PEDAGOGICAL TRAINING AND PERFORMANCE OF AGRICULTURAL EXTENSION WORKERS IN RUBAYA SUB-COUNTY, KABALE DISTRICT

BY

ARINEITWE SHALLON

2011/U/HD/281/MVP

A THESIS SUBMITTED TO KYAMBOGO UNIVERSITY GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS IN VOCATIONAL PEDAGOGY OF KYAMBOGO UNIVERSITY

MAY, 2014

Declaration

I Arineitwe Shallon declare that this is my original work and has never been presented for any award in any University or institution of higher learning.

Signed……

Arineitwe Shallon

Date……

Approval

This is to certify that this work was carried out under our supervision as university supervisors and is now ready for submission for examination.

Signed…… Date…….

Dr Bosco Bua

Senior Lecturer, Department of agriculture,

Faculty of vocational studies

Kyambogo University

Signed…… Date……..

Ms Arinaitwe Dinavence,

Lecturer, Department of Teacher Education and Development Studies,

Faculty of Education.

Dedication

This work is dedicated to my beloved sons Rock Otim Rwot'Omara and Love Micaiah Rwot'Omia.

Acknowledgements

Coming up with this work was a big task that could not be achieved single handedly. I therefore acknowledge the Almighty God for the gift of life and strength throughout the course of this study.

The sponsors especially the Norwegian Government through the NOMA program are acknowledged for the sponsorship to undertake the program.

My supervisors Dr Bosco Bua and Ms Arinaitwe Dinavence are acknowledged for the hard to value efforts put for the successful completion of this work.

Special thanks also go to the respondents for their cooperation during the time of data collection. Similarly, I am very grateful to my husband who stood my absence from home while collecting data and also for the special prayers he gave while I was doing the course. Additional thanks go to my daughter Lucky Joan for taking care of my baby and doing all the household chores while I was busy for the study. My family in Kabale is highly acknowledged for the care they gave to me and special prayers they offered while I was collecting the data.

To the Principal and staff especially the agriculture department of National Teachers' College, Kabale, I say thank you for the cooperation and patience you endured to allow me be away for most of the time while you continued carrying out some of my responsibilities in the college .May the good Lord bless and keep you.

Abstract

This study was about the pedagogical training and performance of agricultural extension workers in Rubaya Sub County of Kabale District. The focus of the study was to assess the impact of training the extension workers received from training institutions on their performance, the attitude of extension workers towards work and the challenges faced while carrying out their work. Descriptive approach was used in the study. A sample population of 50 respondents comprising 44 farmers and 6 extension workers representing various specializations in the agricultural areas of fisheries, crop, animal and environment were used for the study. The sample was purposively selected based on the researcher's interests. Data from the farmers were collected using interview guides while likert scale was used for the extension workers. The findings showed that extension workers are not adequately trained, due to lack of enough practical training and inadequate tools. While in the field extension workers face a number of challenges including poor facilitation in terms of transport, lack of cooperation of the farmers, difficulty in mobilizing and coordinating the scattered farmers, and negative attitudes of farmers among others. Besides the study results showed that extension workers appreciate the value of knowledge and skills acquired from training institutions and have a positive attitude towards their work. Key recommendations were made basing on the findings of the study: Emphasis on reform in the curriculum of extension workers by integrating practical, field attachment, better tools in training. Improve on transport, encourage farmers to remain in groups and also to have a serious monitoring and evaluation system of the extension activities.

List of abbreviations

BTVET -Business Technical and Vocational Education and Training

MVP - Master in Vocational Pedagogy

NAADS -National Agricultural Advisory Services

NOMA - Norwegian Masters Abroad

VET -Vocational Education and Training

AHI -African Highlands Initiative

NGOs -Non Governmental Organizations

WDR -World Development Report

List of Tables

List of Figures

Table of Contents

CHAPTER ONE: INTRODUCTION

1.1 Overview.

This chapter addresses the background of the study, statement of the problem, the purpose and objectives, research questions and scope that guided the study. Justification, significance and the conceptual frame work are also discussed here.

1.2 Background to the study

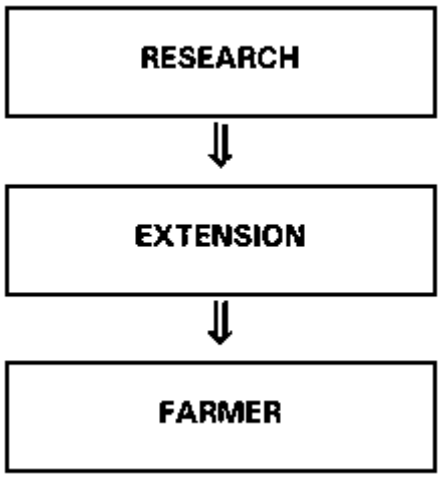
Agricultural extension can be defined as the entire set of organizations that support and facilitate people engaged in agricultural production to solve problems and to obtain information, skills, and technologies to improve their livelihoods and well-being (Davis, 2008). According to Birmingham (1999), Birner (2006), World Bank (2006b), extension education in all fields has gained international recognition in recent times. Extension in general is a form of providing need- and demand-based knowledge and skills to rural men, women and youth in a non-formal, participatory manner (Qamar, 2005). The objective of extension is to improve the quality of life of the rural communities. For example, in agriculture, it is referred to as agricultural extension; or in health it is health extension and other relevant fields/disciplines. Qamar, (2005) further looked at extension essentially as an education, although it falls outside formal education systems, and as such, aims at bringing about positive behavioral changes among those targeted. In fact, agricultural extension can be viewed as the entire set of organizations that support and facilitate people engaged in agricultural production to solve problems and to obtain information, skills, and technologies to improve their livelihoods and well-being (Birner, 2006) as cited in Davis (2009[1]). Accordingly, agricultural extension is a trade that aims at transferring knowledge to people

[1]A paper presented by Kristin E. Davis on Extension in Sub-Saharan Africa. Overview and assessment of past and current models, and future prospects

involved in agriculture who may or may not have got a chance to go to school for formal training. The knowledge and skills given to the extension workers should have emphasis of hands-on as vocational pedagogical principles do outline (Mjelde 2006). Vocational theory is embedded in the Vocational pedagogical approach that advocates for a learning which considers hands on tools and it has to be done practically in the workshop (Nilsson 2011[2]). He further advocates for integrated and holistic approach in learning and work in any education system which is vocational in nature because it helps one to have a broad knowledge of what takes place in the society. This includes the training of agricultural extension workers as well. Holistic approach for vocational training is more appropriate for all professionals that deal with training of farmers, Qamar (2005) notes that although extension has been informally practiced for centuries in developing countries, agricultural extension was formally introduced in Uganda during the 1950s by the visiting American professors and technical experts in agriculture. According to Davis (2009), in developing countries, agricultural extension organizations were created entirely for receiving improved technologies from agricultural research institutes and delivering them to the farmers in a one way flow as seen in Fig 1.

[2] Lennart Nilsson, Ph.D. Professor University of Goteborg, Sweden. He said this during his lecture to cohort three students of masters' degree of vocational pedagogy of Kyambogo University in 2011.

Figure 1. Top down approach agricultural extension

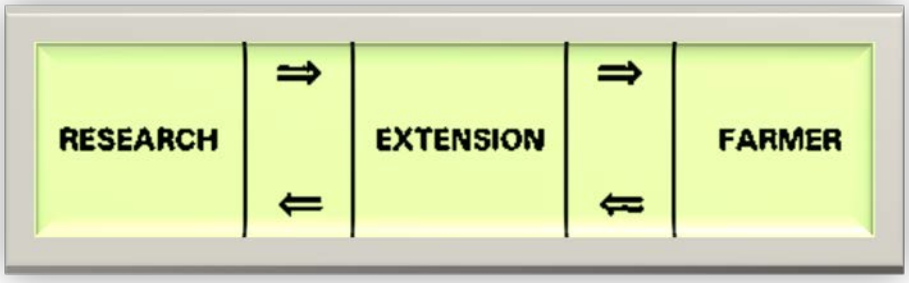


Source: Kristin. E. Davis (2009)

However, there is a gap in the above model since agricultural extension provides a link between the researchers and farmers. Accordingly, this indicates that farmers cannot successfully adopt a new technology unless the extension concept has been appropriately applied. The extension workers take the technology to the farmers from research, and then take the feedback from farmers to the research in a cyclic process. In an aggregate sense, extension can be illustrated as the link between research and farmers as seen in Fig 2

Figure 2. Extension linkage with research and farmers

Source: FAO 1996



The roles of the extension workers are therefore to guide the farmers in the direction they should take from an informed point of view. The extension workers should be well informed

about the results of researches done in the areas of agriculture and as such they are a bridge in knowledge between both the farmers and the researchers (NAADS, 2001). In fact, in Uganda where over 70% of the population is employed in agricultural sector; agricultural extension is a very essential aspect in economic development as highlighted in the Ministry of Agriculture Animal Industry and Fisheries (MAAIF) annual report (MAAIF 2000). Because of its importance in agricultural and rural development, agricultural extension will continue to play a pivotal role in stimulating economic growth, reducing poverty, and improving food and nutrition security in Africa (Benin *et al.*, 2011).

The population of Uganda depends on agriculture that is run by farmers and these farmers need the services from extension workers for improved productivity. Agricultural extension educationists being important in mentoring the farmers towards better agricultural production, it must be noted that training and performance of the extension workers deserves an academic quantitative or qualitative research whose results will play a significant role to guide the development of the agricultural sector in the country (Benin *et al.*, 2011).

Emphasizing on the tasks that the extension workers have to carry out in the developing nations, Qamar (2005) holistically alluded to the fact that agricultural extension work is a very difficult task in less developed countries. This is because the extension work in the developing countries like Uganda is not carried out from air-conditioned offices or laboratories by formally dressed persons, but the extension work is mostly in the field under severe weather and logistic conditions with minimum facilities. He further says that the extension mission of interacting with mostly illiterate and poor rural people with the aim of changing their behavior positively is a formidable task when compared to working with plants and animals in the comfort of research stations. This assertion needs not be underrated for it fundamentally bears the reality of the working condition of the extension workers in

Uganda as I have personally observed that on many occasions, the work environment in the countryside is muddy with dilapidated roads and other weather challenges.

According to World Bank (2006b), the services provided by agricultural extension have significant public-good attributes. There are more than half a billion extension workers worldwide, out of which about 90% are found in developing countries yet, the ratio of farmer to extension agent is higher in developed countries (World Bank 2006b). This report further notes that, the magnitude of investment in extension in most developing countries is similar to that for agricultural research making it a significant component of agricultural development effort hence warrants careful reflection. Accordingly, extension has a dual function of bridging blocked channels between scientists and farmers: it facilitates both the adoption and adaptation of technologies to local conditions (Jock, 2007). He goes on to note that, extension agents must be capable of more than just communicating messages to farmers but must also be able to comprehend an often-complex situation, have the technical ability to spot and possibly diagnose problems as well as possess insightful economic-management skills in order to advise on more efficient use of resources. However, the training extension workers receive while in the training institutions in many cases does not usually prepare them to the tasks in the field (Anderson, 2007).

Although, agricultural extension plays a significant role in the global production and supply of food, the problem with agricultural extension services in developing countries is the lack of an adequate balance between the technical and professional competencies of personnel (Strong and Harder, 2011).Besides, the changing technology poses a fundamental challenge that agriculture extension has to cope with. According to Birmingham, (1999), agriculture extension in developing countries has a very new role to play and needs the serious attention of policy-makers for its meaningful reform and modernization. He further asserted that new

learning needs of farming communities are emerging as the world enters into an era of globalization, democracy, privatization and decentralization, affecting the farmers of both developed and developing countries in different ways.

Through my work experience, I observed that as the population grows and the nation develops, there are new needs that emerge and these needs call for new ways of performing extension activities and delivering services to the beneficiaries. According to Adipala and Patel, (1999); GOU, (2000), the shift from public to private research and development agenda poses a big challenge to the inadequately trained extension personnel with no experience in multi-disciplinary and participatory approaches in research and development.

Therefore, the role of the extension workers is very important when it comes to a district like Kabale in the South Western Uganda, where over 90% of the population depends on agriculture for their livelihoods[3].While it is easier to reach the larger-scale, more progressive and better educated farmers, extension services are making greater efforts to serve those in need of agricultural information that are often overlooked. One of the first emphases should be to reach smaller-scale producers, including subsistence farmers in more risk-prone and diverse agro ecologies (Birmingham, 1999). For instance, in Rubaya Sub-County, Kabale district, are extension workers able to reach all farmers or they only deal with a few known farmers near the road side and those that need the services are left unattended to?

1.3 Statement of the problem

The performance of agricultural sector depends on the quality of agricultural services provided to farmers and agribusiness community. However, the current government policy to modernize agriculture as a strategy for poverty eradication poses many challenges for the agricultural professionals and agricultural service providers in general (NAADS, 2001).

[3] See the profile of Kabale downloaded on 23rd November 2012 from www.kabalebic.co.ug/general/page.php?page=Districtprofile

Although, several studies have shown that extension and training services as well as improved availability of inputs lead to an increase in food production in many countries, these may not be achievable due to the vast arrays of circumstances surrounding the extension services. Therefore, one way of addressing the problem of low productivity is to encourage farmers to adopt improved crop varieties and complementary technologies. However, for new technologies to be disseminated effectively and rapidly there must be an effective and well- functioning extension services that can advise farmers on the recommended production practices as well as pest and disease management practices.

The extension workers' role is therefore fundamental in fostering rapid agricultural productivity if the country's labor force is to be utilized for the good of the population. Whereas these extension workers are trained to extend service to the farmers, millions of subsistence farmers produce barely enough for their own consumption (Qamar, 2005). In Rubaya Sub County, there has always been less seen on the ground yet extension workers are always among the farmers and they are trained and are expected to work and improve the conditions of the farmers. It was upon this gap that the researcher set to find out the performance of extension workers in Rubaya Sub-County in Kabale district.

1.4 Purpose

To examine the factors that hinder the performance of agricultural extension workers in Rubaya Sub County.

1.5 Specific objectives.

The specific objectives of the study were:

1. To assess the impact of training received from training institutions on the performance of agricultural extension workers in Rubaya Sub County.

2. To determine the attitude of agricultural extension workers towards work in Rubaya Sub County of Kabale district.

3. To identify the challenges the agricultural extension workers face in the field while carrying out their work.

1.6 Research questions

The research questions were derived from the specific objectives of the study.

1. What is the impact of training received from training institutions on the performance of agricultural extension workers in Rubaya Sub County?

2. What is the attitude of agricultural extension workers in Rubaya Sub County towards the extension work?

3. What challenges in the field affect performance of agricultural extension workers?

1.7 Significance

Results of this study will be of importance to policy makers especially the Ministry of Agriculture, Animal Industry and Fisheries, in finding out what affects the performance of agricultural extension workers and agricultural productivity in general, so as to put up strategies to address the problem.

The government will be guided by the results of this study to put more agricultural programs that aim at improving farmers' livelihoods with better means of delivering them to the farmers by better extension services.

The study results will provide researchers with literature and a basis for further research in the field of agricultural extension and Vocational Education and Training (VET) in general.

The institutions that carry out the agricultural extension education training will find the results of this study useful in adjusting their trainings to meet the needs of learners according to farmers' expectations.

The research results will also help me and other people in the field to employ its findings in improving on the way in which extension work is carried out.

1.8 Justification

Whereas a lot of research has found out that vocational institutions have been producing graduates with less practical skills (Okello, 2012, Tilak, 2002); the same needs to be investigated in agricultural extension training and performance. On many occasions one observes that there is not much that has changed despite the many years agricultural extension has been among the farmers (Krepp, 2012). Could this scenario be as a result of inadequate training or there are other factors. It was against this background that I went on to investigate the performance of the agricultural extension workers in order to suggest ways to improve on extension service delivery. This includes suggesting ways by which the relevant training with proper pedagogical knowledge related to the needs of the farmers in the field are imparted to the extension workers.

1.9 Scope of the study

According to Amin (2005), scope of the study shows the restrictions that the researcher imposes on the study to determine its boundaries. The restrictions of this study were in terms of content, geographical or location, and time.

1.9.1 Content scope

This provides the boundary of the subject matter being studied, and my content scope was based on the three research objectives of assessing the impact of training the extension

workers received from training institutions on their performance. It aimed at determining the attitude the extension workers have towards work and challenges faced by extension workers in the field of work that limit their performance. This content was chosen for the study because it was thought as a way to lead the research to know how agricultural extension workers perform their work of extension.

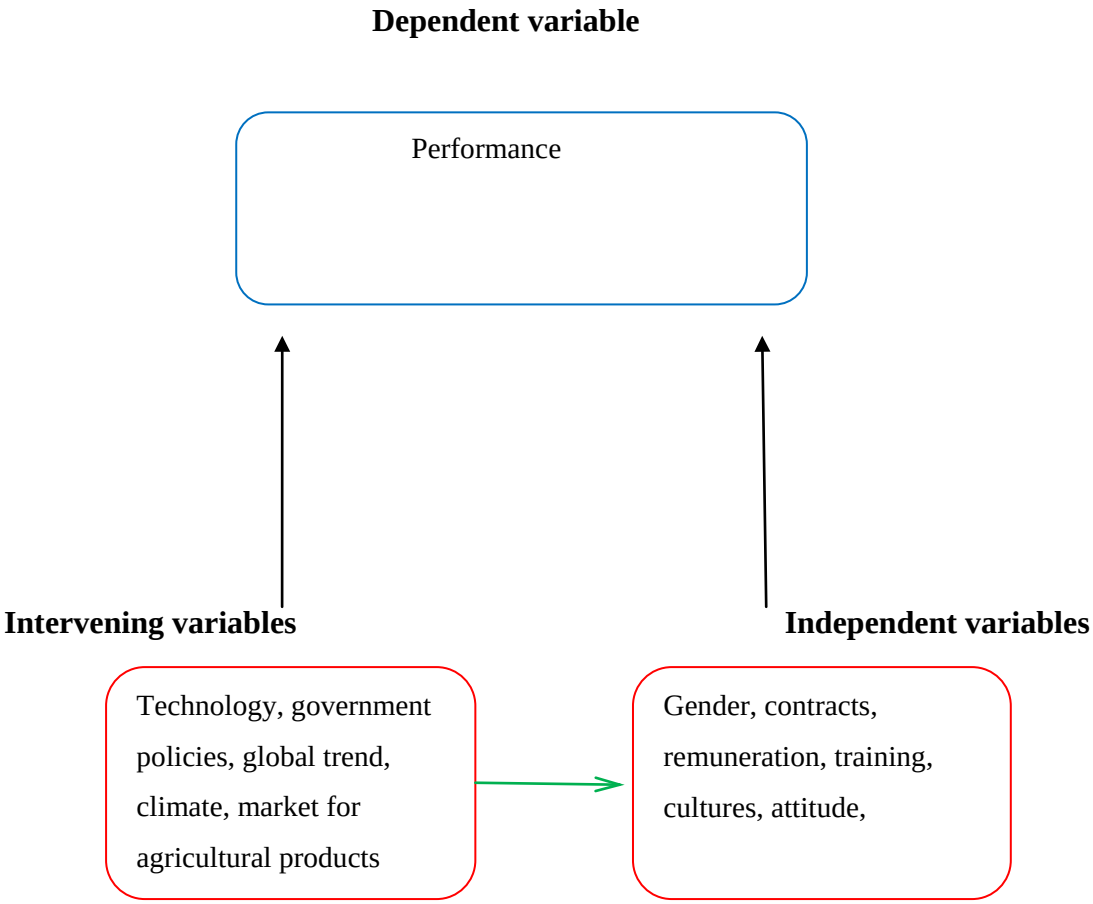
1.9.2 Geographical scope

The study was carried out in Kabale district, but because of limited time and resources, it concentrated on four parishes of Rubaya Sub County to represent the whole district. These parishes are well known to have had a long time of extension work going on and have been exposed to both government and NGO services for a long time. Rubaya Sub County has farmers who have responded well to extension services and also those who are behind in terms of modern agriculture. Since I was interested in knowing the performance of agricultural extension workers, I found this sub county worth considering.

1.9.3 Time scope

The data was collected from respondents (extension workers) who graduated from 2001 to 2012 and from current farmers. This data was collected within a period of two months between January 2013 and Feb 2013.

Figure 3. Conceptual framework



Source: author

There is interplay among the variables which are presented in figure 3 above. This study postulated that the variable under investigation which is the dependent variable under investigation is influenced by several factors (intervening or extraneous variables and the independent variables) either positively or negatively. For instance the predicted independent variables such as gender, culture of the farmers, length of contracts, remunerations of the extension workers, transport and the attitude towards work are factors that affect the performance of the extension workers.

The change in technology which is beyond the control of the country affects the work of an extension worker. Technology changes every time in the world and given the globalization and its effects on the developing economies, a developing country like Uganda is not an

exception in getting to experience its impact. Besides the technology, there is a global trend in research and market that affect our farming and production drastically, there is therefore no way Uganda would not experience such changes engineered by the global trend. There are other unpredictable variables such as global food market, climatic change and the global warming that of late has been affecting the farm production. These affect the extension workers as well.

CHAPTER TWO: LITERATURE REVIEW

2.1 Overview

This chapter presents the review from related studies based on the specific objectives. The approach used aims at bringing out an understanding of the impact of training extension workers received from training institution on their performance, the attitude which agricultural extension workers have towards work and the challenges faced by extension workers while in the field.

2.2 Training received by extension workers

Concerning the training which extension workers received from training institution, literature was collected in relation to the relevance of training given in training institutions to the work place expectation, the relevance of tools in training institutions and those in the workplace and also looked at the element of practical and theory done in training institutions and how they affect the performance of extension workers as pointed out below.

2.2.1 Relevance of training in training institutions

Looking at the expeditions carried out in Masters in Vocational Pedagogy (MVP) program, Mujuni et al (2011)[4] discovered that the training in TVET institutions is not relevant to the labor market demands; he said that the training which learners get from training institutions does not equip them with enough knowledge and skills required by the labor market. Extension education being concerned with training extension workers with vocational skills that link them with farmers too, have to impart knowledge that is relevant to the labor market

[4] Mini project by Mujuni et al on Vocational training acquired from training institutions and its relevance to the work place

in the area of extension in agriculture. Therefore the knowledge and skills given to the extension workers need to have emphasis of hands-on training.

According to Röling and Jiggins, (1998), experiences on sustainable agricultural development suggest a shift from transferring of knowledge to facilitation of learning. Therefore, more attention is now being given to training and extension tools and methods that serve learning for knowledge construction rather than absorption and reception of knowledge (Röling and De Jong, 1998). Learning is individual when one acquires the ability to perform new practices and patterns of actions as related to new knowledge and skills. Learning is communicative when it takes place through discussion and sharing of individual learning content (Defoer, 2002; Leeuwis and Van den Ban, 2004). This is where the extension workers' training has a bearing on pedagogical aspect so that they learn properly and develop capacity to communicate what they have learnt to farmers. Accordingly, the impact of training on extension is gauged by an appropriate message, delivered with an understandable extension method, although it is not always that simple (Röling and De Jong, 1998).

According to Ludwig (1999), enthusiastic extension workers that have global knowledge and technical skills are well suited to effectively spread knowledge internationally. Besides, extension agents must be knowledgeable about the specific culture and social norms of the people with whom they work (Ludwig 1999). The interest of the researcher was to establish whether the training the extension workers in Uganda also capture this important scenario.

2.2.2 Tools and materials in training institutions and work place

Nilsson, (2008[5]) says that it is not possible to have any type of training in vocational education without having tools and experience of using the tools. He says that training is a part of making humans competent to master the tasks by use of tools and materials.

Vocational theory is embedded in the vocational pedagogical approach that advocates for a learning which considers hands on tools and it has to be done practically in the workshop (Nilsson 2011[6]). He further advocates for integrated and holistic approach in learning and work in any education system which is vocational in nature. Holistic approach for vocational training is more appropriate for all professionals that deal with training of farmers.

Okinyal, (2006) noted that vocational education is practical oriented and its success is dependent on the availability of teaching materials, tools, machines and equipment. Accordingly, when these are grossly lacking in any institution, the products will be half baked and therefore lack the required competencies needed in the labor market. This therefore means that tools and materials are essential elements of a holistic vocational training in training institutions and must be in any agricultural training institution that trains extension workers. This helps the learners to know how to use them even in the field for better performance of the allocated duties.

According to Kalyankolo (2000)[7] materials and tools are vehicles of expression. They determine and influence the students' mode and mood of expression. This is an indication that without tools and materials learners cannot unfold their abilities and those in teaching positions will also not be in position to understand their learners. In addition, tools and

[5] Lecture on Vocational didactics to students of vocational pedagogy of Kyambogo University by Lennart Nilsson.
[6] Lecture to cohort three students of masters' degree of vocational pedagogy of Kyambogo University by Lennart Nilsson.
[7] A paper by Professor T. Mazinga-Kalyankolo on: *Specifics of Methods* (Unpublished).

materials are the main conductors through which learning and teaching through the senses take place to develop creativity, thinking, imagination, originality, expression and manipulative skills. Extension personnel are needed in a country in order to provide information to increase crop production via training and educational programs (Strong and Harder 2011). Therefore their training has to be commensurate with what they use in the field.

Since the tools are seen to be very important in the learning process, there was need to find out whether there were enough relevant tools in the training institutions generally in the country where the extension workers in Rubaya Sub County trained from.

According Bantley and Mele (2011), farmers need appropriate new technology: ideas about better ways of farming and some basic background information explaining why the idea will work.. All these must be done with appropriate tools in the training institutions, so that the extension workers are able to use them effectively in the field and also teach the farmers how to use them in case they are new to them. For instance there are Telecenters in some villages in Kabale which train farmers on the use of computers and also internet so that they are able to find market for their products hence eliminating brokers who usually demand a lot of profits.

2.2.3 Practical work versus theory

There is evidence that practical work increases students' ownership of their learning and increases their motivation (Score, 2008). Similarly, Wellington cited in (Dillon, 2008, p. 24) argued that practical work is motivating and exciting, it generates interest and enthusiasm. In agreement, I note that when students are allocated practical task especially on individual basis, they tend to do it faster and with more care than when they are in a group, and this increases motivation and learning. However, this is better done immediately after the theory

lesson before the students can forget. In recent times, the farmer field schools where experiential learning and practical learning are being encouraged by the agricultural extension education system are in the increase world over (Davis, 2008). Indeed, this methodology learning involves discovery learning, farmer experimentation, and group action. The approach is an interactive and practical method of training which empowers farmers to be their own technical experts on major aspects of their farming systems.

Therefore, this calls for a review in the teaching learning process of the extension workers where practical and experiential learning become fundamental in order for them to be useful to the farmers. Moreover, one does not expect an agricultural extension worker who had no enough practical in the training institution to be a good teacher in the entire farming sector because to me, I think he misses the practical knowledge. The proper practical curriculum of the extension workers enhances their professionalism. The term “professional development” is used in the Cooperative Extension Service to refer to the broad array of learning experiences that builds an extension educator’s capacity as a professional, enhances his/her ability to respond to local needs, or assists in meeting long-term career goals (University of Kentucky, 2008).

Ghimire and Martin (2011) stated that professional development is a continual learning process which can be designed to keep extension educators current in their fields and to anticipate the future needs of the organization and clientele. To them professional development is important because it can make a significant difference in the performance of educators and ultimately in the performance of their clientele. Yet, all these are attained in a practical curriculum that imparts skills that makes the extension workers effective in their capacity to deliver the necessary skills needed by the farmer. Commenting on the importance of practical training on vocational related training, Unwin and Wellington (1995) pointed out

that during vocational training, the theory should be related to more authentic activity to provide more information and understanding for the learners.

This is an indication that the theory should be taught alongside the practice. They continue to say that during their study of apprenticeship, some students fail to understand the theoretical topics until when they become apprentices where more practical and authentic activities are carried out. In view of the above, it is worth noting that success in any vocational training given to professionals such as the agriculturalist and agricultural extension workers is rooted in integrating practical and theory, as it enables students to acquire knowledge necessary for professional competence (Okello, 2009). In fact, the curriculum for the vocational courses affects so much how learning takes place and how much time is allocated to theory and practical as well as relating the teaching curriculum with the job requirements. In the vocational education, which involves hands-on, the matter becomes even more important since practice makes perfect.

Ghimire and Martin (2011) pointed out that the training curriculum of the extension workers should put emphasis in four major learning areas including needs assessment/ program development, teaching and learning methods, delivery strategies, and evaluation methods which are generally practical.

Similarly, Nilsson, (2011)[8] asserted that curriculum is the steering tool for the allocation of intentions, equipment, educational space, and professional people with vocational competence and for recruiting people as learners. Furthermore, curriculum is the way the education is structured in terms of intentions for education, content and time allocation, distribution and expected results of the specific education. In fact, if the curriculum is not well directed to what the learners are expected to do in the field, then their performance is

[8] Paper presentation By Professor Lennart Nilsson on: Curricular as a tool for Renewal for giving vocational education legitimate.

affected. So if the curriculum does not cater for practical or if the practical is in the curriculum but the curriculum is not well implemented, then this will grossly affect how extension workers are taught and subsequently how they teach in the field.

I therefore went on to find out from extension worker how much of the practical was involved in the learning in relation to theory to help in assessing the impact of training on agricultural extension performance.

2.3 Attitude of the extension workers towards work

An individual's behavioral beliefs are caused by holding either a favorable or unfavorable attitude towards the behavior in question (Harder *et al*., 2011).

According to Okello (2012), the attitude of the highly educated graduates in Uganda is negative towards work especially if it is tedious. He said that unless people have the positive attitude, no amount of training can improve performance. Riketta (2008) found out that the job attitude had significant effects on the performance. This literature was important in this study since I was interested in examining whether the attitude of the extension workers is negative about the extension work and if it is so conclusion be made and recommendations proposed to combat such attitude. Besides, Adefila (2012) found out that whereas the job performance score of the extension workers was as high as 75%, there were divergent opinions about some impediments that affected the job performance such as poor condition of service, irregular wages and allowances, poor attitude and inadequacy of important materials and equipment to execute the work. Some of these factors found in Nigeria are important to this area of study hence the results of this study become important for the comparative basis on the performance of extension workers in Uganda.

2.4 Challenges in the field that hinder extension work.

Agriculture being a complex undertaking requires a medium in which information about the new knowledge could be transmitted to famers in the way they can understand and accept (FAO, 1984). However, there have always been factors that hinder the process of transmitting the new knowledge to the farmers and I intended to find them out through this study. Under this section, I looked at the environment under which the extension workers do their work including farmers' illiteracy, remuneration, poor transport, few farmers in group, gap between the rich and the poor, pests and diseases infestations. On the other hand, Ibrahim *et al.* (2008) reported that there was a significant relationship between job satisfaction and payment of allowances, rate of promotion, regular training and level of education of extension workers. The study recommended that regular promotion and training of extension workers should be maintained and funding of the extension service should be improved upon. This study found this literature of great importance especially in the comparative element of what pertains in Uganda. Most researches on extension challenges in the field in various countries tend to associate the problem of extension workers to social competencies, which largely affect their performance. Ferris *et al*. (2001) identified social skills as the single strongest predictor of performance rating dimensions of task performance, job dedication, and interpersonal facilitation as well as an overall rating of performance. Similarly, results of investigation conducted by Payne (2005) indicated that high performing employees were more skilled at communicating empathy, adapting their communication, and managing interactions with others than lower performing employees. Finding of a research conducted by Riggon *et al*. (2000) showed that possession of social competence led to good prediction of work performance. Agricultural extension workers also need to be experts in communication skills as well as in science and technology. However, Vanclay and Lawrence (1995) suggested that more emphasis needs to be placed on enhancing social skills of

agricultural extension workers to improve the impact of extension work. Similarly, Texas A & M university system (2005) asserts that social skills of agricultural extension workers such as establishing effective working relationships with co-workers, colleagues, supervisors, volunteers, clients and key community leaders were important in determining their work performance. Results of study conducted by Tiraieyari *et al*. (2010) showed that social competencies influence agricultural extension workers' performance. Social competencies are therefore of great importance in the success of extension workers in any country where agriculture is of paramount importance.

2.4.1 Poor transport

In countries where the farm sector comprises a large number of relatively small farmers (as is common in most developing countries), the clients of extension services live in geographically dispersed communities, where the transport links are often of low quality, adding to the cost of reaching them (Anderson, 2008). According to Qamar, (2005), extension work is a very difficult task in less developed countries. It is not carried out from air-conditioned offices or laboratories by formally dressed persons, but mostly in the field under severe weather and logistic conditions with minimum facilities. In addition, extension work is done outside in plots of land but not in the shelter of houses or class rooms. Anderson, (2008) says that this trend puts a very large number of government extension workers in the field, with loyalty to different technical departments, but suffering from a lack of sufficient operational funds and transport facilities, poor career opportunities, low salaries, and, above all, lack of coordination among various extension units.

With this situation, and given the hilly nature of the study area, I wanted to find out how this affects the performance of extension workers. On the other hand, the study carried out by Okereke and Onu (2007) in Nigeria, revealed that organizational factors that affect performance are mobility/logistic factors, job design and administration.

2.4.2 Farmers' literacy and poverty

Qamar (2005) says that the extension mission of interacting with mostly illiterate and poor rural people with the aim of changing their behavior positively is indeed a formidable task when compared to working with plants and animals in the comfort of research stations.

Semana (n.d) adds that the dilemma is that the majority of the Ugandan farming community is predominantly peasantry/subsistence with a small fraction that can be regarded as emergent farmers. Such population may not respond sustainably to the now farmer owned contract extension system including changing patterns of donors.

When illiteracy is combined with poverty and peasantry/ subsistence, it may be a complex situation to easily move forward with. I wanted to find out how this affects the performance of the extension workers in Rubaya Sub County.

2.4.3. Remuneration

Qamar (2005) pointed to one challenge that the extension workers face in Uganda. He said that in some districts of Uganda, the authorities divert the extension budget on constructing feeder roads, leaving extension staff without salary for several months. He adds to say that under the present conditions, hundreds of millions of subsistence farmers are neither able nor willing to pay for extension advice, the quality of which in most cases does not make a convincing case for cash payment. With this in mind, I aimed at conducting the study to find out how the extension workers feel about how they are remunerated and whether this affects how they perform their work.

2.4.4 Few farmers in group

The grouping of the farmer is also known to be one of the factors that may affect the performance of the extension workers. This is because in many instances, individual farmers cannot afford the technologies that the extension workers are to promote.

Birumaud (2006)[9] however asserts that if organized in groups, the farmers can pool resources and gradually help one another adopt such technologies which are promoted by the extension workers.

In many cases, I have seen that the government and even NGOs prefer to help people for example fifty people who are organized in groups with objectives than helping fifty individuals who are not in groups. Therefore, farmers must be organized in groups in order to be helped and this also makes the work of extension workers easier.

[9]Strengthening farmers' organizations. The experience of RELMA and ULAMP by Millie Biruma Abaru, Anthony Nyakuni and Gideon Shone 2006

CHAPTER THREE: METHODOLOGY

3.1 Overview

This chapter describes the methodology that was used to investigate the problem of the study, and the following are discussed here; research design used, tagert population, scope, sampling strategy, sample size, tools/instruments used for data collection, reliability and validity and data analysis

3.2 Research design

The research design was based mainly on a descriptive study design employing both qualitative and quantitative methods. According to Kombo and Tromp (2006) a descriptive study design is used when collecting information about people's attitudes, opinions, habits or any of the variety of education or social issues. The design was chosen because of its suitability for capturing the respondents' perceptions, and attitudes out of which meaning can be made (Kvale, 1996, pp. 11-70) and is sensitive to human situations. This design gave a greater understanding of the training and performance of extension workers and particularly through free interaction with farmers and the extension workers.

3.3 Area of the study

The study was conducted in Kabale district located in south western part of Uganda. Kabale lies at approximately 1,200- 3,000 m above sea level with the highest points being western and Southern parts of the district. Kabale has a montane climate with a bi modal rainfall pattern. The first rains which are normally light start from March to May while the second rain is usually from September to November. June to August is the main dry season and December to February is the short dry period with light rains. The mean annual rainfall and

temperature is 1,092mm and 18^{o}C respectively, with an average household having 6-7 plots of land which are normally scattered on hills (Kabale District Local Government, 2002).

The district has twenty Sub Counties but the study was conducted in Rubaya Sub County which borders Rwanda because it houses many private and government organizations concerned with the agricultural extension work. Some of the government organizations include National Agricultural Advisory Services (NAADS), National Agricultural Research Organization (NARO) and African Highlands Initiative (AHI). The NGOs include Africa 2000 Net work (N2N), Excel Hot Consult (EHC) and Bioversity International. These organizations have existed in the area for a long time (A2N, 2003). This Sub County has both farmers who have well advanced in farming and those who are lagging behind in farming as may be called progressive and non progressive farmers respectively. Out of the eight parishes, the study concentrated mainly in four parishes of Mugandu, Buramba, Kibuga and Karujanga because these were not very accessible and these parishes do not portray good farming practices. It was my interest to find out from people in such hard to reach areas how extension work is done. The parishes are shown on the map in appendix 4.

3.4 Population of study.

The study population comprised of graduate extension workers at degree and diploma levels and farmers. Extension workers from both government sector and NGOs were chosen because they experience different working conditions, face different challenges and also their attitude towards extension work could be different. They had to be graduates at either degree or diploma level so that they are able to tell about the training they received from training institutions. Farmers at two levels namely model and non model farmers in that Sub County were selected because being at different farming levels they could answer questions differently pertaining challenges extension workers face in the field.

3.5 Sampling strategy

Purposive sampling techniques were used for identifying the respondents. The respondents were sampled on the basis of the research needs (Cohen and Manion, 1994). They were selected on the basis of the knowledge that they have the information being sought. Cohen *et al*. (2000) said that purposive sampling saves time, money, and spares the researcher the efforts of finding less amenable respondents and is relevant to the study. Extension workers were chosen considering the gender aspects. This helped in avoiding biases from the farmers and also in having a variety of views from both male and female extension workers especially concerning gender based challenges that are faced by extension workers. Extension workers from both government and NGOs were considered for comparative purposes.

3.6 Sample size

Dooley (1995) defines a sample as the portion of a population selected for the study, and a sample size as the number of elements in the sample. I used 50 respondents in different categories of extension workers of Government and NGOs, model and non model farmers in the sub county, as shown in the Table below;

Table 1

Sample size determination

Extension workers	Government		N.G.O		Sub total
	Male	Female	Male	Female	
	2	1	2	1	6
Model farmers	No of Respondents Per parish		No of Parishes		16
	4		4		
Non model farmers	7		4		28
Total					**50**

3.7 Data collection procedures

I sought an introduction letter from the Head of Department of Art and Industrial Design to ease the data collection process, before I left to go to my district of research. After a period of two days in Kabale district, I went to Rubaya Sub County and presented the letter to the Sub County chief to whom I had to explain the purpose of the study. I was straight away granted permission to carry out research in the parishes and also asked to report to the LC1 chairmen of the villages I would be working in. I got the telephone numbers of the LC1 chairmen from their respective parish chiefs and I made appointment to meet some the following day and others the next day since I had to give a verbal introduction of myself to them. Parish chiefs gave me the names and contact of the extension workers and also the model farmers and I had to select the non model farmers myself because I was looking at their location to avoid

considering only those on the roadside. I made appointments with my respondents and agreed on the dates and venue. I first arranged to meet with farmers and collected information from them, and then I considered the extension workers after interviewing the farmers. All farmers and extension workers were successfully met and data was collected from them using the already developed tools. (Appendix 1, 2 and 3). My appointment to meet the sub county NAADS coordinator was made and he preferred to be seen after all the respondents, but he had many schedules on his desk so he kept postponing the meeting until when the data collection time elapsed. I went back during the course of the semester after making appointment with him but still I was not able to see him.

3.8 Validity and Reliability of the instruments

Validity of an instrument is the degree to which an instrument measures what it is supposed to measure (Okello, 2012). To ensure validity, instruments were first pretested on the farmers in Mukono district in Nantabulirwa village to incorporate issues not captured or rephrase the questions. The instruments that were not easily understood were revised and others rephrased to bring up a proper meaning to the study. The supervisors also checked the instruments and had professional guidance to ensure the validity.

Reliability is the consistency of measures by an instrument. To ensure reliability of the instruments used in this study, I tested the instruments on the same samples twice after a period of two weeks. The items which were not consistent in their results were revised.

3.9 Data collection methods

This aims at describing the methods and techniques that were used to collect data for the study.

I used interviews with the help of interview guides to collect data. According to Kumar (2005), an interview is a person to person interaction between two or more people with a specific purpose. It involves asking several questions requiring verbal responses that range from general to specific information. The face to face nature of an interview makes it observational (Odiya, 2009). This type of method was chosen because I was dealing with some people who were illiterate and so who needed such an interactive method to freely acquire the necessary information from them. The method also assisted me to easily clarify questions which would have otherwise been hard for the respondents. Interview guides were developed and used to provide open ended questions and these questions were sometimes rephrased according to the individual and the preceding responses.

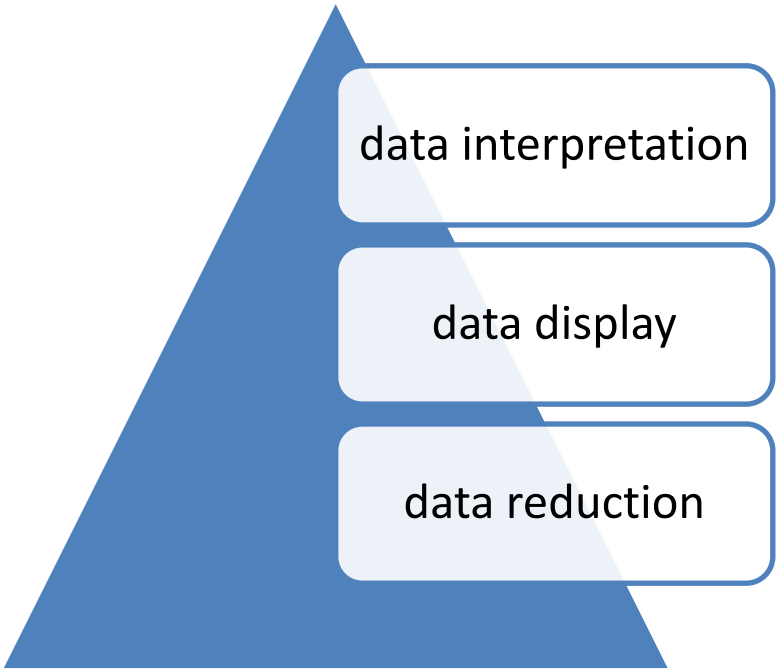
In addition to the above methods, I used a Likert scale to assess the attitude of extension workers. Tuckman (1994) describes a scale as a device developed and used by researchers to quantify responses of a participant on a particular variable. A Likert scale also known as summated scale was used to assess the extent to which an individual agrees or disagrees with a statement. The levels of agreement or disagreement corresponding to the points were strongly agree (SA), agree (A), undecided (U), disagree (D), and strongly disagree (SD). This was used to understand the attitude which extension workers have towards their job. To arrive at the full Likert scale, I first identified all the sub areas of the topic and selected statements to which the respondent shows agreement or disagreement and marked the appropriate response with the number corresponding with the responses. Six copies of the Likert scale were developed for the extension workers because this was the group whose attitude was being measured.

An audio recorder and camera were used to have a wide base of information which I can always play back and look for the omitted information during the interview writing.

3.10 Data analysis

Data analysis is the orderly breakdown of data in order to derive meaning out of it, which usually leads to findings. After collecting the data, I analyzed data using the three stages of data reduction, data display, and data interpretation as portrayed in the figure below and subsequently explained.

Figure 4: Summary of data analysis



Source; Keith, 1998

Explanation of the figure above

Data reduction

This begun the process of data analysis which involved reduction of the data in form of text, transcribing images/ photographs, and sound got from respondents. This was also done through editing some vague responses and discarding absurd observations and recordings. Similar responses were clustered and patterned which lead to reduction in the amount of data

to deal with. The triangle shows data analysis which indicates the large volume of data reducing from the base to the apex.

Data display

Data display involved organization, compression and assembling data. Data display is a packaging of what was found out, in form of text, tables and figures (Keith, 1998). I used comparison tables and a pie chart to show differences in responses and text was used to explain responses.

Data interpretation

Data interpretation is attaching meaning and significance to the displayed data, explaining patterns and looking for relationships and linkages in the data. This was done through explanation of the tables and diagrams.

3.11 Ethical Issues

According to Cohen and Manion (1994), research ethics are about regulatory code of practice put in place by various professional organizations to guide researchers. To maintain a high standard of ethics, consent was sought from the LC1 chairpersons of every village that was visited before beginning the interviews and before conducting the interviews with individual respondents, consent was sought for using their names for future consultations. It was ensured that information about the respondents' attitude and feelings are kept private. Data was interpreted according to the objectives of the study and irrelevant data was excluded from the report.

CHAPTER FOUR: PRESENTATION AND INTERPRETATION OF RESEARCH FINDINGS

4.1 Overview

This chapter presents the research findings and interpretation based on objectives and personal views on results from respondents interviewed. Findings were interpreted basing on the profile of the extension workers and the objectives that guided the study; the following were the objectives of the study. To assess the impact of training received from training institutions on the performance of agricultural extension workers in Rubaya Sub County, to determine the attitude of extension workers towards work in Rubaya Sub County of Kabale district and to find out the challenges the extension workers face in the field while carrying out their work.

4.2 Profile of the interviewed agricultural extension workers in Rubaya Sub County

The profile of agricultural extension workers interviewed was compiled. Of the six interviewed, two were females and four males. Graduates with degree were five and only one had a diploma as the highest qualification. The respondents work experience ranged between two years and twelve years (Table 2).

Table 2. Profile of agricultural extension workers interviewed, Rubaya sub-county, Kabale, 2013.

Respondent	Gender	Level of education	Work experience
1	Male	Degree	4
2	Female	Degree	2
3	Male	Degree	7
4	Female	Degree	9
5	Male	Diploma	5
6	Male	Degree	12

N= 6

4.2 Impact of training received from training institutions on the performance of agricultural extension workers in Rubaya Sub County.

Some instruments geared towards finding out the impact of training received from training institutions on the performance of agricultural extension workers in Rubaya Sub County.

The responses were elicited to help me come up with a judgment on the contribution of the learning acquired from the training institutions and the reality of extension work in the field; Below were responses from the respondents;

Table 3 presents the responses of agricultural extension workers and five out of the six agricultural extension workers interviewed, appreciated the value of going for training in the training institutions. This is because they were able to acquire some skills and knowledge. In contrast, only one extension worker did not see the importance of going to train in training

institutions. This particular extension worker who was against going to school for the sake of learning extension work argued that one can even do well without this training as long as he or she practices extension work from the work place.

Table 3:

Relevance of training to agricultural extension work, Rubaya Sub County, Kabale district, 2013

Training is of help (Yes, No)	**How**
Yes	It can help me to train others, put theory to practice
No	The training for extension work is not necessary, one can even learn on the job
Yes	Helps in needs identification, monitoring and evaluation
Yes	Helps in report writing, using some tools, leadership skills
Yes	Gives leadership, questioning techniques, innovativeness
Yes	Helps me to be a good teacher, leader. Put theory to practice

N= 6

4.2.1 Relevance of tools at training institutions to the work place

The respondents identified the tools which are common at the training institutions and work places. They said that there are even tools which they hear about but have never seen either in colleges or universities and the work places and the tools was mentioned and their uses identified as seen in Table 4.

Table 4:

Tools extension workers used in training institutions and work place in Rubaya Sub-county, Kabale district, 2013.

Tools seen in training institutions and work place.	**Tools/ machines neither seen nor used in both training institutions and at work place.**	**Use of the tool neither seen nor used.**
Hoes Pangas Slashers Computers Hammers Wheel barrow Axe	Tractors	For both primary and secondary ploughing. For weeding if the crops are planted in lines.
	Incubator	To incubate eggs especially on a large scale.
	Combine harvester	To harvest crops especially those planted on a large scale. Saves on human drudgery
	Milking machine	Faster milking is assured if the animals to be milked are many
	Soil test kits	To test what kind of nutrients are in the soil in order to know which crops to plant.
	Maize sheller	Helps in un shelling maize

4.2.2 Practical carried out at training institutions

The respondents interviewed were extension workers and the results show that there is more theory taught at the expense of practical at the training institutions. Four out of six of the extension workers feel that a lot of theory was given to them in the training institutions and very little practical given. One out of the six interviewed extension workers feels that too much of the practical in the training institution was got at the expense of theory.

It is only one extension worker who feels that both theory and practical were given the attention deserved.

Table 5: Responses about theoretical and practical training

Respondent	Mostly practical	Mostly theory	Equal practical and theory
1	No	Yes	No
2	No	Yes	No
3	Yes	No	No
4	No	Yes	No
5	No	No	Yes
6	No	Yes	No

N = 6

4.3 Attitude of extension workers towards work in Rubaya Sub County.

To get the attitude which extension workers have towards their work, an attitude scale with questions that would help to find out this was employed, and the results tabulated in Table 5.

It was found that 4/6 of the respondents enjoyed extension work as opposed to 2/6 that felt it is not enjoyable. However, (3/6) asserted that extension work is tedious and tiresome and an equal number felt it is not tiresome. 1/6 felt he is paid well as opposed to 5/6 who said that they are poorly paid. Important to note is that 6/6 believed that the society does not appreciate their work. 6/6 said that extension work is not necessarily for men but also women do it equally well. 3/6 attributed their work not being well due to poor training whereas 1/6 was not sure and also 2/6 attributed other factors to be the cause of their work not being well done but not training.

Table 6:

Attitude of extension workers towards work, Rubaya Sub County, Kabale, 2013

Parameter	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total
Extension work is enjoyable	3	1	0	2	0	6
Extension work is tedious	0	3	0	3	0	6
We are paid well	0	1	0	2	3	6
Society appreciates our work	0	0	0	6	0	6
I don't like my work	1	1	0	4	0	6
Extension work is good for men not women	0	0	0	6	0	6
It is easy to work with farmers	2	0	0	4	0	6
My work would be better if I was trained well	2	1	1	1	1	6

N = 6

4.4 Challenges the extension workers face in the field while carrying out their work.

The challenges faced by extension workers in the field were identified from two categories of respondents i.e. the six extension workers, and 44 farmers, including model and non model farmers and the responses are shown in Table 7 and 8.

The most pressing challenge faced by extension workers in the field according to extension workers was reportedly poor means of transport followed by poverty among farmers as shown by 100% and 67% respectively. However, 50% reported that limited funds of extension workers and few farmers in groups was also a big challenge they face.

Table 7:

Responses from extension workers on challenges they face in the field of Rubaya Sub County, Kabale District, 2013.

Challenge	Responses	Total	Percentage
Limited funds of extension workers	3	6	50
Poor means of transport	6	6	100
Farmers negative attitude towards extension work	2	6	33
Harsh climate	2	6	33
Few farmers in groups	3	6	50
English reading materials instead of vernacular	1	6	17
Poor farmers	4	6	67
Gap between rich and poor farmers	2	6	33
Lack of equipment to help in extension work	2	6	33

Table 8 presents the response from the farmers on the challenges faced by the extension workers. 68% see their love for material things such as allowances and physical inputs as the main challenge which extension workers face and actually which limits extension workers' performance. This challenge is followed by poor transport of the extension workers as indicated by 36% of both categories of farmers. 18% model farmers said that many farmers are not in farmer groups and they feel it is a challenge to extension workers. They feel that the other challenges faced by extension workers are farmers' illiteracy, many farmers not being in groups and reluctance to adopt to new technology.

Non model farmers identified corruption in government as a challenge faced by extension workers. However, there was an intersection of challenges from both model and non model farmers such as farmers want material things, poor transport of extension workers, and conflicts among farmers.

Table 8 :

Responses from 44 farmers on challenges faced by extension workers, of Rubaya Sub County, Kabale district, 2013.

Challenge	**Responses**	**Total**	**Percentage**	**Model/ non model farmers**
Farmers want material things not services.	31	44	68	Both
Farmers' illiteracy	5	44	11	Model
Many farmers are not in farmer groups	8	44	18	Model
Poor transport means of extension workers	16	44	36	Both
Conflicts among farmers	4	44	10	Both
Corruption in Government	8	44	18	Non model
Famers take long to adopt new technologies	8	44	18	Model

CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Overview

The chapter presents a discussion of the research findings according to personal views on results from respondents and supported by literature. Salient conclusions and recommendations are also included.

5.2 Discussions

This discussion is done according to the following objectives that guided the study. To assess the impact of training received from training institutions on the performance of agricultural extension workers in Rubaya Sub County, to determine the attitude of extension workers towards work in Rubaya Sub County of Kabale district and to find out the challenges the extension workers face in the field while carrying out their work.

5.2.1 Impact of training in training institutions

The results showed that most of the extension workers appreciate the value of going to school to attain formal education. This is because formal education empowers them with knowledge and skills to do their official jobs. In fact, the findings show that for one to do the agricultural extension work to the expected level, he or she must have the foundation or the required training in order to acquire the necessary skill required in the world of work for example leadership, monitoring and evaluation skills. Without this training, some activities done by the extension worker may not be appreciated by the employers and the recipients. This extension worker lacks some basic knowledge especially the theoretical knowledge that is mainly taught in the training institutions like colleges and universities. The extension workers have to gain knowledge to enhance their capacity to impart practical knowledge to the

farmers for better production and economic development (Chowdhury et al, 2011). Capacity is the ability of an individual to perform an activity and if the extension workers are not given this, their work may not be done to the farmers' and other stakeholders' expectations. When extension workers are trained well, they are able to help the farmers they work with to build themselves in terms of knowledge and skills for better agricultural production. Enhancing capacity of rural people to innovate and engage with evolving markets in an equitable and environmentally friendly way is an important concern (Zossou et al., 2012).

This agrees with Tiraieyari and Uli (2011) who said that in order to perform effectively, an agricultural extension worker should be able to demonstrate social skills during the training of clients, which skills are attained from the training institutions. Compounding the importance of training of the extension workers, Birmingham, (1999) pointed out that both in service and pre service education is necessary to help extensionists develop the knowledge, skills and attitudes necessary to meet an increasing set of diverse demands. Training is very fundamental when it comes to the extension work in this ever changing technological world. In a separate study done by Birkhaeuser (1991), extension workers must be better equipped for rural needs by virtue of their training, their proximity to the grassroots, their ability to identify felt needs of the rural communities and their efficient and cost effective mode of operation.

5.2.2 Tools

The tools used in training institutions and the work place are just simple tools like pangas, slashers and hand hoe. However, all the extension workers admitted that they have never seen the tools or implements like incubators or combine harvesters. They said that these tools/ machines are only heard about but they have never seen or used them. To observe the responses properly, it is seen that these tools are mainly those used on large scale farming and

for one to have a fast growing industry, he needs such tools in order to produce very fast and also grow at a high pace. This finding agrees with Harrison (1980) who pointed out that appropriate technology makes the most economical use of a country's natural resources and its relative proportions of capital, labor and skills and that it fosters attainment of national and social goals. So, facilitating the adoption of appropriate technologies by farmers encourages the right choice of technology that can enhance agricultural production. Like one respondent said, "we are still using rudimentary tools to do work" which I feel delays work and will continue to keep us under subsistence farming.

Kalyankolo, (2000)[10] supports this view derived from my findings in the field when he said that materials and tools are vehicles of expression. They determine and influence the students' mode and mood of expression. This is an indication that without tools and materials learners cannot unfold their abilities to pass exams well and also do work well in the field of work.

In support, Nilsson, (2011)[11] puts it that, understanding which working tools to be used is a very important part of the planning function in the training institutions and workplaces. This means that tools and materials have to be planned for and prepared before one embanks on any vocational task. He says that how to master the tools in order to achieve the wanted work results is very important and there is need to pay attention to that in all vocational training institutions. Important tools which help the learning process to be effective was found missing in both training institutions and the work places and as Nilsson says, extension workers may not achieve the wanted work results.

[10] A paper by Professor T. Mazinga-Kalyankolo on: *Specifics of Methods* (Unpublished).
[11] A verbal presentation in one of cohort 3 Plenary sessions with Dr Professor Lennart Nilsson

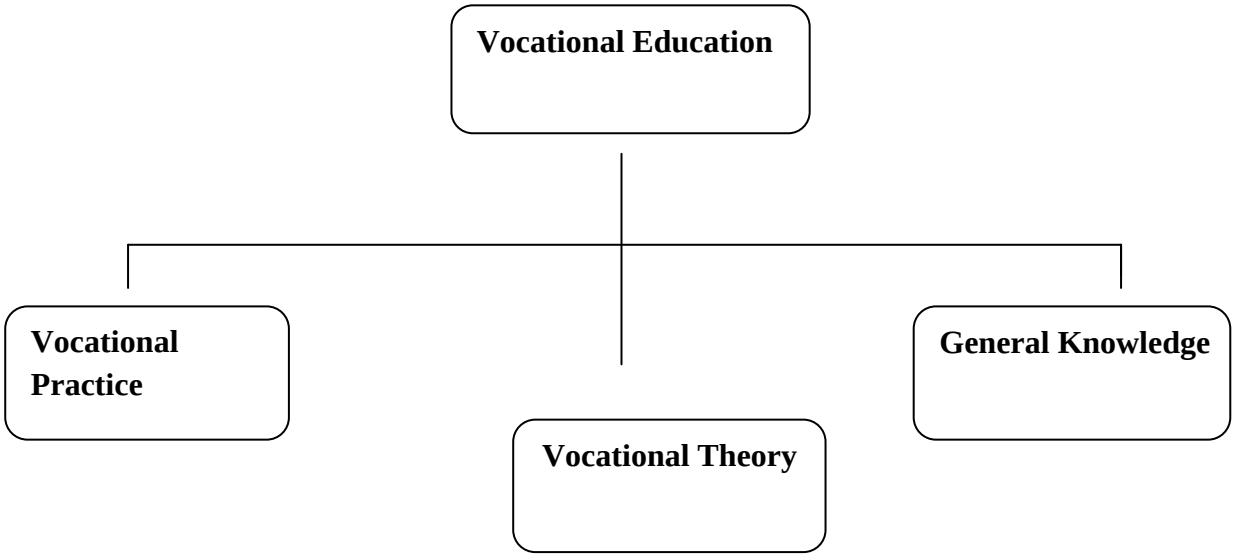
Indeed, vocational competence is dependent on the masterly of the use of tools and materials both in training institutions and at workplaces. Tools must be in good working condition and must be those that aid work to be done in the shortest possible time not those which will drag the work and delay results like the hand hoe instead of a tractor. In a developing country like Uganda where the population depends on agriculture, I observed that there is need for effective tools in both training institutions and in the field of work so that the production is fast and agricultural productivity improved for the welfare of the beneficiaries. Extension workers need to know how to use agricultural implements and equipments like combine harvesters or tractors and incubators so that when they are found in the field, they are in position to educate the farmers on how to use them so that work is done in the shortest possible time. Through personal observation, I noted that when work is delayed, for example cultivation and planting, one does not expect to harvest the same amount as one who had crops planted in time, therefore use of tools that drag the work do not profit and also affect the work of the extension workers.

5.2.3. Theory and Practical taught

According to the results, there is more of theory in training institutions taught at the expense of practical lessons. One extension worker lamented that he can only remember once when they were allowed to go to the field for practical lesson which he said did not even last the planned time. They said that many trainers used the time allocated for practical to teach theory without compensating for it. Unwin and Wellington, (1995) as cited by Bhyat, (2006, p. 45), pointed out that during vocational training, the theory should be related to more authentic activity to provide more information and understanding for the learners. Brown, (1998), cited by Bhyat, (2006, p. 41) adds that the methods of educational didactics shouldn't assume separation between knowing and doing and therefore don't agree with the idea of

separating what is learned from how it is learned. To know and to do have a hidden element of general knowledge because one needs this general knowledge in order to understand both theory and practical lessons. Nilsson (2008)[12] made an illustration of vocational education to have three important components that must work together for the learner to properly understand the content taught as illustrated below.

Figure 5: Components of vocational education



Source; Nilson, (2011)

From Nilsson's illustration above, it is noted that without practical, theory and general knowledge embedded in them, vocational education is incomplete.

Lao-tzu had this philosophical assertion during his lifetime; "if you tell me, I will listen, if you show me, I will see. But if you let me experience, I will learn". (http://www.unevoc.unesco.org/publication)

The assertion insists on the fact that learners understand better if they are allowed to practice and experience by themselves.

[12] Paper presentation By Professor Lennart Nilsson on: *Vocational Didactics*. The Page is part of a manuscript on; *vocational didactics (Nilsson, L. 2008)*

For vocational skills to be successfully acquired there should be a connection between what is learnt in class and how it is actually put to practice. During teaching, theory should always be taught alongside practical for proper understanding. For example when teaching agriculture and castration as a topic, learners should be taken to the farm, given castration equipments for example elastrator bands, asked to hold the testes of the animal and perform the castration exactly how the theory was taught. This should be done following theory before the learners can forget.

Okello, (2009) also adds that Uganda's education system is generally theoretical in nature. Even the courses that should be practical are taught theoretically. He says that reasons behind this include a lack of technology, lack of practice among teachers of vocational education, and poor attitude towards work among the highly educated people in the country. Hence, the type of education given to the students is irrelevant in some instances to the job market requirements. The respondents said that most times, the practical lessons were conducted in the lecture room with the teacher only describing. They said that the teacher would for example gather many weeds and show to them while in the class room instead of allowing them to visit the garden and see the whole plant and how it grows. In this case the practical lessons were taught theoretically.

5.3 Attitude

It is worth noting that all the interviewed extension workers including both men and women extension workers believed that to do extension work does not require one to be a man because women can do the same work which men can do. Given the hilly terrain and bad weather conditions in Rubaya Sub County, one would expect women to perform less than men as it was put by Mjelde., (2006, p. 146) that it has been argued that to be tough and hard, to put up with heavy work for long periods, and to be able to lift heavy weights are essential

to some jobs, and therefore are directly related to male body strength. In vocational education and training, gender takes the centre stage. This is the reason why institutions like Akershus University College, Norway, Kyambogo University, Uganda and Upper Nile University, South Sudan are involved in NOMA project to address the gender issues in vocational disciplines (Mjelde, 2008, p. 6), so that women are not left out in such courses.

When it comes to agricultural extension as a vocational discipline which involves heavy work of riding motorcycles in rough muddy roads, and in difficult terrain it becomes interesting to note that both men and women extension workers in Rubaya felt that women and men can do this work equally.

The results further show that all the extension workers interviewed believed that society does not appreciate their work. They said that they try to work hard to meet deadlines and farmers' needs but this meets the dissatisfied hands of the beneficiaries as a result of farmers' poverty, limited funds of extension workers and bureaucracy that has to be followed right from the top. Swanson, (2010)[13] puts it that a bottom-up extension system cannot be created overnight because extension directors and senior managers will be reluctant to give up their decision making authority in setting extension priorities.

According to the results, extension workers attitude towards their work is good because they feel that their work is enjoyable and they like it. Okello (2012) stated that unless people have the right attitudes, no amount of training will improve performance. Riketta (2008) adds that the job attitude has significant effects on the performance. Extension workers said that the only hindrance is poor remuneration and the fact that farmers are difficult to work with in a sense that the majority are located on hilly areas and farmers themselves demand a lot of incentives and yet they don't appreciate.

[13]Strengthening Agricultural Extension and advisory systems. Agriculture and rural development discussion paper 44 by Burton E Swanson

5.4 Challenges faced by extension workers

The challenges faced by extension workers in the field were discussed following responses from two categories of people; the six extension workers themselves, and 44 farmers, including model and non model farmers and the discussion follows below.

5.4.1 Challenges according to extension workers

Majority of extension workers said that poor transport is the main challenge because they don't have enough fuel for the motor cycles and sometimes the roads become impassable due to a lot of rain and poor terrain. According to Qamar (2005), extension work is a very difficult task because it is mostly in the field under severe weather and logistic conditions. However, they expressed a wish that if this transport challenge was improved their work would be enjoyable with few problems.

Poverty of the farmers was ranked number two. They said that sometimes farmers are expected to give a contribution in terms of tools and also to give back what they are given after getting profit but they end up failing because they have either eaten up the seed or the given livestock could not profit due to poor management. All this is attributed to poverty which drags the extension process. This view concurs with the Bategeka *et al*. (2013) who asserted that poverty continues to drag down many farmers from progress. They said that farmers also demand for incentives because of poverty and when they are not provided they dodge meetings and go to where these incentives in terms of transport and sitting allowances are provided. To attract farmers, some service providers offer incentives such as food and drinks during training (Obaa *et al*., 2005) . However, the 'benefits' of such induced participation are usually minimal.

Semana (n.d) added that the dilemma is that the majority of the Ugandan farming community is predominantly peasantry/subsistence with a small fraction that can be regarded as emergent

farmers. Accordingly, such population may not respond sustainably to the now farmer owned contract extension system including changing patterns of donors. One farmer said that instead of one going in for extension meetings, he would rather go to the garden to dig for money to buy food or will see it better to go and dig to catch up with seasons to avoid hunger in future.

5.4.2 Challenges faced by agricultural extension workers according to farmers

According to both model and non model farmers, the majority sees love for material things such as allowances and physical inputs as the main challenge which extension workers face. Accordingly, this limits extension workers' performance. With this love for material things which they said are not being given by many organizations, 8 model farmers said that few farmers come for meetings to learn and the majority are not in groups, so it becomes very hard for the extension work since it is very difficult to access all the farmers yet the Parliamentary Act that established NAADS (GoU, 2001: 5) stipulates one of its objectives as to: 'empower all farmers to access and utilize contracted agricultural advisory services'.

At the end of the day, many farmers are not educated which to me would make extension work remain un seen in this community. Both categories of farmers highlighted poor transport of the extension workers among the challenges they face saying that many of their plots of land are on hilly and hard to reach places where even a motor cycle cannot easily go and so extension workers tend to dodge such areas to save on the fuel in their motorcycles. They said that sometimes the roads become too muddy or dusty in rainy and dry seasons making it hard for extension workers to reach out to all the farmers. Benin *et al*. (2011) asserted that farmers who have access to the best technologies from the advisory services are those who live where infrastructure is good (including in areas closer to all-weather roads), farmers are able to acquire on their own the improved technologies being promoted by the NAADS program as well as related advisory services. Some non model farmers mentioned

corruption in the government as a challenge they feel affects the performance of extension workers. They said that sometimes seasons end before the promised seed is delivered and other times it comes when other farmers are already weeding, as a result of delay due to corruption. They felt so dissatisfied about how the government and NGOs distribute materials and services saying that similar farmers are always given goods and services and others are left out. “If you have a small piece of land and your house not well built, you are left out because extension workers only want the rich to be educated so that they can also educate us the poor”. This position of the farmers differs from the stand of NAADS which is supposed to guide all farmers and the poor farmers as stated in the following assertion by Benin *et al*. (2011) that” by design, the NAADS program also expects to target specific populations, for example, women and economically active poor farmers (i.e., those with limited physical and financial assets, skills, and knowledge) rather than the destitute or large-scale farmers” To me this statement meant that even the poor want to be involved when giving services and goods but extension workers say that if the poor are given seed for multiplication, they cook it instead of planting it and that’s why the rich are usually given first.

To consider the model farmers alone, they see farmers’ illiteracy, many farmers not being in groups and reluctance to adapt to new technology as the challenges which affect extension work. One model farmer said that farmers come in and out of groups and when they have gone and come back, they push the group backwards because extension workers want everyone to move at the same pace. If this in and out of groups continues, the groups’ progress is interrupted and this limits the performance of the extension work.

5.5 Conclusions

This study concluded that extension workers appreciate the value of knowledge and skills acquired from training institutions of colleges and universities and have a positive attitude

towards their work. However, a number of challenges including poor transport, poverty of farmers, inadequate training and limited appreciation were identified to hinder the performance of the extension workers. Simple tools are still used in both training institutions and at work which affects efficiency of performance and agricultural productivity as a whole. Theory is majorly taught in training institutions and practical time is limited which affects the performance later at the place of work. Since the attitude of extension workers towards their work was found to be positive, the challenges they face should be solved to make work enjoyable so that the communities develop with a high level of food security and good livelihoods of people.

5.6 Recommendations

In order to improve the performance of the extension worker, there is need for the training institutions and other responsible stake holders to review the curriculum to include more practical time, field attachments and apprenticeship programs to allow for hand on practical skills which will make the extension workers come out when they are well vast with the reality that is in the field.

Similarly, there is need to provide better tools in the training institutions and work places to facilitate learning and performance of agricultural activities for faster agricultural growth. In most cases the training institutions lack the facilities and equipments or tools to train the workers to be. This therefore leaves the graduates of the training institutions to face the working world with limited exposure to working tools.

To ameliorate the status quo of the extension workers further to help them perform well, there is need for the ministry in charge of agriculture to put in programs for more career development opportunities with proper methodologies for training extension staff and farmers.

The government of Uganda should also continue to encourage women to take up vocational courses which include extension training since women can carry out extension work in the same way the male counter parts do.

Basing on the finding of this study, it is recommended that a proper planning to enhance the transport system used by the extension workers be made so that they can reach all the farmers. This can be done by increasing on the extension budget and a proper accountability on how money is used plus a serious monitoring and evaluation of extension activities.

There is need to beef up all the programs that aim at reducing poverty among farmers to aid the farmers move to the levels where they can practice modern agriculture. Poverty is still seen as one of the main challenges hindering performance of extension workers and agricultural productivity as a whole.

Both the government and NGOs should have a serious monitoring and evaluation of extension activities to avoid corruption.

Agricultural extension workers through more sensitization and educational programs should encourage farmers to form and remain in groups so as to ease the accessibility of the farmers by the extension workers. Organization of farmers for empowerment and group extension access can be done through sensitization and educational programs.

5.7 Areas for further research

The following areas can still be explored for further research as pertaining to agricultural extension work;

- The attitude of farmers towards extension workers in Uganda
- Performance of agricultural extension workers in the hard to reach areas of Uganda
- The attitude of extension workers towards farmers.
- Factors affecting stability of farmer groups in Kabale District

References

Adefila, J.O. (2012**).** Spatial Impact of Extension Workers' Performance on Sustainable Agricultural Development in Kaduna State of Nigeria.

AHI Report, (2002). Effects of climate on farmers' activities. Rubaya Sub County.

Amin, M. (2005). Social Science Research: Conception Methodology and Analysis. Kampala: Makerere University.

Bategeka, L., Kiiza, J., Kasirye, I. (2013). Institutional Constraints to Agriculture Development in Uganda, economic policy research centre, Makerere.

Benin, S., Nkonya, E., Okecho, G., Randriamamonjy, J., Kato, E., Lubadde,G., Kyotalimye, M., & Byekwaso , F.(2011). Impact of Uganda's National Agricultural Advisory Services Program. International Food Policy Research Institute 2033 K Street, NW.

Bhyat, F. (2006). From the Particularities of Practice to the Generalisation of Theory. Pages 39-59.

Birkhaenser, D. R. (1991). The economic impact of Agricultural extension. A review on Economic Development and Cultural Change. 39 (3), 607-650.

Birmingham, D.M. (1999). Revisiting Agricultural Extension. Experiences in Less Industrialized Countries. Journal of International Agricultural and Extension Education, Trinidad and Tobago 1999.

Bantley and Mele. (2011). Sharing ideas between cultures with videos**.** International journal of agricultural sustainability 9(1) 2011

BTVET strategic plan, (2011-2020). Ministry of Education and Sports, Kampala, Uganda.

Cohen, L.,Manion, L.(1994). Research methods in education (4thed.). London, NY. Routledge.

Cohen, L, Manion, L, and Morrison K, (2000). Research methods in education 5th edition, Routledgefalmer, London

Davis, K.E (2008). Extension in Sub-Saharan Africa: Overview and Assessment of Past and Current Models, and Future Prospects. Journal of international agricultural and extension education,vol.15,no 3

Dooley,D.(1995). Social research methods (3rded.).New Delhi: Prentice Hall of India.

Downloaded on 24th November 2012 from www.sozialpsychologie.uni-frankfurt.de/wp-content/uploads/2012/01/2008-Riketta-job-satisfaction-performance.pdf

Defoer, T. 2002. Learning about methodology development for integrated soil fertility management. Agricultural Systems 73: 57–81.

Ferris, G. R., Witt, L. A., Hochwarter, W. A. (2001). The interaction of social skill and general mental ability on work outcomes. J. App. Psy., 86: 1075-1082

Ghimire, N.R, and Martin, R. A.(2011). A Professional Competency Development Model: Implications for Extension Educators in the journal of international agricultural extension education, Vol 18. No 2

Government of Uganda (GoU). (2001). The National Agricultural Advisory Services Act, 2001. Acts Supplement No. 9, The Uganda Gazette No. 33, Volume XCIV

Harder, A.,Lamm, A.J, Ganpat,W,and Lindner, J.R (2011). An Examination of Trinidad Extension Officers' Behavioral Beliefs and Intent to Participate in an International Extension Experience, in the international journal of agricultural extension education. Vol.18, no 3

Harrison, P. (1980). The third world tomorrow. Harmondsworth, UK: Penguin.

Kabale District Local Government hand book. (2002)

Keith, F. Punch. (1998). Introduction to Social Research. Quantitative and Qualitative Approaches. SAGE Publications London, New Delhi.

Kombo, D.K., & Tromp, D.L.A. (2006). Proposal and thesis writing, an introduction**,** Pauline publication, Nairobi

Krepp, S. P. (2012). Redefining Agriculture Extension.Retrieved on 12th November 2012 from

http://www.grameenfoundation.applab.org/blog/redefining-agriculture-extension.html

Kumar, R. (2005). Research methodology. A step by step guide for beginners. London; SAGE Publications.

Leedy, P.D. (1997). Practical research. Planning and design (6thed.). New Jersey: Merrill, Prentice Hall.

Ludwig, B. G. (1999). Globalizing Extension Professionals. *Journal of Extension*, *37*(4)

Ministry of agriculture, animal industry and fisheries (2000); NAADS master documents, on line, accessed on 20th June 2013 from http://www.naads.or.ug/publications/naads-core-documents-2/naads-master-document-of-task-force-and-joint-donor-groups-2000/

Mjelde, L. (2006). The magical properties of workshop learning. New York: Oxford Wien.

Mugenda, O. M., Mugenda A. G. (2003). Research methods. Quantitative and Qualitative approaches.

Obaa, B., Mutimba, J., Semana, A.R. (2005). Prioritizing farmers' extension needs in a publicly-funded contract system of extension: a case study from Mukono district, Uganda.

Odiya, J. N. (2009). Research proposals and Reports in APA or MLA publication style. Makerere University

Okello, B. (2009). Complexity and contradictions in vocational education in Uganda . Kampala.

Okello,B. (2012). Factors influencing the attitude towards technical vocational education and training in Uganda. A PhD thesis in the school of education of Kenyatta University.

Okereke, N.E.E., Onu, D.O. (2007). Perceived Factors Affecting Performance of Extension Workers In Imo State, Nigeria, Global approaches to extension practice, a journal of agricultural extension accessed online on 21 June 2013, from http://www.ajol.info/index.php/gaep/article/view/34894

Okinyal, H. (2006). Status of BTVET in Uganda. UNESCO paper presented in Lilongwe, Malawi.

Payne, H. J. (2005). Reconceptualizing Social Skills in Organizations: Exploring the Relationship between Communication Competence, Job Performance, and Supervisory Roles. J. L. Org. Stu., 11(2): 223-226.

Qamar, M. K. (2005). Modernizing national agricultural Extension systems. A practical guide for policy-makers of Developing countries.

Riggon, A. C,. Ronald,. Tylor, J., Shelby, N. (2000). Personality and Communication Skills as Predictors of Hospice Nurse Performance. J. Bus. Psy., 15(2): 351-359

Riketta, M. (2008). The causal relation between Job attitudes and performance; a meta-analysis of panel studies.

Röling, N., & Jiggins, J. (1998). Synthesis. Chapter 16. In: Participatory learning and adaptive management in times of environmental uncertainty, N. Röling & M. A. E. Wagemakers (eds.). Cambridge: Cambridge University Press.

Röling, N., & De Jong, F. (1998). Learning: Shifting paradigms in education and extension studies. The Journal of Agricultural Education and Extension 5(3): 143–161.

Semana, A.R. (n.d). Agricultural Extension Services at Crossroads: present dilemma and possible solutions for the future in Uganda. Makerere University

Strong, A. & Harder, R.(2011). Recommended Competencies Needed for Teaching in International Extension Settings**.** Journal of International Agricultural and Extension Education, Volume 18, Number 3

Texas, A.M University system (2005). Performance Appraisal System Extension Agents, Performance Summary. Texas Cooperative Extension. Accessed on online on 21 June 2013from; http://countyprograms.tamu.edu/cpoadmin/AgentsPASEevaluationDocuments .pdf

Tilak, J.B.G. (2002); Vocational education and training in Asia in The Handbook on Educational Research in the Asia Pacific Region. (eds. John P Keeves and Rye Watanabe, Kluwer Academic Publishers 2002)

Tiraieyari, N., Idris, K., Hamzah, A., Uli, J. (2010). Competencies influencing extension workers' job performance in relation to Good Agricultural Practices in Malaysia. A. J. App Sci., 7(10): 1379-1386

Tuckman, B.W. (1994). Conducting educational research (4thed.). Fort Worth: Harcourt Brace College Publishers.

University of Kentucky. (2008). County extension agent development system: A comprehensive and systematic approach for facilitating professional growth.

Retrieved on 26th march 2014 from http://www.ca.uky.edu/Agpsd/systemnew.html

Vanclay, F., Lawrence, G. (1995). The environmental imperative. Ecosocial concerns for Australian agriculture, Central Queensland University Press, Rockhampton

Zossou, E., Vodouhe, D.S., Van Mele, P. and Lebailly, P. (2012). Linking farmers' access to rural radio, gender and livelihoods: case study of rice processors in Benin. Paper presented at the Third IAALD Africa Chapter Conference. Johannesburg, South Africa, 21-23 May 2012.

Appendix 1. Interview guide for extension workers.

Dear respondent

I am a student of Kyambogo University pursuing a Masters Degree in Vocational Pedagogy. I am carrying out an academic study on the extension work in Rubaya sub-county. I kindly request you to provide the relevant information. This will be treated with utmost confidentiality and will be used for academic purposes only.

1. Work experience (no of years) …….
2. Institution where you were trained……
3. Gender…….
4. From your field experience, how do you think the training you got from school has helped you in your work?
5. Did your training involve ICT
6. How related are the tools you used at school during training to the tools you are using now?
7. During your training time, how much practical work was given to you compared to the theory?
8. What challenges do you face as an extension worker in this sub county?
9. What recommendations do you suggest in order to solve these challenges?

Appendix 2. Interview guide for farmers.

Dear respondent

I am a student of Kyambogo University pursuing a Masters Degree in Vocational Pedagogy. I am carrying out an academic study on the extension work in Rubaya sub-county. I kindly request you to provide the relevant information. This will be treated with utmost confidentiality and will be used for academic purposes only.

1. As a farmer in this sub-county of Rubaya, what are the problems you are facing?
2. For how long have you been involved in farming?
3. Have extension services ever reached you? If so, how have they changed your way of farming?
4. How do you think other farmers have benefitted from extension services?
5. What do you think are the challenges faced by extension workers in this sub county?
6. What do you think are the solutions to these challenges?

Appendix 3. A Likert scale for extension workers

For the items below, tick the most appropriate answers

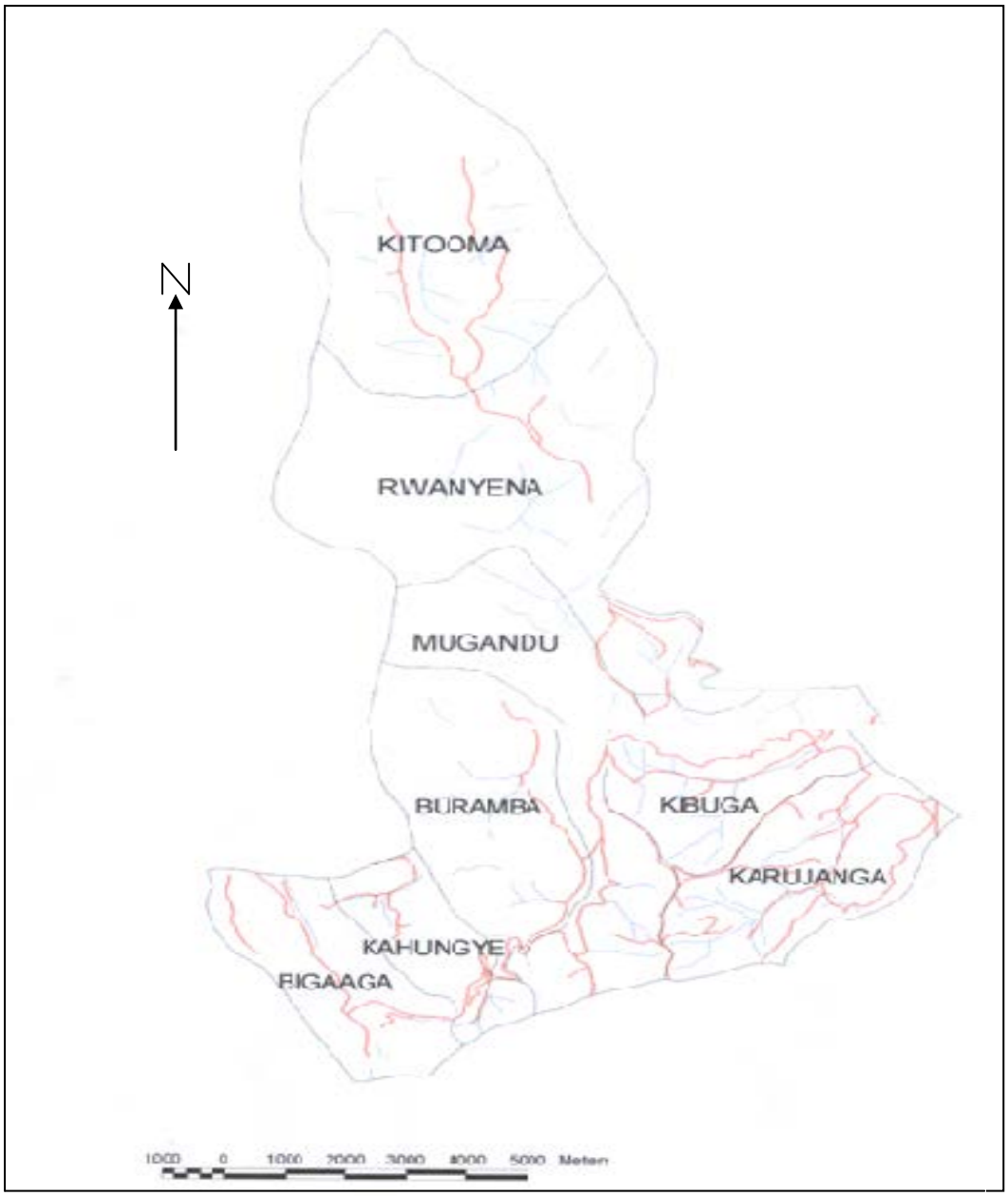
1. The job of extension work is enjoyable
    - o Strongly agree
    - o Agree
    - o Not sure
    - o Disagree
    - o Strongly disagree
2. Our work is tedious
    - o Strongly agree
    - o Agree
    - o Not sure
    - o Disagree
    - o Strongly disagree
3. I wish my children could be extension workers like me
    - o Strongly agree
    - o Agree
    - o Not sure
    - o Disagree
    - o Strongly disagree
4. Extension workers are paid well
    - o Strongly agree
    - o Agree
    - o Not sure
    - o Disagree

- Strongly disagree

5. Society does not care for extension workers
    - Strongly agree
    - Agree
    - Not sure
    - Disagree
    - Strongly disagree
6. Given chance, I would opt for another profession
    - Strongly agree
    - Agree
    - Not sure
    - Disagree
    - Strongly disagree
7. Extension work is only good for men not women
    - Strongly agree
    - Agree
    - Not sure
    - Disagree
    - Strongly disagree
8. It is easy to work with the farmers in the sub county
    - Strongly agree
    - Agree
    - Not sure
    - Disagree
    - Strongly disagree

9. It is easy to work with small scale farmers
    - Strongly agree
    - Agree
    - Not sure
    - Disagree
    - Strongly disagree
10. If I was trained well, my work would be better
    - Strongly agree
    - Agree
    - Not sure
    - Disagree
    - Strongly disagree

Appendix 4. Map showing parishes in Rubaya Sub County



Key:

Parishes

Roads

Rivers

Source; AHI report 2002