide (ICTs) revolution, there are still very serious ICT training and communication gaps among extension agents in some developing countries. It was on this note that the study was designed to review the training need on Communication Skills and ICTs in agricultural extension.

Types of Training
Training extension personnel may be categorized into two types; pre-service training and in-service training.

Pre-service training: is a process through which individuals are made ready to enter a kind of professional job such as agriculture, medicine engineering. They have to attend regular class in a formal institution and a need to complete a definite curriculum and course successfully to receive a formal degree or diploma. They are not entitled to get a professional job unless they earn a certificate which can either be diploma or degree from appropriate institution. Pre-service training contents emphasize mostly technical subject matter such as pedagogical skills to prepare the students to work in agricultural institutions or engage in agricultural venture. Pre-service training is more academic in nature and is offered by formal institutions following definite curricula and syllabuses for a certain duration to offer a formal degree or diploma. It is the training giving to individuals to become expert or consultant for immediate or future use.

In-service Training: is a process of staff development for the purpose of improving the performance of an incumbent holding a position with assigned job responsibilities. It promotes the professional growth of individuals. It is a programmed designed to strengthen the competences of extension workers while they are on the job (Malone 1984). He explained further that in-service training is a problem-centered, learner oriented, and time bound series of activities which provide the opportunity to develop a sense of purpose, broaden perception of the clientele, and mastery of techniques. In-service training, on the other hand, is offered by the organization from time to time for the development of skills and knowledge of the incumbents (Abdul Halim and Md. Mozahar Ali,2016). In-service training may be divided into five thus: induction/orientation training, foundation training, on the job training and career development of extension personnel throughout their service life. The use of workshop, seminars, short courses, conferences etc. could be of great benefit in equipping extension staff for a better service.

Induction/orientation training: is the type of in-service training immediately after employment to introduce the new extension personnel/staff member to their positions. It begins on the first day the new employee is on job. This type of training is aimed at acquainting the new employee with the organization and its personnel. Induction training for all new personnel should develop an attitude of personal dedication to the service of people and the organization. This kind of training supplement whatever pre-service training the new personnel might have had (Halim and Ali, 1997).

Foundation training: Is a form of in-service training, which is also useful/appropriate for newly recruited personnel. Besides technical competence and routine instruction about the organization, every staff member needs some professional knowledge about various rules and regulations of the government, financial transactions, administrative capability, communication skills, leadership ability, coordination and cooperation among institutions and their linkage mechanism, report writing etc. foundation of their service career. This training is usually provided at an early stage of service life.

Maintenance/Refresher Training: This is the type of in-service training offered to update and maintain the specialized subject matter knowledge of the incumbent. Refresher training keeps the specialist, administrators, subject matter officers, extension supervisors and front line workers, extension agents updated and enables them to add to the knowledge and skills they have already. Maintenance refresher training usually deals with new information and new methods as well as review of older materials. This type of training is needed both to keep employees at the peak of their possible production and to prevent them from getting into rut.

On-the-job training: This is adhoc or regularly schedule training under the training and visit (`T & V) system of extension, and is provided by the superior officer or the subject matter specialist to the subordinate field staff. This training is generally a problem and technology oriented and may include formal presentation, informal discussion, and opportunities to try out new skills and knowledge in the field. The superior officer, administrator or subject matter specialist of each extension department must play a role in providing on-the-job training to the staff while conducting day-to-day normal activities.

Career or development training: Is the form of in-service training designed to upgrade the knowledge, skills and ability of employee to help them assume greater responsibility on higher position. The training is arranged departmentally for successful extension workers at all levels, for their own continuing education and professional development. Malone (1984) opined that extension services that provide the opportunity for all staff to prepare a plan for career training will receive the benefits of having longer tenured and more satisfied employees, which increased both the effectiveness and efficiency of an extension service. Malone stated that career development is the act of acquiring information and resources that enables one to plan a programme of lifelong learning related to his work life. Although extension workers are responsible for designing their own career development education, the extension organization sometimes sets some criteria and provides opportunities for the staff by offering options.

Training is a circular process that begins with needs identification and offers a number of steps with evaluation of training activity. A change or deficiency in any step of the training process affects the whole system and therefore it is important for a trainer to have a clear understanding about all phases and steps of the training process. The three phases of training process include: planning, implementation and evaluation.

Process of Training Phases

The planning phase encompasses several activities two of which are training needs identification and curriculum developments are very important.

Training Needs Identification: It involves a condition where there is gap between what is and what should be in terms of incumbents knowledge, skills, attitudes and behaviour for a particular situation at a point in time as earlier explained. This gap is called a problem, which occurs when a difference exists between the desired performance and the actual performance of extension personnel (Ekpere, 1984).Curriculum Development: This is the most important part in a training programme after a need for training has been identified. The curriculum specifies what will be taught. It provides the framework and foundation of training. It states the contents; methods materials needed implementation and evaluation.

Determining the areas of training programme

According to Wenthing (1992), once training needs have been identified and training activities have been decided as part of the solution, the needs analysis should be done to determine knowledge, skills and attitude requirements and performance difference. The needs analysis procedure involves breaking down the training problem into its basic parts in different successive phase to identify and understand the important components in each phases, ultimately it leads to identifying and understanding the training content. The training analysis can be divided into three distinct analytical phases: job analysis method to determine a major area of task where training may be needed, task analysis and knowledge and skill gap analysis. The training needs analysis determine the training contents and how deficient the trainees are in these contents and the subsequence task provides the sequence of the training activities. When training staff, a conduct of comprehensive training needs analysis in the organization may seek the basis for this process at three different levels as follows: organizational level (data about the organization as a whole such as structure, market, products/services, manpower requirement, etc, job level data concerning jobs and activities such as job descriptions, personnel specification; and individual level-data about individuals such as a appraisal records, personnel training records etc. are known (Cole, 2000).

Selecting a training method

A training programme has a better chance of success when its training methods are carefully selected. A training method is a strategy or tactic that a trainer uses to deliver the content so that the trainees achieve the objective (Wenting ,1992). Selecting an appropriate training method is perhaps the most important step in training activity once the training content are identified. There are many training method but not all of these are equally suitable for all situations. To achieve the training objective, a trainer should select the most appropriate training methods for the content to involve the trainees in the learning process. Four major factors are considered when selecting training: method: the learning objective; the content, the trainees, and the practical requirement (Wenthing ,1992) Training methods should be selected on the basis of the degree to which they do the following:

- ✓ Allow active participation of the learners. Helps the learners to transfer learning experiences from training to the job situation.

- ✓ Provide the learners with knowledge of results about their attempts to improve

- ✓ Provide some means for the learners to be reinforced for the appropriate behaviour.

- ✓ Provide the learners with opportunity to practice and to repeat when needed

- ✓ Motivate the learners to improve their own performance

- ✓ Help learners increase their willingness to change

These criteria indicate that a single training method will not satisfy the objectives of a training programme. A variety of training methods are available to a trainee. The most commonly used methods include:

- ❖ **Instructor presentation:** The trainer orally presents new information to the trainees, usually through lecture. Instructor presentation may include classroom lectures, seminar, workshop, etc.
- ❖ **Group discussion:** The trainer leads the group of trainees in **discussing** topic.

- ❖ **Demonstration:** The trainer shows the correct step for completing a **task** or shows an example of a correctly completed task.
- ❖ **Assigned reading:** The trainer gives the trainees reading assignment that provides new information.
- ❖ **Exercise:** The Trainer assigns problems to be solved either on a paper or in real situations related to the topic of the training activity.
- ❖ **Case study:** The trainer gives the trainees information about a situation and direct them to come to a decision or solve a problem concerning the situation
- ❖ **Role play:** Trainees act out a real - life situation in an instructional setting.
- ❖ **Field visit and study tour:** Trainees are given the opportunity to observe and interact with the problem being solved o r skill being learned.

Implementation phase
Once the planning phase of a training programme is complete, then it is time to implement the course. Implementation is the point where a trainer captivates the training plan or it is the process of putting a training programme into operation. The first step towards implementing a training programme is publicity. Most of the well established training centers develop training brochures which contain course descriptions, prepared calendar of training opportunities and inform concerned organization agencies, or department well ahead of time about their training plans. Once the training centers and concerned organizations agree to implement, the next step is to arrange available resources such as sufficient fund for the course and facilities for food, lodging, transportation and recreation. All these resources need to be well managed and coordinated to run the programme smoothly.

Evaluation phase

Evaluation is a process to determine the relevance, effectiveness, and impact of activities in light of their objectives. In evaluating an extension training programmes one need to consider that most training activities exist in a larger content of project programme and plans. Thus, Wenthing and Clarke (1997) defined training evaluation as a systematic process of collecting information for and training activity which can then be used for guiding decision making and for assessing the relevance and effectiveness of various training components. It is the actual judgment passed on a programme following the result of measurement and assessment of the programme (Madukwe 1991).

The four criteria to evaluate training programme are reaction, learning, behavior and results. Each criteria is used to measure different aspect of a training programme. Reaction measures how the trainees liked the programme in terms of content, methods, duration, trainers, facilities, and management. Learning measures the trainees skill and knowledge which they were able to absorb at the time of training. Behaviour is concerned with the extent to which the trainees were able to apply their knowledge to real field situation while results are concerned with the tangible impact of the training programme on individuals, their job environment, or the organization as a whole.

Type of Evaluation

On the basis of time dimension, evaluation may be classified as formative evaluation or summative evaluation. Formative evaluation involves the collection of relevant and useful data while the training programme is being conducted. The information can identify the drawbacks and unintended outcome and is helpful in revising the plan and structure of training programme to suit the needs of the situation. Summative evaluation is done at the end of the programme and makes an overall assessment of its effectiveness in relation to achieving the objectives and goals. Roah (1989) also classified evaluation into four: evaluation for planning, process evaluation, terminal evaluation and impact evaluation.
Evaluation for planning provides information with which planning decisions are made. Training contents and procedure (methods and materials) are usually planned at this stage in aids and strategies. Process evaluation is conducted to training activity during the implementation phase (Roah 1989 in Solomon,2010).Through this process the key elements of the training activities are systematically monitored, problems are solved before they become serious. Process evaluation is periodically conducted through out the entire period of the programme.

Terminal evaluation is conducted to find out the effectiveness of a training programme after it is completed. The objectives of terminal evaluations are to find out whether the goals have been achieved, along with the courses of failure, if any. Impact evaluation assesses changes in behavior of trainees as a result of training effort. It measures how appropriates the training was in changing the behaviour of participants in real-life situations

Constraints to training of extension personnel

According to Gallaghere (2002), agricultural extension service in developing countries are grossly underfunded to undertake the activities required for achieving food security

including training of extension personnel who stand in the gap between the technology developers and end- users. There are usually shortages or inadequate fund disbursement to assist willing personnel to attend training programmes, which could help to improve their competencies and capability to perform their task better among the rural communities.Okoli(2000) explained that in recent years the Nigerian agricultural extension has been experiencing dwindling funding from the government. This is very apparent in the state wide ADPs. There is also erratic and haphazard release of fund. Problem of administrative bottleneck and poor governance of public programmes have effect on the training of extension personnel. Moreover, there is inadequate training policy to enforce training programmes on all categories of extension personnel especially those who have long serving experience without initiatives to attend retraining programmes regularly in order to update their skills and knowledge.

Madukwe (2005) asserted that motivation is one of the factors that can influence any personnel to perform better. Lack of enough motivation by the organization after, attending training courses or workshops also contribute to the poor attendance of most extension personnel to training and retraining programmes. Some believe that it does not affect their promotion in such an organization. Therefore, they ignore some of the training programmes organized for them. Poverty and economic depression with a lot of family responsibilities without good remuneration affect the non - challant attitude, which some extension personnel developed toward training activities meant for their improvement and performance of their job. The issues of poor funding becomes critical after the withdrawal of external funding as revealed in a study by Agbamu and Okagbare (2005) who explained that the effect of expiration of world Bank funding were noticeable in the in ability of some state Agricultural Development programmes to provide enough vehicles, motorcycles for the agricultural extension work, irregular payment of traveling allowance, ill motivated field staff, reduced training session for village extension workers, and reduced technology review meetings.

As a result of the crucial role being played by the extension personnel in communicating the modern technology to the farmers, policy makers and planners should recognize the need for encouraging staff for effective performance through their support towards training and retraining programmes. Trainers must ensure that all equipment needed for teaching skills are available both during training session and for extension agent to have adequate time to learn and practice skills before taking them to target groups. Ogumbameru (2004) noted some motivational factors that can ginger staff of any of organization to perform effectively. Such include salary increase, promotion, better working condition, etc. Training of extension personnel should attracts such motivational factors so that they can be encouraged to constantly attend training and retraining programmes organize for them.

CONCLUSION AND RECOMMENDATION

Problem solving is an important role, but the role is changing from prescribing technical solution to empowering farmers' organization or group to solve their own problems. This is

achieved by helping them to identify the problems and seek the right solution by combining their indigenous knowledge with improved knowledge and by using their resources properly. Similarly, there is a shift in the education role from lecturing, seminars and training to learning by doing and encouraging farmers and farmers' organization to conduct experiment and undertake action-learning projects. Information communication technology (ICT) refers to all information and communication system and technologies inclusive not only of digital formats such as the internet or the world wide web but also interfaces with radio, cable, and wireless television video, cellular phones, print media and others.ICT as technologies involved in collecting, processing, storing, retrieving, disseminating, and implanting data and information using micro-electronics, telecommunication and computer. It means technologies that facilitate communication and transmission of information by electronic means. Training is the process of acquiring specific skills to perform a job better. It helps people to become qualified and proficient in doing some jobs.Training is the organized procedure by which people earn knowledge and skills for a definite purpose. The major objective of training is for people to learn something. Hence, learning means change in behavior of the learner. This paper recommends that there is need for capacity building orientation and training of extension worker at all levels to be able to provide more customized information to meet each user's needs.

REFERENCES

Abdul Halim and md Mozahar Ali(2016). Training and professional development. A reference manual.

Agbamu J.U, and Okagbare G.O. (2005). Institutional strengthening of Ogun State ADP upon expiration of World Bank Assistance, In: Orheruata A.M (eds). Agricultural rebirth for improved production in Nigeria. Proceedings of the 39th Annual Conference of Agricultural Society of Nigeria held at the University of Benin, Benin city. Oct 9th -13th

Agbamu, J.U. (2006). *Essentials of agricultural communication in Nigeria*. Ibadan: Mathias Press Limited. Pp. 1 – 11.

Duncube, R.A (2001). Information, technology and small, medium and micro- enterprise development in Botswana. Doctor of philosophy thesis, institute for development policy and management.

Edwin,F(2018). Training:Meaning ,Difinitions and Types of Training.

Gallagher, K.D (2002). Self –financed field schools Helping Farmers Go Back to School. In IPM/IPPM.FAO, UN Rome.

Hazelman, M and Floor A.G (2004). Regional prospects and initiatives for branding the rural digital divide. AFITAWCCA Joint congress on ICT in agriculture.

Malone, V. M. (1984). Inservice training and staff development. In B. E. Swanson (Ed.), *Agricultural extension: A reference manual.* Rome: FAO.

Malukwe, M.C. (2005). Agricultural administration. Agricultural Society of Nigeria Pp 189-190.

Ogunbameru, O.A. (2004). *Organization dynamics*. Ibadan Spectrum Books limited.

Ogunu – Ebiye, U.G.(2018). Use of Information and Communication Technologies in Enhancing Cassava Production for Food Security inOgba/Egbema/Ndoni Local Government Area of Rivers State. Agricultural society of Nigeria, 52nd Annual Conference

Proceedings,Abuja.pp19-22

Okoli, J. C. (2000). *"*Organization of Personnel functions at the local government level*".* Paper Presented at Zonal Workshop on "Effective Human Resources management, 9th to 11th August, 2000.

Parker, .C (1999). Decision support systems: lessons from past failures, *Farm Management, 10, (5)*. Pp.273 – 289.

Richardson, D. (2000). Rural Access. How can connectivity contribute to social and agricultural development Technologies March/April Knowledge Enterprise Inc.

Solomon,J.F,(2010). Assessment of emerging roles and training needs of extension personnel in kogi state agricultural development programme. MSc. Thesis submitted in the department of Agricultural Extension, University of Nigeria, Nsukka.pp8-64

Wenthing, T. I. (1992). *Planning of effective training: curriculum development* FAO Rome

Zip, W. (1994). Improving the transfer and use of Agricultural Information. A guide to information technology World Bank, Washington D.C