AGRICULTURE TRAINING IN FARM INSTITUTES AND THE LABOUR MARKET REQUIREMENTS IN UGANDA

By

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DECLARATION

I **Tumwesigye Rogers** do declare that this thesis is my original work which has never been presented to any other University for the award of a diploma or degree.

Tumwesigye Rogers Signed.....

2010/U/HD/230/MVP Date.....30/10/2017

APPROVAL

We declare that this research report entitled "**Agriculture training in farm institutes and labour market requirements in Uganda"** is Rogers Tumwesigye's work and has been submitted by our approval

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To all those people whose prayers and love helped to transform my dreams into reality.

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LIST OF ACRONYMS

ANTA	Australian National Training Authority
BTVET	Business Technical and Vocational Education and Training
CoC	Centre of Competence
COMEDAF	Conference of Ministers of Education of the African Union
DANIDA	Danish International Development Agency
DIT	Directorate of Industrial Training
ESC	Education Service Commission
FAO	Food and Agriculture Organization
GWP	Government White Paper
ICTs	Information Communication Technologies
IFPRI	International Food Policy Research Institute
MGLSD	Ministry of Gender Labor and Social Development
MoES	Ministry of Education and Sports
MVP	Masters in Vocational Pedagogy
NAADS	National Agricultural Advisory Services
NCA	National Certificate of Agriculture

NOMA	NORAD's Program Master's Studies
NORAD	Norwegian Agency for Development Cooperation
PEAP	Poverty Eradication Action Plan
TVET	Technical Vocational, Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organization
UVQF	Uganda Vocational Qualification Framework
VET	Vocational Education and Training
WWW	World Wide Web
ZARID	Zonal Agriculture Research Institute Development

ABSTRACT

Agriculture training is intended to prepare trainees to meet the agriculture labour market requirements. In Uganda training is done at farm institutes, college and university levels. This study assessed Agriculture Training in Government Farm institutes and whether the training meets the Labour market requirements in Agricultural sector of Uganda. The agricultural training methods used in farm institutes were identified; the training methods employed and how they prepared trainees to meet the labour market requirements were determined. The attitude of agriculture trainees and graduates from farm institutes towards their trade were established. A descriptive study design was used employing both qualitative and quantitative approaches. Farm institute graduates, trainees, instructors and institute administrators were used for the study. Interviews, observation and document analysis were used to collect. Snow ball, systematic and stratified random sampling techniques were used to select the respondents. Findings indicated that the lecture method was dominant over practical methods and had limited consideration for agriculture labour market. As a result, trainees and graduates were not equipped with the skills and attitudes needed in labour market to a large extent which led graduates to face challenges on their first time of employment during practical tasks. Hence there is need for instructors to train professionally and renew their teaching methods so as to make teaching more practical and use appropriate teaching methods that can enrich the trainees with hands on experience. In addition, farm institutes' laboratories need to be well resourced and curriculum made flexible to include contemporary and emerging issues from time to time. Farm institutes' graduates' who retrained had more positive attitudes' towards manual work and remained in the trade. Therefore Uganda Government through the Ministries of Education and Sports and the Ministry of Agriculture Animal Industry and Fisheries should put more emphasis on practical training if positive attitudes are to be developed in the citizenry.

CHAPTER ONE
INTRODUCTION

1.1 Overview

This study focuses on agriculture training in farm institutes and agricultura labour market requirements in Uganda. I purposely identify agriculture teaching methods used in farm institutes and determined how the teaching methods meet the labour market requirements. I also established the attitudes of agriculture trainees and graduates towards agriculture trade. In the literature review, I used my personal work, educational background experience and knowledge from other scholars to Identify different agriculture teaching methods used by instructors in farm institutes. I also determined how agriculture teaching methods used in farm institutes equipped trainees with skills and attitudes needed in the labour market. It was from this analysis that I laid out the problem statement under investigation as well as the purpose and objectives of study.

1.2 Background to the Study

Training in agriculture skills, knowledge and attitudes is very important in preparing people for employment and income generation in the labor market (Labrador, 2008, Johanson & Adams, 2004). Indeed, Egau Okou[1] made an observation that the present labour market requires people who are multi skilled, creative, flexible, and able to work in teams and with ability to work in new and changing technologies. This calls for the ability to use the hand and the mind and able to integrate the two in production. However linking Vocational

[1] Assistant Commissioner, Instructor and Tutor in the Ministry of Education and Sports-Uganda. Facilitation to Masters in Vocational Pedagogy (MVP) students Kyambogo University on Sept. 9th, 2011

Education and Training (VET) to the labour market is a global challenge (Johanson, & Adams, 2004).

On the contrary, the present training in skills, knowledge and attitudes seem not to result into job creation and increased agriculture productivity (Van Der Geest & Van Der Hoeven, 1999). This is often attributed to inadequate training or the changing patterns of employment which require changing patterns of skills (Ministry of Finance, Planning and Economic Development [MFPED], 2004). There is limited evidence that people who have gone through agricultural training use the skills, knowledge and attitudes acquired from these training institutions to increase productivity at their workplaces or to create their own employment (Barnett, 1999).

In response to labor market requirements, governments in Hungary, Poland and Turkey instituted retraining programmes in early 1990s to find out the better ways of training that equip the citizens' with employable competences (Indermit, Fruitman, & Amit, 2000). Similarly in Yugoslavia, agricultural producers lacked the necessary knowledge and skills to use technical methods efficiently and this was limiting their productivity (David, 1962)

In Africa Agriculture training was put among the key priority areas in the strategies to revitalize Technical Vocational Education and Training (TVET) in a Conference of Ministers of Education of the African Union ([COMEDAF], 2007). In the COMEDAF meeting held in Addis Ababa in May 2007, it was discovered that Africans lacked the skills, knowledge and attitudes required by the labour market to promote Agricultural productivity. In Africa the labour market in the agricultural sector is yet to be developed, for example in Uganda where 80% of employment is derived from agriculture; the labour market is dominated by people with limited skills and suffers from high rates of

unemployment and underemployment (Ahimbisibwe, 2010). The agricultural sector is dominated by practices such as poor husbandry, limited access to technical advice, limited access to credit and limited capacity to adopt modern technologies (Epeju, 2003). As a result modern Agricultural sector businesses are usually held by foreigners (BTVET strategic plan 2011).

Agricultural productivity increases when most farmers have been trained in agricultural institutions to be innovative and to apply advanced technology (Gould, 1993). In Uganda training in agriculture is grouped among the BTVET courses that are offered by vocational training institutions. For that matter, Uganda has made attempts to invest in technical education by both the private and public sector and it is projected that about 42,000 students will be entering BTVET institutions by 2016/2017[2].These efforts have improved on geographical coverage and student numbers but not the quality (Johanson & Adams, 2004; Lindell, 2010; Ssekamwa, 1997). Among the Government agricultural training institutions are farm institutes out of which Kitagata farm institute in Shema District, Rwampala and Rwentanga Farm Institutes in Mbarara District were considered for the study. Farm institutes train students in skills in fields such as agriculture (crop and animal care), forestry and marketing.

However skills development is not enough unless it is supported by other attributes such as attitudes that help people come to terms with their circumstances, make the best of the opportunities they have and contribute positively to the communities in which they live (Frost, 1991; Reece & Walker, 2003). As a result there is an increasing concern on the

[2]Ministry of Education and Sports (MoES) BTVET advertorial: Skilling Uganda, strategic plan- extracted from the New Vision of Monday Oct. 1st 2012

nature of the skills and attitude training in farm institutes as well as their application to the labour market.

1.3 Statement of the problem

The Agricultural labour market requires graduates who are skilled, knowledgeable and with the right attitudes that can enhance productivity. However agricultural VET institutions appear to provide such training only to a limited extent. The skills, knowledge and attitudes of any vocational trainee depend on the programme offered, the type of personnel for instruction and the teaching methods used by the vocational training institution. This preparation by Vocational training institutions creates a mismatch between training and the labour market requirements. This study examines the extent to which farm institutes in Uganda equip agricultural trainees with skills, knowledge and attitudes required by the agriculture labour market

1.4 Purpose of the study

The purpose of the study was to establish whether agricultural training carried out in farm institutes equipped learners with skills, knowledge and attitudes required by the Agricultural labour market in Uganda.

1.5 Objectives

1. To identify agriculture training methods used in farm institutes.
2. To determine whether agriculture training methods employed in farm institutes prepare trainees to meet agriculture labour market requirements.
3. To establish the attitude of agriculture trainees and graduates from farm institutes towards their trade.

1.6 Research questions

1. What are the agriculture training methods used in farm institutes?

2. Do the agriculture training methods employed in farm institutes prepare trainees to meet the agricultural labour market requirements?

3. What is the attitude of agriculture trainees and graduates from farm institutes towards their trade?

1.7 Scope

1.7.1 Geographical scope

The study was carried out in three out of the four government owned farm institutes in Uganda. These included Kitagata farm institute in Shema district, Rwampala and Rwentanga farm institutes in Mbarara district.

1.7.2 Content scope

The agricultural training methods in farm institutes in relation to vocational didactics (tasks, tools and materials, tutoring, time) and how they prepare trainees to acquire skills, knowledge and attitudes required by the labour market was examined. In the second objective, focus was on the match between agriculture training in farm institutes and labour market requirements for an agriculturist in Uganda. The third objective, investigated the attitude of agriculture trainees and graduates towards their trade.

1.8 Significance of the study

The study is beneficial in a number of ways because in the first place, it brings out information and issues about agriculture teaching and learning and the extent of compliance to the professional standards in the labour market. Hence the study is pivotal to teachers in the classroom in their struggle to find modalities to revitalize the teaching of

agriculture. It will further stimulate an interest in the need for reorientation of the curriculum to meet the labour market requirements so as to bridge the gap that is currently evident between theory and practice hence benefiting employers and employees. Equally significant, the results of the study may enlighten policy makers on the need to formulate and implement the stronger policies that will improve the quality of standards in agricultural training institutions.

1.9 Conceptual frame work

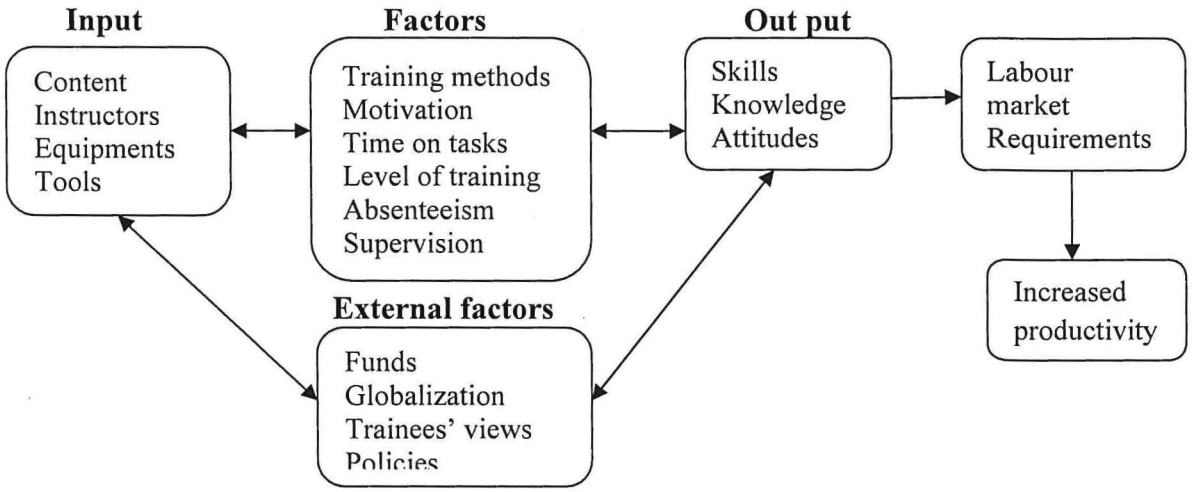

Figure 1.1: Conceptual frame work

The conceptual frame work (Figure 1.1) explains the main things to be studied and the presumed relationships among them. It is based on Lev Vygotskys theory of social constructivism (Driscoll, 2000).The theory works on principle that the teacher and the older learners should be active and involved to help the younger learners (Lave & Wenger 1991). The class should be well resourced with a variety of tools which should provide the learners with learning experiences. For that matter, inputs in farm institutes are; content, instructors, equipments, tools, and government policies. These factors aim at producing graduates who have knowledge, skills and attitudes that facilitate them to work in fields

like crop science, animal science, marketing agricultural products, managing trainings, supervision and administering of projects in the private or public sector.

Executing the process to the output involves teaching methods, time on tasks, absenteeism, level of training motivation and supervision. Proper direction of the process leads to the output which is the graduates (labour force) with skills attitudes and knowledge. However the training programme can be interfered with by lack of funds, globalization and peoples' perceptions about agriculture. This results into skills mismatch in the labour market.

1.10 Operational definition of the key concepts

Competence: Competence can be defined as a possession and development of skills, knowledge, appropriate attitudes for successful performance in the labour market.

Labour market requirements: This refers to the skills, knowledge and attitudes that the world of work expects a farm institute graduate of agriculture to posses.

Labour market: This means the state of demand for farm institutes agriculture graduates by the world of work.

Mismatch: This refers to the gap between expectations and reality.

Practice: This means practical work in a workshop / room with special equipment, of an agricultural farm under supervision by a qualified teacher / instructor.

Training: Training is the act of acquiring skills, knowledge and attitudes.

Vocational education: For the purpose of the study, it means training in agricultural skills knowledge and attitudes.

1.11 Personal Background

I am a professional agriculture teacher practicing teaching and farming simultaneously. I have worked in different capacities first worked as a Farm manager/teacher and teacher in

charge of the school farm where I have learned a lot about learning/teaching in class and at the work place. My personal experience as a student of agriculture and work experience as a farm manager and teacher since 2000 was enriching and inspiring. While in the farm, I was introduced to graduates from farm institutes who had limited agricultural skills to apply and learnt most competences on the job. During the performance of my duties I realized that formal Agriculture/Teacher training had not equipped me with the competences that I needed to do my job as a farm manager and teacher because I had to learn some practical skills from my juniors and supervisors on the job. Consequently I was compelled to examine and reflect upon the teaching/training in formal training institutions especially on the appropriateness of the didactics and pedagogy used. As a master student of Master of Vocational Pedagogy (MVP), what I have gone through has been a turning point as far as teaching and learning is concerned. The new approach to teaching that emphasizes group work, learning by doing, trying and failing and trying again has been the start of the great journey to learning. I have realized that group learning and participation is the best method of learning. I urge all Educational institutions to adopt it in order to improve productivity of agricultural graduates. It is because of this experience that I decided to carry out a study to assess agricultural training in farm institutes and labour market requirements in Uganda with a view of suggesting change.

CHAPTER TWO
LITERATURE REVIEW

2.1 Training methods used in Farm Institutes.

2.1.1 Lecture Method

This is a traditional method where instructors stand in front of the class and pass on knowledge while learners act as recipients of knowledge (Dube &Moffat, 2009). The teacher is regarded as a depositor while the learners are depositories seated patiently receiving knowledge from the teacher. The lecture method has got advantages to the teachers such as, presenting facts in order, is suitable for large groups of people but it leaves the audience passive because communication is one way (McCarthy, 1992; McKimm & Jollie, 2007). Lecture method is preferred by trainees especially who sleep in class, dream or pretend to be paying attention or those who are forced to attend. Much as the teacher can try to motivate the students by allowing question, and incorporating learning aids in a lesson, big class numbers continue to limit the acquisition of competences. It is therefore not good for teaching practical skills like in agriculture as it most learners passive.

Most school agricultural science curriculum is structured around three major concepts namely; production, protection and economics, that should be taught practically to make an impression on society (Suleiman & Barry, 1997). Much as Suleiman and Barry recommend practical teaching, there are elements within the curriculum like general knowledge and vocational theory that need to be taught theoretically using lecture method. Different countries have different policies regarding practical teaching and theoretical teaching. In China, there used to be 70% theory teaching (lecture) and 30% practical (lab experiment, field practice, and

internships). But the new reforms stipulate 50-60% theory (lecture) and 40-50% practical teaching (Shao & Bruening, 2002).

In Norway, Norwegian mission report (2009 p. 5), recommends 50:50 theory and practice ratio respectively (Center of Competence in Skenderaj [CoC]: Building and construction, 2009). This is done to ensure that practical skills are mastered by the students. In Uganda, the Acting Head of BTVET[3] Department and curriculum specialist for technical education revealed that there is consideration for allocating 80% for practical training and 20% for theory. Whereas these policies are in place, implementation remains a challenge in most countries.

Various studies conducted to this effect reveal that lecture method dominate in most countries' agriculture teaching methods. A study carried out in Botswana revealed that most teachers were still using traditional methods such as lecturing instead of using methods such as community projects and project work which are more realistic in equipping trainees with skills and knowledge (Dube & Moffat, 2009). In order to promote agricultural skills, practical methods: methods that emphasize hands on skills need to be promoted. In Uganda the real approach to the teaching of agriculture was discouraging (Ssekamwa, 1979). Agriculture is taught theoretically and has failed to make an impression on society. Students come to farm institutes with experiences on problems such as weed control, fertilizer application, disease control which can only be solved when students are exposed to these situations practically. These real life experiences cannot be taught by lecture method.

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[3] This was in a face to face interview with MVP students of which I was among on 8th Sept 2011

2.1.2 Laboratory Method

This method is mostly used for teaching experiments and demonstrations. In agriculture, tests involving soil, parasites, pathogens and plant diseases are best analyzed when conducted in the laboratory. This method promotes the development of manual skills hence good for vocational subjects like agriculture. Practical agricultural training helps the learners to solve some common problems which cannot be solved theoretically. The use of instructional materials enables students to learn while doing. Learners are able to use their different senses by seeing and doing in solving their problems with confidence. This method is very good in science for developing a process of inquiry (Blum, 2009). For the success of this method, instructors should give individual instructions and ensure that trainee understand what they are doing and why they are doing it in that particular way (Sharma, 1994). However it can be limited by failure to have enough and or modern lab equipment.

2.1.3 Outreach Programmes

These involve going out to the field to explore the labour market. It helps students to experience different farming practices in the field. In agriculture students can visit farmers' projects, and learn from farmers' experience about management of the projects. Students can also teach farmers the new techniques of management if it is found that the farmers are using traditional methods of management. Students prefer outreach programmes because they give a better and more natural experience. While comparing learning in institutions and the work places students stated that schools are good but cannot teach how to work independently (Anja, 1995).

2.1.4 Field Trip

This involves exploring the environment in its natural state. In agriculture topics involving animal, botany, landscape, cultivation and harvesting are best learnt in their natural state (Ali Shah, 2009). Field trips help to cross check information that was taught theoretically in the class room. However for successful field trip, proper instruction of what to observe should be given before going out so as to limit on the distracters. Agriculture teachers have an advantage when teaching in the field because students can observe by themselves through different channels of perception a situation which the teacher can find difficult to verbalize. However teaching in the field can be distractive and therefore the teachers should be as task oriented as they are in the class (Blum, 1996).

Similarly to the above learners should be offered opportunities to attend industrial training approximately for two months in order to acquire work related skills (BTVET Strategic Plan, 2011). During this period learners are supposed to perform field activities under the supervision of experts. This experience helps to connect theory learnt at school with practice in the work place. It also compensates students from institutions that do not have modern equipment. This allows learners to meet farmers and interact in community farming projects in order to gain hands on agricultural skills in real situations.

Learners have additional benefits in aspects like, improved interpersonal skills including communication, organizational skills, teamwork, decision-making and planning. During this period, instructors should monitor students' progress in the field to find out which problems they are facing. This is a good policy but the challenge is on its level of implementation. For example the BTVET Strategic Plan (2011 p. 14) states that, the provision of internships is currently not sufficient to meet the growing demand. There is

therefore need to find out how implementation of industrial training has been done in promoting competence acquisition in agriculture training institutions.

2.1.5 Information Technology (IT) and the World Wide Web Context

The use of Information Technology (IT) and the World Wide Web (WWW) as a teaching tool and rich source of information is increasing rapidly. It includes the use of information communication technologies (ICTs) to pass on knowledge to students. The technologies commonly used are computers, television, radio, films, video and charts, maps, graphs. IT and the World Wide Web as a teaching tool have the following advantages; IT provides access to expert knowledge and rich sources of information originating from around the world (McKimm & Jollie, 2007). IT helps in teaching topics such as digestive systems and the working of small machines which can be watched on television. In addition it entertains learners and keeps group's attention (McCarthy, 1992). However if it is not regulated, learners may waste time on information not connected to the study especially pornographic pictures that affect their moral behaviors. Failure to use information technologies is heavily blamed on its cost. It is only those rich well established institutions in that can afford the skyrocketing cost of it technologies.

2.1.6 Project Method

A project is a practical unit of activity of a problematic nature, planned and carried to completion by the student in a natural, manner and involving the use of physical materials to complete the unit of experience. Under this method, tasks can be given on individual or to group basis to complete depending on the instructors' (Petty, G. 1993). In project work, students are expected to use part of their free time to accomplish the tasks given. Practical projects equip learners with skills and positive attitude and the ability to work

independently. Teachers should ensure that the project given is meaningful to learners. Ali Shah, (2009) contends that projects are based on principles of purposefulness activity, reality experience, cooperation, flexibility and democratic approach.

This implies that the task under project method should bring meaning in the life of the learners. Learners should also be in agreement to perform the task and should treat the task as important in equipping them with the right skills and attitudes needed for survival. Teachers are then expected to supervise projects and direct its progress. A project should allow every member of the group to participate in the activities.

Borrowing a leaf from the Norwegian mission report that recommends a maximum of 30 learners in a theory lesson and 15 learners in a practical lesson (CoC, 2009), the numbers within a group should be small if projects are to be fruitful. Larger numbers are associated with problems such as inadequate tools and materials, safety risks and reduction of learning outcomes for students. This is because active members with in a group struggle to use the few available tools amongst themselves during practice. After the project has been finished there is need for evaluation to see if learning objectives have been achieved. It is also important to note that the success of the above teaching methods depend on the competence of instructors and the tools available.

2.2 Characteristics of Instructors

Different countries have set up programmes to prepare individuals both for self employment as farmers and for wage employment in private, state owned, and or government agriculture organizations. However the main challenge encountered has been limited availability of skilled instructors to carry out the work (Middleton et al., 1993). Various scholars have carried out research in this field of knowledge. While commenting

on industrial work, Kajsa et al., (1991) states that whatever training strategy taken the teacher should be skilled professionally with experience and knowledge about tools, work division and organization. Nilsson[4] identifies five characteristics of professional competence as; long period of education, experience, ethics, different types of knowledge, and qualification (paper) or credentials. Therefore a vocational teacher should have technical skills, industrial experience and pedagogical skills (Kaahwa, 2005). As Middleton & Demsky, (1989) cited in Kaahwa, (2005), unqualified teachers adversely affected the training quality in countries where they operate.

Similarly in Uganda, teachers are noted to have lacked agriculture kills since the colonial times. Majority of the teachers of technical subjects were not qualified as teachers and worst of all they were qualified in purely academic subjects and therefore did not have the technical skills to pass on to their learners (Ssekamwa, 1997). Yet teachers are perceived as greatest sources of educational change in an orderly society (Perraca Bijur & Wheeler, 2000). This resulted into the failure to ignite the right skills, attitudes and competences to apply in the labour market because the teachers could not give what they did not have (Hammond cited in Egau Okou, 2002). This implies that teachers' knowledge and skills influence students' achievement. If the teachers are poor deliverers of the content, then they are likely to produce poor graduates with low motivation and confidence to work.

Studies on teacher qualification show that ill trained teachers normally teach to the limits of their knowledge because their own lack of education holds back what they do in classroom (Nanda, 1998, p. 39). This implies that no system of education is better than his personnel and no system of education above the standard of its teacher (Ali Shah, 2009).

[4] Nilsson is a professor of vocational didactics in his lecture note to MVP students in April 2011

Therefore teachers should aim at upgrading their skills by attending refresher courses, seminars, and workshops or visiting teachers especially those of the subject they teach (Sharma, 1994). This can give them new ideas for professional and instructional improvement. The traditional understanding of a teacher has always been taken to be a fountain of knowledge; one that stands in front of students and students listen passively as recipients of the knowledge (Reece & Walker, 2003).

In the modern time where there have been advances in information communications technology (ICTs), the teacher is a facilitator whose role is to facilitate the process of searching for the truth through the process of discovery (Kaahwa, 2005). Similarly, McKimm & Jollie, (2003) propose a shift from the 'teacher as expert' to 'teacher as facilitator of learning' in which teachers guide learners towards resources and sources of knowledge just as much as being the sources of knowledge themselves. Therefore teachers should respect learners ideas, guide, counsel, and direct the learning. Sharma, (1994) emphasizes the need for teachers to concentrate on students work and help them to understand what they are doing, why they are doing it in what way.

One of the major functions of schools is that they should be sources new ideas and knowledge which Ansu, (1995) refers to as innovation function of education. Hence education should prove that it is equal to the challenges of technology and the information age (Raggatt & Unwin, 1991). However this is still a challenge especially to developing countries like Uganda due to inadequate financing, weak information links with employment and fragmented systems (Kaahwa, 2005) which leads to difficulties in paying salaries high enough to attract and retain instructors especially those with occupational skills in high demand in the private sector.

Tools used to facilitate teaching and learning in Vocational Training Institutions

Tools and materials are very important in the execution of tasks because without them no task can be carried out. In addition agriculture training for high quality skills requires proper equipment, tools and materials for practice by the learners (Conference of Ministers of Education of the African Union [COMEDAF], 2007). Tools help the teacher to achieve the goal of why and how to do things. However with the present changes in technology, the type/model of the tools /materials matter a lot.

Tools and materials in agriculture training institutions are many and varied. In advanced countries training institutions like in the soviet polytechnics, teaching aids such as toys are normally produced by the students in their practical work (Masri & Munther , 1994). This is done as a way of improvisation though it may not bring the reality in the classroom. This implies that much as toys may not bring the reality into the classroom, learning aids pray a significant role in trying to copy the reality which promotes learning outcomes. Under such circumstances, the tools in agriculture training institutions should be similar to the tools in the work places.

Agriculture training institutions which have enough and up-to-date agriculture training equipment have a better chance that their students will perform well once they are outside in the labour market. Unfortunately, schools are not economically equipped to buy the latest equipment (Mjelde, 2006, p. 69). With Uganda's new policy of vocationalization of education, there is need for the government to increase funding in farm institutes /vocational training institutions so as to increase the amount of tools for the learners. If the tools are found insufficient and obsolete, it makes one to doubt the nature of skills got from using such obsolete tools. It results into academic education that promotes rote learning of

dead facts instead of equipping trainees with necessary skills that will enable them to survive and be productive in agriculture labor market (Dube & Moffat, 2009).

Thus shortage of tools can be a hindrance to learning and motivation by learners. Studies carried out have presented students' complaints about shortage of tools that resulted into theoretical education that could not help them use their hands, legs, eyes or and arms (Emerson, 1984 in Raggart & Unwin, 1991). Students were not happy to be enclosed in schools, and colleges and recitation rooms, for ten or fifteen years and come out at last with a bag of wind, a memory of words without any practical skills to apply in the labour market. This implies that the trainees can themselves loose trust when they are not involved in performing tasks.

2.3 Agriculture training methods and labour market requirements

The labour market is undergoing many changes as a result of new technologies, new forms of work organizations and new trends of organization management (Hirsch & Wagner, 1995). As a result many countries have put in place national agriculture training centers with an intention to match the training with the labour market. The private sector has tried to support governments' effort by setting up different agriculture training centers in different parts of the country.

Despite all the efforts, there have been mismatches between training in the said institutions and the labour market requirements both in private and government owned institutions. One of the difficult tasks of vocational education has been keeping instruction a breast of new developments (Sharma, 1994 p. 24). The rapidly changing technologies involve a whole set of individual, organizational and societal factors. Although changes in

technology emphasize the need for more complex cognitive skills, 'a strong back and a weak mind will not permit any nation to compete in today's market place,' (Goldstein & Ford, 2001). Goldstein and Ford argue that it is not simply a matter of literacy skills but the need for complex thinking skills. Agriculture labour market needs cognitive skills to be supplemented by psychomotor skills.

All work of the mind can be visible when it is expressed by physical domains. Psychomotor involves muscular activity and requires basic dexterity skill coupled with knowledge of how and when to use the skill. Therefore application of skills in agriculture labour market needs ability to assess information, understand work systems and manipulate technologies. As a result, today's agriculture, jobs have increasingly become complex due to technological and sophisticated systems. Rapid changes in technology development require a continuous learning philosophy. Therefore a commitment to training and continuous learning is crucial for the labour force to remain competitive.

More skills needed in agriculture labour market are innovation, respect for work, persistence, resilience flexible and relevant skills coupled with the right knowledge and attitudes and the ability to think and act (Schnarr, 2008).These competences are important especially for the youth who after school find it difficult to get employment not because there are no jobs but because they do not have employable skills[5]. Poverty Eradication Action Plan (PEAP) policy document emphasizes that the changing patterns of employment equally requires changing patterns of skills (PEAP/2004/5-2007/8, 2004

[5] President Y.K. Museveni's speech while addressing Journalists on Friday 28th Oct. 2011 at state house Nakasero in Kampala, Uganda

p.148). This implies that the training should be a life time activity. In support of PEAP, Gould, (1993 p. 23) argues that the widening range of increasingly complex technology need more specialized and highly trained manpower.

In view of the above, workers should be in position to update their skills in order to adapt and adopt as new technologies invade the work place. Therefore modern workers should be in position to go back to school to acquire new skills or hold retraining programmes at their work places in order to match the changing work conditions.

Carnoy, (1970) argues that most work skills are probably not taught in school but on the job, He states that on the job training is considerable cheaper than schooling and in many kinds of skilled work can be substituted for schooling (p. 8). Therefore there is need to implement policies on industrial training and intensify work place visits by training institutions so that trainees can benefit from the work place. To counteract the above challenges of skills mismatch, Government of Uganda has introduced Uganda Vocational Qualifications Framework (UVQF), a tool used to ensure that that Business, Technical, Vocational Education and Training (BTVET) programs develop in a manner that responds more flexibly to changing work and employment patterns and in a way that closes the gap between the world of work and training (BTVET strategic plan 2011-2020). This is being implemented but has not been applied to all vocations including agriculture due to inadequate funding.

If the competences are not tested and certified, to discover what skills they have, what they can easily manage and how well they must be able to do it to meet standards set by the employer/ consumer or the society recruitment process becomes challenging. If those who

receive training cannot find a job where their skills can be used, training becomes a bad investment. This is because working, life changes rapidly and vocational schools are lagging behind (Heinkkinen, 1995 p. 135). Heinkkinen presents student's comparison between learning in schools vis-à-vis work place;

> *"I think I learn better at work. The field is so different from what I learned in school. I thought I learned everything about the field but when I started working I understood how little I knew"*

This calls for both schools and work places to be conditioned to facilitate proper learning. In addition, workers should prepare to update their skills so as to match the dynamic conditions of the work place brought about by introduction of new technologies, new forms of work organizations and organizational management (Hirsch, & Wagner, 1995).

Curriculum is being criticized for being irrelevant to skills, knowledge and attitudes needed by the labour market (Wirak, 2003). According to Food and Agricultural Organization (FAO) cited in Shao & Bruening, 2002) China's curricula and teaching methods implemented have not always been relevant to the development objectives of individual countries, the needs of farmers, or to the labor market in general. As a result there is a mismatch of agriculture teaching strategies and curricula to meet the needs of the new economic realities in Chinese agricultural education.

2.4 Attitudes of agriculture trainees and graduates towards their trade

Agriculture teaching methods affect the attitudes of trainees and graduates. For example a research has shown that a lecture lesson concluded with home work activity builds positive attitude towards the subject more than those who do not get home work (Cotton, 1988).

When teaching using practical methods, learners develop muscles and a positive attitude to do most of the practical tasks in the training institutions and the work place. Agriculture labour market needs people with more psychomotor domain because the field demands more of hands on experience. Acquiring skills and attitudes takes place simultaneously and with interactions between cognitive and psychomotor domains.

Training with psychomotor domains guarantees development of hands on skills which will always be applied in the labour market while emphasis on cognitive domains develops the mental aspect but with limited performance of practical tasks. Therefore attitudes affect agriculture teaching and learning of vocational skills and later on their application in the world of work. They affect the zeal with which a person attempts a task. Students attitude determine if they get involved in practical tasks or not.

Unless students have the right attitude, learning becomes superfluous (Reece, 2003). To develop the right attitudes tasks should be developed in direct application to the actual experiences of the learner and the worker. This adds some meaning to what is learnt and it motivates the learners. Okello[6], (2011) that agriculture did not develop in Uganda completely and by 1963 anybody would want to take up agriculture willingly because it was reserved for academic failures. People looked at education as a means to escape from a manual work, such as agriculture. The graduates of agriculture at that time reaped less from the work they did because there was plenty of food and therefore the sales would not reap much. Agriculture did not lead to highly paid employment in addition to being a trade (Ssekamwa, 1996). However since attitudes change with time, there is need to find out the

[6] Complexity and contradictions in Vocational Education in Uganda: Un published notes presented to the post graduate students of Vocational Pedagogy Kyambogo University on 12th Oct. 2011

attitude changes that have taken place so far and how they affect competence acquisition and productivity.

Attitudes also affect gender distribution of labour. For example, home economics and handcrafts have been developed for girls, while the harder and more manual tasks and activities such as agriculture, crafts, seamanship and fisheries have been for boys (Mjelde, 2006 p. 33). This is attributed to physical might attached to these activities. Lighter tasks fit females better while tougher tasks fit males. Therefore the instructors should identify the skills which an agriculture trainee needs to acquire and determine what attitudes and interests to be developed in connection with his/her trade.

Attitudes are often, but not necessarily, based on previous personal experiences. A person's environment shapes type, quality and quantity of these available experiences and information (Hyytiä & Kola, 2005). Therefore agriculture training institutions and workplaces should provide good environments that encourage learners to develop good attitudes. Environments that favor practical tasks create positive attitudes towards manual work. This results into trainees' better performance and mastery of practical tasks which will enhance transfer of learning in the labour market.

Once in agriculture labour market, these skills, values and attitudes are recognized and rewarded (Johanson & Adams, 2004). This gives more motivation for the institute graduates to worker harder in order to earn more money or sustain their jobs. Agriculture teaching methods that do not favor positive attitudes should be discouraged in training. For example, lectures are not effective methods for developing positive attitudes towards manual work and do not help trainees to analyze and synthesize ideas (McKimm & Jollie,

2003). Attitudes are enhanced when learners' are involved in practical activities which are realistic and are performed by the learners with assistance from the instructor as elaborated in the theoretical flame work.

In conclusion, a variety of methods are used to train students in skills knowledge and attitudes for the agriculture labour market. The methods used depend on the content to be taught, the tools available, availability and competence of the instructors. Theoretical agriculture teaching methods like lecture method lead to acquisition of knowledge while practical methods like group work/ project work, laboratory experiments, industrial training and field investigations have been recommended for equipping learners with knowledge, skills and attitudes that are needed in the agriculture labour market. Development of practical skills occurs concurrently with the acquisition of positive attitudes. Basing on principles of vocational didactics (tasks, tutoring tools and materials, and time), there is need to find out how agriculture teaching in farm institutes is employed in a bid to equip trainees with the skills and attitudes that are required to meet the requirements of the labour market.

CHAPTER THREE
MATERIALS AND METHODS

3.1 Introduction

This chapter covers the research methods I used in answering the research problem and the gathering of data to answer the research questions. This chapter includes the research design, target population, respondent selection, data collection methods, data processing and analysis as well as data quality management.

3.2 Research design

The study used a descriptive design. It described the status of agriculture teaching that existed at the time (Amin, 2005) by interpreting people's views, opinions and behaviours about teaching methods used in farm institutes and how the methods prepared trainees to meet the labour market requirements. It also addressed the attitude of agriculture trainees and graduates of farm institutes towards their trade. Both qualitative and quantitative research approaches were utilized to create a multi-dimensional approach to the problem under study using different methods and techniques of data collection (Robson, 1993, Van Dalen, 1973, P. 317).

3.3 Target population

The study population was in five categories that is; principals, instructors, trainees, graduates, and employers. Trainees and graduates were men and women who had offered National Certificate of Agriculture (NCA). This course admits senior four leavers and lasts for three years. Its graduates were therefore old enough to freely exchange ideas and give unbiased responses. Trainees in their final year of study were selected because they were anticipated to have diverse knowledge and information regarding the agriculture training programme and how it related to the labour market.

Agriculture farm institute graduates who completed the programme between the periods of 2005-2011 were targeted. Graduates were selected because in addition to having passed through training programme, they possessed field experiences and therefore had good knowledge and information about the linkage between the agricultural training and the labour market requirements in agricultural trade. Principals were selected because of their knowledge and information about the tools and materials possessed by the institution, teaching methods, finances, recruitment and appraisal of instructors.

Instructors; both male and female who had taught at the department for two years and above were selected. They were targeted in view of the experience they would have amassed during their years of service. Instructors trained students in agricultural skills and therefore had the information about the mode of training and the challenges met.

Employers were also selected. The reason for this sample was to solicit their views as they are the major employers of farm institute graduates. They had the knowledge about the skills and attitudes possessed by the graduates.

3.4 Respondent selection

Agriculture instructors were selected using stratified simple random techniques. I first grouped them into males and females, wrote the names of each group's respondents on pieces of paper, folded and put them in different containers after which picked one male and one female at random (Robson, 1993). The procedure was repeated for the three institutions visited. Trainees were selected using stratified and systematic random sampling approaches. They were grouped into male and female, the names of each group written on paper and males were selected according to multiples five (5, 10, 15...) until seven males and six females selected according to multiples of three (3, 6, 9...). There was an average

of forty male and twenty female students per farm institute to give an average of 60 students per class. This ensured equal representation and reduced the risk of obtaining an unrepresentative sample (Walsh, 2001). Three principals from the three farm institutes were purposively selected due to their knowledge and information about finances, recruitment and the general management of the institutions which information could not be obtained from other respondents (Amin, 2005).

Snowball sampling was used to select thirty two graduates (sixteen male &sixteen female). I began with one graduate and through cumulative methods each graduate led me to another. I stopped locating more graduates when I realised that I was no longer getting new information (Kambaza, 2004). Snow ball helped to locate respondents who were not easy to access. Out of the thirty two graduates that I had audience with, I was able to interview five of their employers. In order to solicit for the experts' opinion, I had an interview with the Kabale district NAADS Coordinator. This gave a total of eighty four respondents.

3.5 Data collection methods

Interview

Face- to- face in depth interviews using interview guides (Appendices 1, 2, 3 & 4) were done with principals, instructors, employers and Kabale district NAADS coordinator. These followed appointments I had made with them in advance. Appointments helped me inform the targeted respondents what I expected from them so as to prepare them before hand. This helped me conduct successful interviews and avoid floppy visits (Mugenda & Mugenda, 1999 p. 83).

Interviews with principals and instructors of farm institutes addressed a number of issues ranging from agriculture teaching methods used, how the teaching methods relate to the

labour market, funding for the farm institutes and the tools used in the institute. More information about the attitudes of trainees and graduates towards agriculture trade was obtained. Interviews with principals were conducted in the morning session while interviews with instructors would sometimes spread to the afternoon. Face to face interviews with employers were focusing on recruitment procedures, competences possessed by graduates at the time of employment, challenges faced and the attitudes of graduates towards their trade. Interviews with the National Agricultural Advisory Services (NAADS) coordinator gave a general overview of agriculture teaching methods and labour market requirements of an agricultural farm institute graduate. More so, the attitudes of farm institute agriculture graduates towards agricultural activities.

On average each interview took about twenty five minutes with a maximum of three interviews held per day. Interviews helped in obtaining none verbal cues and feelings, follow up of ideas and probe responses from my respondents (Bell, 1993, p. 91). This helped to get an in depth understanding of the situation. I supplemented interviews with a voice recorder for recording respondents' voices in order to minimize errors that could result from a faulty memory (Best, 1970, p 182). After interviewing one respondent I would review the responses, fill in notes and summarize key information for each before going for another respondent. At the end of each day I would check all the information and verify it as necessary. On one occasion I went back to crosscheck the data I had obtained from one of the farm institutes.

Open ended questionnaires were delivered by hand to the trainees and graduates to answer questions. These provided data for objectives 1, 2, and 3 (see appendices 5 & 6).Open

ended questionnaires gave respondents freedom to reply according to their wish and in their own words (Boyce & Neale, 2006). After introducing myself to create rapport, I distributed questionnaires to agriculture trainees in their farm institutes where they were filled instantly while graduates were traced in the world of work. Most graduates were found at their work places and because of their busy schedule, I sometimes left questionnaires with them and returned to collect them when they were ready. I sometimes explained the meaning of a few items which were not clear with some respondents. This made questionnaires the best alternative since respondents' were busy and not able to get time for face to face interviews.

Observation

Observation addressed objectives 2 and 3. I observed stores, demonstration plots, institute farms, the nature of buildings and their location from each other. I also observed tools and materials used in teaching/learning sessions, their lay out /arrangement and their method of storage. I also observed two agriculture lessons in progress. Emphasis was on classroom environment, agriculture teaching methods used to deliver the content by instructors and students responses. I carried out simultaneous recording to minimize errors that could result from faulty memory (Best, 1970 p. 183). Observation was guided by an observation checklist (Appendix 7).

Document analysis

Written documents and visual information was critically studied using a documentary analysis guide (Appendix 8). The programme documents such as draft curriculum documents (content) and time table all of which related to agricultural teaching were studied. A document sheet was then compiled containing all the items of interest, clarify

and summarize the content of lengthy documents. The objective of studying documents was to find out what content it was, the best agriculture teaching methods that could be used to teach the content and its relevance to agriculture labour market. Documentary analysis provided confirmatory evidence of the information obtained from interviews and observations.

3.6 Data processing and analysis

Data was analyzed using both qualitative and quantitative approaches. Data from interviews, questionnaires, documents and observation was compiled, sorted and organized its grammar corrected and coded according to the objectives of the study as supported by Creswell, 1994 p. 166). It was then organized in various ways to identify consistencies and differences, note patterns or themes, identify connections and relationships between questions (Sarantakos, 1998). Data on teaching methods was analyzed and presented in figure and tables indicating frequencies and percentages.

3.7 Data Quality Management

In order to ensure credibility of the findings, pilot testing of the tools with my colleagues in Norwegian Agency for Development Cooperation (NORAD)'s Program of Master Studies (NOMA) house cohort two was done to identify any ambiguities, misunderstandings or inadequacies in the instruments. In addition, triangulation techniques were used by integrating different methods such as reviewing documents, conducting in depth interviews, using open ended questionnaires, and observation to collect data (Robson, 1993). This was used to cross validate data obtained from different sources so as to produce believable and credible work.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter breaks and translates data gathered from respondents that participated in data collection in the study on Agriculture training in farm institutes and the labour market requirements in Uganda. The objectives of the study comprised of; identifying agricultural training methods used in farm institutes, determining how agricultural training methods used in farm institutes prepare trainees to meet the labour market requirements and establishing the attitudes of agriculture trainees and graduates towards their trade. This data is presented and discussed under objectives and is categorized as presentation, analysis and discussion of results. Discussion of study is done and compared with the existing literature and to some extent my personal opinion is given.

4.2 Agriculture training methods used in Farm Institutes

The teaching methods used in the teaching of both theory and practical content in the Farm Institutes are given in Table 4.1.

Table 4.1: Responses of trainees and graduates about the teaching methods used

Teaching methods used by instructors	Frequency	Percentage
Lecture	34	47.8%
Class discussions	5	7.5%
Visits to work places	-	
Project work/group work	23	34.3%
Lab experiments	7	10.4%
Industrial training	-	
Information Communications Technology (ICT)	-	
Total	**67**	**100%**

The dominant method was the lecture method (47.8%) followed by project work while other methods such as visits to work places, industrial training and use of Information Communications Technology (ICT) were hardly used. The results indicate that majority of instructors were still tied to the conventional teaching techniques. When Instructor's were asked why they did not use a variety of teaching methods, they responded as follows;

> *"I am not a trained teacher, I do not know much about teaching methods, preparing schemes of work and lesson plans*[7].
>
> *"When I started teaching I did not know how to conduct learning groups"*[8]

Therefore the instructors interviewed lacked the competences required for teaching agriculture. The training they had undergone was not meant to equip them with teaching techniques. These instructors agreed that they had passed through agricultural training institutions hence had the knowledge about agriculture but lacked pedagogical skills. They therefore did not have the required competences to use varied teaching methods. Use of unqualified agriculture teachers is very common on assumption that having majored in agriculture automatically qualifies them to teach (Dube, 2009). For effective teaching, VET teachers need two types of qualifications: a Vocational and a Pedagogical qualification. A vocational teacher should have technical skills, industrial experience and pedagogical skills in order not to adversely affect the training quality (Kahwa, 2005)

Whatever training strategy taken, the teacher should be skilled professionally with experience and knowledge about tools, work division and organization. This is because

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[7] Response from a farm institute instructor in Shema district

[8] Response from a farm institute instructor in Mbarara district

teachers are perceived as greatest sources of educational change in an orderly society (Perraca Bijur & Wheeler, 2000). Therefore agriculture teachers should be sufficiently trained with workplace knowledge and school knowledge in order for them to do proper prior preparation for equipping knowledge, skills and attitudes needed by the agriculture labour market as supported by Jorgensen (2008).

Agriculture teaching methods which would motivate learners such as industrial training, laboratory techniques, visits to the workplaces appeared to be the least favored. As cited in literature review, learners come to farm institutes with experiences on problems such as weed control, fertilizer application and disease control which can only be solved when students are exposed to hands on experience. When they do not find what they expected they become frustrated.

The trainees and graduates revealed that they were not happy with instructors because the methods used were not necessarily meeting the objectives of competence training. This was analyzed from students' comments about the teaching methods used by the instructors.

> *"We are not happy with instructors. They do not organize seminars, field trips and outreach programmes where we can learn new technologies. We are locked here, we cannot go out*[9]*."*

Agriculture teaching methods which would motivate learners such as industrial training, laboratory techniques, visits to work places appeared to be the least favored used (Table 4.1) As cited in literature review, learners come to Farm Institutes with experiences on

[9] Response from a student of Rwentanga Farm Institute

problems such as weed control, fertilizer application, disease control and animal management which can be solved when students are exposed to hands on experience.

On students' expectations, an Instructor from Rwampala Farm Institute had this to say;

> *'in Kashari -Ankole region, students come for animal activities and therefore not interested in crop activities. This is because they are majorly cattle keepers and they want to learn something which they will directly apply in their homes.*[10]*"*

When they do not find what they expected, they become frustrated. In Uganda the approach to the teaching of agriculture has been theoretical and discouraging (Ssekamwa, 1979). As a result agriculture taught has failed to make an impression on society.

Although, trainees and graduates believed that lecture method was the most frequently agriculture teaching method used, instructors traversed that lecture method was not purely lecture.

> *"We do not lecture to learners; we involve learners by asking questions and allowing some short interval for discussion in between the lecture lesson*[11]*".*

According to the instructors, their techniques used in the lecture method aroused and discovered curiosity among students so that they are not bored as supported by McKimm, & Jollie, (2007).

However through personal observation of sessions using a check list, instructors were found in class dictating notes to learners systematically. A lesson was being conducted in class about weeds and the instructor was struggling to explain the nature/appearance of weeds to students when it would have been better to teach the lesson in the field. The

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[10] Response from an instructor of Rwampala Farm Institute

[11] Response from an instructor of Rwentanga Farm Institute

understood and writing main points on the chalkboard. Questioning is a technique that would help to attract attention of students who were lost intellectually (Ali Shah, 2009). However the numbers in class would determine the effectiveness of the technique. The classes were congested with an average of 60 students in a lecture theatre which made the instructors fail to control students hence learning was not holistic. Some students were noted active but others were not paying attention to what the instructors were teaching. A number of students were found sleeping in class, others lost in discussions when others were busy listening and answering questions.

In this case individual attention was minimal and that's why the method was qualified to be lecture. The lecture method may not be the best method of teaching agriculture skills and attitudes because learners are not fully involved especially timid learners who are always reluctant to ask for clarification or elaboration during a lecture and prefer being quiet (McCarthy, 1992 and McKimm & Jollie, 2007). This is supported by the Government White Paper on education (GWP) which stated that the teaching of agriculture degenerated into theoretical exercise by putting more emphasis on academic performance (MoES, 1989). As a result, agriculture teaching failed to generate skills and attitudes needed in the labour market because of lack of practical aspects.

Findings from the instructors, trainers, curriculum documents and personal experience show that there are elements in the agriculture curriculum which are best taught using lecture method. When asked why instructors prefer lecture method over other methods, an

"Lecturing is sometimes very good especially when teaching general knowledge ..."[12].

I probably agree with instructors that aspects like general knowledge and vocational theory are best taught using lecture method. On the other hand much as it helps to teach general knowledge and vocational theory, BTVET[13] department provides for 20% general knowledge and 80% practice. This means that lecture method though dominantly used only covers 20% of the curriculum with less time for practice. Learning through practice and experience-by trying and failing and through action is the basis of true knowledge (Mjelde, 2006). This could have been the reason why the method was the least preferred by the trainees since students were left bored and passive.

Trainees, graduates and instructors agreed that Lecture method promoted more content to learners. This was discovered when 90% graduates complained of having had long hours of theoretical lessons that resulted into having more knowledge than practical skills. Although lecture method promoted more content to learners, experiential learning would promote learning by doing and therefore increasing the amount of practicals in the teaching and learning process. This would motivate learners to grasp more knowledge and skills from the lecture. Unfortunately, instructors were less exposed to the outside world where they would learn new better methods of agriculture teaching. When asked if they had any external avenues for professional growth, an instructor of Rwampala farm institute had this to say:

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[12] Response from an instructor of Kitagata Farm Institute

[13]Revealed by the Acting head of BTVET department and curriculum specialist for technical education in a face to face interview with MVP students of which I was among on 8th Sept. 2011

> *"we do not go for refresher courses, seminars, field trips or outreach programmes where we can update our knowledge and skills on the new developments in the labour market"*[14].

Revelation from instructors showed that a number of them did not have time and opportunities for professional growth; refresher courses, and seminars or benchmarking in other agricultural training institutions to get new knowledge. An interview with principals about the terms of employment of instructors revealed the following;

> *"A good number of agriculture instructors are employed on permanent/fulltime terms; others are hired on part time*[15] *basis because Government has not sent us enough instructors"*[16].

Agriculture instructors on permanent terms had undergone interviews with Education Service Commission (ESC) after having seen the vacancies advertised in the news papers. Part time instructors found positions through internal advertisements of the available jobs. This implies that they had the right qualifications for the jobs. In view of the fact that some instructors were on part-time employment, there was a possibility that some of the agriculture instructors were actually too busy to make adequate preparation for teaching, let alone supervise the learning process, or prepare and update their notes.

When asked about how instructors supervised tasks, the agriculture trainees and graduates reported that;

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[14] Response from an instructor of Rwampala farm institute

[15] These particular instructors had jobs elsewhere and taught in farm institutes to get side income. They were paid per hour taught.

[16] Response from the Deputy Principal of Kitagata Farm Institute

"Instructors give us tasks and go to the staffroom to converse and others get on their bicycles and go away. Others issue hand outs which sometimes were not explained[17]*"*.

This could be because part-time staff instructors had limited time in the farm institutes because of paying allegiance to authorities in their permanent workplaces and had limited time for the mentoring process in the farm institutes. The likely results are skills and knowledge mismatch.

A part from training and availability of agriculture instructors my personal experience is that practical agriculture teaching methods require tools and materials in order to impart hands-on skills. Farm institutes did not have enough tools and materials to use to conduct practical tasks notably ox ploughs and tools and materials for soil sampling and testing. Farm institutes did not only lack but also used old equipments (Figure 4.1). Most of the tools were of old technology and very few modern tools were available at the farm institute. The few tools that were use in training students did not meet the modern standards

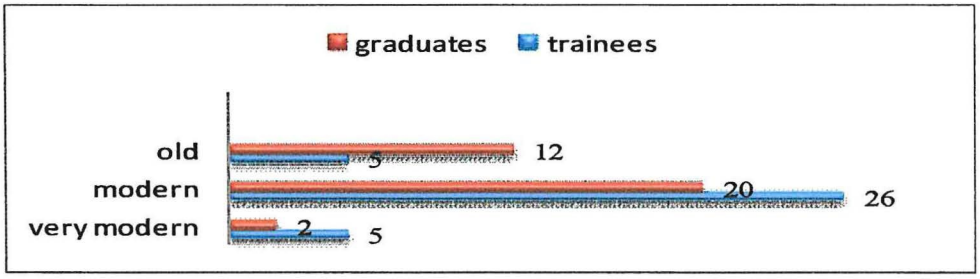

Figure 4.1: Trainees and graduates views about the status of tools in farm institutes

This however did not appear as a surprise when personal interviews with employers revealed that the graduates did not know how to handle some equipment because they were

[17] Response from an instructor of Rwampala Farm Institute

evidenced when I asked the principal Rwentanga Farm Institute about the availability of tools:

> *"we do not have enough tools, the ones we have are old and when it comes to the labour market it is a challenge"*[18].

Further analysis shows that trainees thought that the tools were modern partly because they had not been exposed to the world of work to compare the tools with what was in the training institutions.

Lack of laboratory equipment or malfunctioning equipment creates frustrating episodes during the lesson and limits experiential learning. Experiential learning is a combination of finding out and taking action (Blum, 1996). When provided with tools students are able to find solutions to problems themselves or with partial guidance from the instructors. This helps them to grasp the skills better than if they learnt passively by listening to an instructor or even demonstrating by the instructor.

However studies have shown that, farm institutes are not economically equipped to buy the latest equipment. Raggart & Unwin, (1991) presented students' complaints about shortage of tools that resulted into theoretical education which could not help them use their hands, legs, eyes and arms. Students were not happy to be enclosed in schools, colleges and recitation rooms, for ten or fifteen years and come out at last with a bag of wind, a memory of words without any practical skills to apply in the labour market. This resulted into trainees themselves losing trust because they were not involved in performing practical tasks.

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[18] Response from the principal of Rwentanga Farm Institute in Mbarara district

The few tools and materials available were not easily accessed by students'. Most them were kept in general stores and ferried to the classrooms whenever it was time to conduct practical lessons (Figure 4.2). Some stores were located far from classrooms. Observation sessions showed some tools like ploughs and engine parts kept on the verandas outside under the trees being affected by weather.

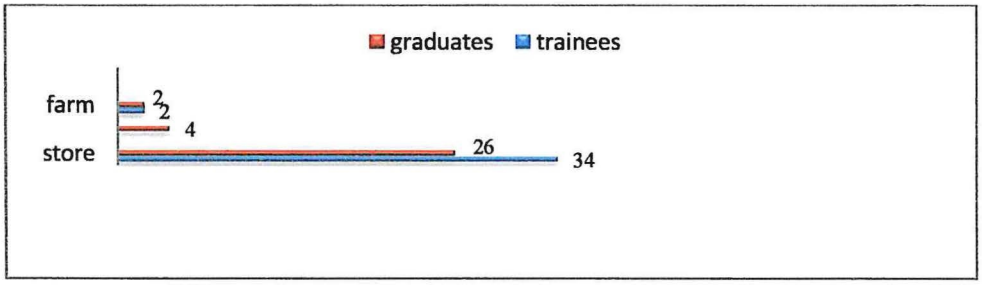

Figure 4.2: Respondents views about where tools are kept

Although it is a good practice to keep tools and materials indoors to protect them from frost and thieves, it would be best to keep them in the laboratory where practicals are carried out so that students can easily access them at the time of need. Carrying tools may be a burden to some instructors and this is probably why some resorted to theoretical methods of teaching because they were reluctant to carry the tools to the classrooms. In addition stores were not always open and free for students to access because of the nature and security of some tools. This was evidence to show that some tools and materials were difficult to access when students needed to use them. When asked how easy it was to access tools and materials from the school farm/store, about 40% reported that it was not easy to access the tools and materials.

This was an indication that availability of tools in stores did not guarantee their use. This violates the reason for integrating practical examples in teaching agriculture. In the teaching of agriculture, McKimm, & Jollie, (2007 p. 13) argue that practical sessions make

students regard what they learn as being useful beyond the classroom which enhances transfer of learning. This is because practical work is active, enjoyable, fun and engaging and creates hands on experience. As Petty, (1993) noted, skills cannot be taught satisfactorily without practical work.

As a result agriculture teaching in farm institutes detached theory from practice and did not therefore meet the objectives of competence training. Even in the purely academic disciplines, subjects must be transmuted or turned into some kind of practical activity (Mjelde, 2006). No learning is vocational unless the tasks involved are accompanied with impartation of practical skills to perform those tasks. Humans and tasks are the two central components of vocational didactics (Nilsson[19]). In any farm institute and work place, tasks and activities should be well structured and defined for the activities within the tasks to be effectively accomplished. When asked about work place visits and industrial training the Principal of Kitagata Farm Institute had this to say;

> *"Learners do not go for industrial training; we even fail to facilitate work place visits because we do not have money....*[20]*"*

During the interview with instructors and principals to find out how the institutions help trainees to understand the world of work, their responses were all negative. It emerged that work place issues were not well attended to. When asked the role of the farm institutes in community development, one of the principals had this to say;

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[19] Nillson lecture notes to MVP students cohort two in Feb 2011. He is a prominent professor of vocational didactics based in Sweden

[20] Response from the Principal of Kitagata Farm Institute

"Only farmers come to this institution to get good knowledge and learn from us. We do not take students out[21]*"*.

In reference to the foregoing observation, principals of the three institutions visited revealed that the failure to visit work places or participate in industrial training was due to inadequate facilitation in the farm institutes. They understood very well that industrial training is a government policy that aims at connecting agriculture training in farm institutes and the work places but were not implementing it because of shortage of funds. This shows that policy formulation is easy but implementation is a challenge. The BTVET Strategic Plan (2011, p. 14) which states that, "the provision of internships is currently not sufficient to meet the growing demand. Together with the employers, the BTVET department will develop a plan to improve the availability of internships". The policy document emphasizes the need for industrial training but little has been done in ensuring that trainees go for industrial training.

In this sense, the content is taught theoretically and does not help agricultural trainees satisfactorily towards the achievement of the goal. This tallied with personal experience where in a visit by MVP students (of which I was among) to Arapai Agricultural College now Busitema University in March 2011, it was found that one tractor was used to train more than 1500 students. At the time of our visit, it had a technical problem and was out of function. There is need to view industrial training as a form of learning from the perspectives of situated learning, one that enhances the connection between the world of work and the training institution. In agriculture labour market, farmers and learners meet and interact in community farming projects in order to gain hands on agricultural skills in

[21] Response from an instructor at a farm institute in Mbarara district

real situations and also benefit in aspects like, improved interpersonal skills including communication, organizational skills, teamwork, decision-making and planning. This is a substantial adjustment that farm institutes must make.

Through observation and responses from farm institute graduates, work places were well equipped with modern technologies which were not in farm institutes. When tasked to compare learning at the work place and learning in training institution, graduates had this to say:

> *"Learning at the work place is easy and enjoyable. There are enough tools. You do not get bored you learn the skill quickly*[22]*".*
>
> *"At the work place explanations are done practically which enhances learning"*[23].
>
> *"On job training exposes you to real field experiences and you get to understand fully how things are done"*[24].

The motivation to learn at the work place was geared by the presence of enough tools and materials that kept the learners busy. Work places therefore were better in equipping trainees' agriculture skills and attitudes because of the practical tasks that were performed. Agriculture practical tasks to a large extent help to develop a process of inquiry (Barnard cited in Blum, 2009) and this enhances competence acquisition. Nonetheless graduates appreciated the theory taught at school as it gave them a strong foundation for the practice in their workplaces.

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[22] Response from a farm institute graduate working in a Zonal Agriculture Research Institute Development (ZARID) in Kabale district

[23] Response from a farm institute graduate working in a livestock farm in Kabale.

[24] Response from a service provider with the NAADS programme in Bushenyi district

Personal interviews with employers about competences possessed by farm institute graduates confirmed the foregoing statement when they said that graduates have the theory but lack some practical component though they are trainable. This is probably because of the lecture method of teaching that exposed them to more of theory than practice. Better to note is that sometimes agricultural labour market may require more of cognitive skills than psychomotor. People whose work require more questions from farmers and feel comfortable to reply them require more of cognitive skills. Thus lecture method can therefore serve the labour market better by developing people with cognitive skills coupled with ability to articulate.

In addition to lecture method, group work was used as a method of teaching by instructors. The major tasks performed under this method of teaching were poultry and cattle management on farms, nursery bed management and gardening. Classes were sub divided into smaller groups before tasks could be given. However activities like egg collection and marketing of milk were not performed by trainees. Administrators of the farm institutes did not want losses which could result from student involvement. They expressed fears about the honesty of some trainees. However, this resulted into a problem to skills acquisition because employers revealed that graduates lacked marketing skills. Admittedly, graduates lacked marketing skills because they were not exposed to them during training. The major function of farm institutes is to equip learners with competences needed in the labour market but not profit generation. Trainees should be allowed to practice all activities so that they can learn all competences involved wholly.

After dividing learners into smaller groups, instructors resorted to demonstration which denied some learners a chance to individually handle and practice with the tools. Large

classes were associated with problems such as difficulties in maintaining discipline, stressful loud voice by the instructors and failure to attend to individual problems of students as noted by Ali Shah, (2009). Therefore instructors selected to divide learners into smaller groups where class control was fairly done than in a big group.

Generally, group work was sometimes coupled with project work during teaching. Project work was given especially when performing certain practicals like on farm practices in poultry, crop and animal activities. In this method learners were grouped into smaller groups and given agricultural tasks to perform during their free time or at certain specified times especially early morning and evening hours. The learners performed the tasks, monitored their progress and evaluated the tasks. This limited skills acquisition since the learners did not have a senior person to direct them on what to do. According to Lave & Wenger, (1991) the learner/apprentice must be with the instructor/master for a long time before the master can declare the learner able to work independently. In this particular case learning did not take place because the time that the apprentices had with their masters was limited.

Some instructors liked project work (Table 4.1) because practical sessions demanded more time and tools to perform the tasks which were not at their disposal. As a result some instructors did not supervise the tasks nor did they give proper guidance whenever necessary. According to Mckimm, (2007) a project has five steps-providing a situation, specifying the task, planning, executing and evaluating. The responses revealed that the tasks were given but all the steps are not executed. Instructors gave instructions to students and went to relax in the staffroom or left the station and did not carry out proper supervision. More so they did not conduct evaluation phase and yet this was a critical stage

where they would determine if learning took place or not and plan to do remedial teaching if at all learning did not take place. This was anticipated when some instructors complained of too much work load. As discussed earlier other instructors worked on part time basis and had less time to supervise learners.

Failure to supervise group work led to learners exploiting the situation. It was up to the individual student to attend lectures or not. Some trainees only watched as others performed the tasks, others were lost in deep conversations and disrupted those that were interested in performing the tasks as supported by McCarthy, (1992). Interestingly there was no systematic follow-up of the students' learning progress by the instructors. This could have been why some agriculture trainees did not report for practical tasks because the tasks had no meaning to them. It is not good to force students to attend classes or to pay attention in class but proper guidance and counseling would be necessary to help them develop a sense of direction.

During the study it emerged that work place issues were not well attended to. The responses of trainees and graduates revealed that the learners do not visit work places nor do they go for industrial training (Table 4.1). During the interview, with instructors and principals to find out how the institutions help trainees to understand the world of work, their responses were all negative. When asked the role of the farm institutes in community development, one of the principals had this to say;

> "*Only farmers come to this institution to get good knowledge and learn from us. We do not take students out*"[25].

[25] A response from a principal of one of the farm institutes in Shema district

In reference to the foregoing observation, principals of the three institutions visited revealed that the failure to visit work places or participate in industrial training was due to inadequate facilitation in the farm institutes. They understood very well that industrial training is a government policy that aims at connecting agriculture training in farm institutes and the work places but were not implementing because of shortage of funds. This shows that policy formulation is easy but implementation is a challenge.

The BTVET Strategic Plan (2011, p. 14) which states that, "the provision of internships is currently not sufficient to meet the growing demand. Together with the employers, the BTVET department will develop a plan to improve the availability of internships". The policy document emphasizes the need for industrial training but little has been done in ensuring that trainees go for industrial training. There is need to view industrial training as a form of learning from the perspective of situated learning, one that enhances the connection between the world of work and the training institution. This allows farmers and learners to meet and interact in community farming projects in order to gain hands on agricultural skills in real situations and also benefit in aspects like, improved interpersonal skills including communication, organizational skills, teamwork, decision-making and planning. This is a substantial adjustment that farm institutes must make.

Apparently there were no computers for learners in the farm institutes. Johanson, & Adams, (2004 contend that the use of Information Technologies (IT) and the World Wide Web (WWW) as a teaching tool and rich source of information is increasing rapidly. However, instructors and learners revealed that the only computers available were meant for administrative purposes. Other IT technologies found in farm institutes were mobile phones and television sets which were commonly used during communication and leisure

time to watch foot ball. Amidst these challenges, learners were not able to up-to-date knowledge and information from various authors as well as sharing knowledge and information via e-mails (McKimm & Jollie, 2007). Instructors were limited since they could not compare their knowledge with other countries in the diaspora.

Further still, ICT changed the nature of delivering education to students gradually giving way to a new form of electronic literacy (Chinnammai, 2005). Trainees/workers and employers are at an advantage of duplicating new and expensive technologies from far countries. By so doing, they improve the quality of their teaching and products to match the international standards and therefore are better placed in the competing world. This also helps in improving the general standard of their reputation since the duplicated technologies are immediately offered to the local market at relatively cheaper price.

All in all agriculture teaching methods need to be realigned to teach all practical dimensions of the discipline. Lecture method of agriculture teaching that was found to be dominant did not equip trainees with practical skills. Alternative methods like field trips, laboratory experiments and industrial training which were least emphasized are appropriate for imparting on hands-on experience that is required in agricultural labour market.

4.3 Agriculture training methods and labour market requirements

The agriculture teaching methods used in farm institutes cater for both skills and knowledge needed to meet the labour market requirements. It was observed that the lecture method gave knowledge while the industrial training gave more skills (Figure 4.2).

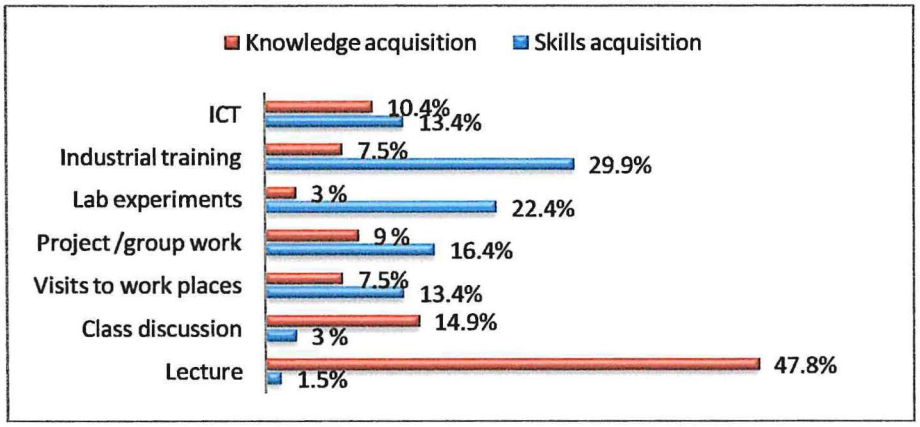

Figure 4.3: Responses of trainees and graduates about the teaching methods used by instructors and the competences expected out of them.

The results in table 4.1 show that the most frequently used method was lecture method (47.8%) which imparted fewer skills but more knowledge. Agriculture teaching methods meant to foster skills acquisition like industrial training, Information Communications Technology, and visits to work places were hardly emphasized. The agricultural trainees, graduates, and employers agree that the labour market requires people with more hands-on skills. Graduates said that they had the knowledge required but lacked some of the skills needed in the labour market. In response to the question;

"What practical things were you not able to do during your first days at work?"

Graduates specifically pointed out lack of skills in aspects on *soil analysis, bee keeping, marketing techniques, apple production, mushroom gardening, and poultry management under deep litter system, grafting, silk worm management, insemination and injection of*

farm animals. Majority of the graduates (81%) agreed that they faced challenges while the rest (19%) graduates disagreed that they did not face any challenges at the time of their first employment. Interviews with Instructors revealed that they used lecture method to teach topics such as soil analysis, vaccination, insemination, injection of farm animals and post handling and marketing techniques. Also instructors, graduates and trainees agreed that poultry management and fruit farming were taught using project work.

Majority of the respondents agreed that lecture method was used to teach soil analysis because the farm institutes never had the tools and materials for soil sampling and testing. Vaccination, insemination and injection of farm animals were also taught theoretically using lecture method and therefore learners did not get a chance to get hands-on experiences. This could probably be justified by the response from principals that financing was limited and would sometimes take five years before they received the money from government. It might have been also due to prioritization of items that left soil sampling, testing and insemination gadgets out of the list for purchases. In the MoES, (2012) BTVET advertorial, it was highlighted that the funds disbursed to farm institutes were not enough to facilitate proper training. The lecture method delivers the content though the labour market requires methods that pass on practical skills to the trainees. As a result graduates who were more than two years in the field reported lack of soil analysis, vaccination and insemination skills. This was confirmed when graduates who had served more than two years in the field were asked a question;

What practical things were you not able to do during your first days at work?

86% of those interviewed among other things mentioned vaccination, soil analysis and insemination of animals.

Worldwide, National Educational systems have been tied to a life of crisis of shortage of funds, classrooms, teaching materials, teachers- a shortage of everything except students (Coombs, 1985). Therefore there was need to increase on the income generated projects in the institutes so that they could not solely rely on government funding. They could also lobby and get more funds from well wishers and None Governmental Organizations (NGOs) to bridge the gap. Agriculture skills should be taught in a way that goes beyond a particular job and leaves trainees better able to take on different tasks in future.

The tools as explained above influenced the choice of the teaching methods used by the instructors. Where tools were inadequate and insufficient, traditional method such as lecture method was used. The aspect of insufficient and outdated tools and materials is the reason why farm institute graduates had to be retrained in other agriculture training institutions when they got employment in the agriculture labour market.

One might have hoped that the outcomes of agriculture teaching would become increasingly satisfactory, however there is much evidence to the contrary: evidence of inadequacies in the system and of wide spread dissatisfaction with its products (Burgess, 1986 p.71). For that matter graduates noted that they did not get all the skills that they wanted from the training institutions. This is a disappointing result in the context of job creation and sustenance in the quest to enhance economic growth of the nation.

Instructors also used lecture method to teach post handling and marketing techniques. This was because these activities were not done by the trainees in farm institutes. Instructors disclosed that trainees were not the best people to handle sensitive products like milk and eggs due of financial reasons. Instructors therefore resorted to giving notes to trainees

without chances of hands-on experience. This however resulted into graduating people with limited competences in marketing skills. Advancing his argument about skills training Frost, (1991) stated that training for employment cannot be holistic if it does not incorporate additional skills like business skills: how to seek and obtain orders how to obtain and utilize capital, how to locate markets, how to make profit and what to do with it. Therefore there was a mismatch between agriculture training in farm institutes and the labour market requirements.

Poultry management under deep litter system and grafting of seedlings were taught using project work. From table 4.2, Project work is a good way of imparting skills to trainees but it did not equip learners with the necessary skills because it was probably poorly managed. Firstly as earlier discussed in chapter two, some instructors did not supervise and cater for individual learners' needs (McKimm, & Jollie, 2007). This meant that the tasks were done by a few learners who were more active in class and could work with minimum supervision. They performed the activities at the expense of others as noted by McCarthy, (1992). In an interview with graduates about project method of teaching, one of the graduates had this to say;

> "*During training, we did not have individual plots to allow everybody to participate in all the details. When I got a job I realized that I had missed some of the steps in some routine operations. I tried to learn from my seniors*"[26].

The learners who did not participate in the performance of tasks while in farm institute faced challenges in their first days of work. Vocational Pedagogy emphasizes the

[26] A response from a farm institute graduate who was working with the NAADS program in one of the sub counties in Kabale district.

importance of close interaction with tools and materials in teaching/ learning processes. Interactive learning is supposed to put ones' hands on or into things to try things out. This is to provide familiarity to ones' own knowledge and it should be at its climax in farm institutes during vocational practice which is not the case. Practice that involves integration of the hand, mind and heart is very important from the start so as to ensure that right procedures / movements are learnt because unlearning of wrong movements can be difficult to rectify (Reece & Walker, 2003). Therefore inadequate exposure of individual learners to agricultural tasks limited the development of their skills and affected their performance in agriculture labour market.

Secondly instructors revealed that most learners missed project work especially on farm practicals like those meant for early morning or evening hours. Incidentally, most poultry management practicals were carried out early morning while grafting was normally done after classes in the evening. Development of manipulative skills in trainees needed the instructor to give individual instruction, examine the work and progress of each learner while questioning him/her to determine if he/she understood what his/she was doing and why doing it in that particular way (Sharma, 1994). Consequently, graduates faced challenges resulting from lack of enough practice and supervision of tasks involving poultry management and grafting.

Project method of teaching was also used to teach competences involving fruit farming. However apple production was assumed to have been classified among other fruits in the curriculum. After teaching management of certain fruits, instructors assumed that learners would use the same knowledge to understand how other fruits are managed. Experience shows that apple production and management is quite different from management of other

fruits like pineapples and bananas and therefore graduates needed to have had a real field experience with them in order to ably fit in the labour market. As Vygotsky cited in Moon & Leach, (1999 p. 43) contends, pedagogy should be oriented not towards yesterday of development but towards it tomorrow.

Agriculture teaching methods like visits to work places or for industrial training were not practiced. This raises concern about how the labour market requirements were catered for. If learners did not visit work places to see the tools and compare with what was in their institutions, socialize with senior staff and see how planning, organizing and communication were done in the work place. They might not effectively exploit their potential in the work place when they get employment.

The workplace is a key site for the development of generic skills such as communication, problem-solving, teamwork, information technology and customer service skills (Australian National Training Authority [ANTA], 2003). These skills are critical in today's agricultural labour market and therefore those concerned with employability and the culture of the workplace need to assist individuals to effectively develop and use these skills.

Industrial training was provided for in the BTVET act 2011. The same policy document recognized that the provision of internships was currently not sufficient to meet the growing demand but hoped to develop a plan to improve the availability of internship (BTVET Strategic Plan 2011 p. 14). However, little had been done to ensure that agriculture trainees in farm institutes visited work places. This showed that the problem was not only insufficient industrial training but no attempts had been made to that effect. I therefore, believe that the students went out to the world of work when they were ill-

equipped with the necessary competences. Some farm institute graduates quit agriculture trade, others acted as apprentices and the rest were retrained in other agriculture training institutions in order for them to get the skills needed to perform.

There is evidence that some competences needed in the labor marked were not provided for in the old curriculum[27]. Topics such as silk worm management, green house management, and mushroom gardening were lacking in the old curriculum. These were new technologies that came in the limelight with the introduction of NAADS in 2001 (International Food Policy Research Institute [IFPRI], 2007).The content was therefore dominantly used in the agricultural labour market but had not been incorporated in the training programme of farm institutes.

Because some content was not in programme documents and instructors not properly trained most graduates were retrained so as to move with the current trends in the agriculture labour market. As noted by Kasozi, (2003 p. 4), Uganda's higher education needs reform to be made relevant to the economic needs of graduates and the labour market. This involves making the curriculum flexible to include contemporary and emerging issues from time to time.

During the study it emerged that the graduates from farm institutes did not easily get jobs. Out of the thirty two graduates that were contacted, twenty three had retrained in other agricultural training institutions after graduating from farm institutes. Out of the nine graduates who had not gone for further training only one was doing work related to

[27] The old curriculum ended in Feb. 2012. The new curriculum that was still in draft form started with academic year 2012/2013.

In an interview with principals' to ascertain how easy it was for their graduates to get jobs, one of them had this to say:

> *"It is not easy to get jobs because they finish with 'just' a junior certificate. Most jobs need more than a certificate"*[28].

From the above information, my submission is that farm institutes did not equip learners with enough hands-on skills that would make them compete for jobs or sustain their jobs. Agriculture teaching methods used were not oriented towards imparting practical hands-on skills to make graduates secure jobs in the labour market.

In general, the relationship between teaching methods used in farm institutes and labour market requirements in Uganda remain a contradiction. The method used did not prepare trainees to meet agriculture labour market requirements. Teaching methods like field trips and industrial training which are instrumental in linking classroom knowledge to practical realities outside the class where the labour market exists should be emphasised. For effective teaching of agriculture, instructors should exposé learners to excursions, field trips, work place visits and industrial training so as to concretize their teaching so that it becomes more realistic and meaningful to the learners.

[28] A response from a principal from one or the farm institutes in Mbarara district.

4.4 Attitude of agriculture trainees and graduates towards their trade

The agriculture trainees and graduates showed a 'divergent' attitude towards their trade with up to 46% of the trainees regarding agriculture as a dirty job while a bigger percentage of graduates (54%) did not agree with the statement. When tasked to comment on the statement; "this course leads to dirty jobs", the following were the responses;

Table 4. 2: Views of trainees and graduates about agriculture trade

This course leads to dirty jobs	SA	A	UD	DA	SDA[29]
Trainees	3	9	2	4	8
Graduates	6	5	0	10	10

It was further revealed that it is the students who had failed to get marks to take them to their first choice vocations that were channeled to farm institutes.

Additionally, instructors and trainees in Farm Institutes did not have special attire to put on while conducting the practical lessons. They therefore make their bodies and clothes dirty during practical sessions. Many times trainees were required to report with the attires to the farm institute during admission but it was never emphasized. From the above findings, the percentages of trainees and graduates who felt that Agriculture was a "dirty" job were significant enough to cause behavioral change. Some people under look agriculture related tasks because of the 'dirty' activities involved and therefore feel such activities are beneath them.

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[29] Rating scale: SA =Strongly Agree UD =Un decided SDA = Strongly Disagree
A =Agree DA = Disagree

Traditionally jobs that leave the body dirty are taken to be for of the less privileged citizens. For example an average Nigerian peasant does not want his child to earn a living as a full time farmer because such a job is for the poor (Azubuike, 2011 p. 36; Tibenderana, 2003 p. 52). This implies that jobs that soil the body are associated with people of low economic status. The same notion has existed in Uganda since the colonial period when a son of Sir Apollo Kagwa commented that parents do not send their children to school to look after cattle but to learn to be lifted for posts of high standing (Ssekamwa, 1997 p. 81). Generally people look at education as a means to escape from manual work, such as agriculture.

It is made worse when students compare the facilities available during training in agricultural institutions versus the facilities in other institutions like Law-lawyers robe, Business-tellers in banks and Creative arts where trainees are exposed to attractive facilities. Not until such perceptions are changed can agriculture training equip trainees with the competences needed in the labour market.

On choosing Agriculture as their first choice vocation, findings revealed that over 90% of agriculture trainees and graduates did not select farm institutes as their first choice vocation. The admission requirements of the farm institutes indicated that students who scored low marks after senior four and senior six were channeled into farm institutes. A credit in either mathematics or English and a pass in either one of the traditional science subjects (Chemistry, Physics and Biology) or agriculture qualified one to join farm institutes. This was different from requirements to teacher training colleges where it was a must to have passed English, Mathematics and at least two of the traditional science subjects mentioned above with credits.

The history of education in Uganda has it that agriculture training was reserved for academic failures (Okello[30], 2011). As a result some percentage of the population may not willingly enroll for agriculture courses in farm institutes. As noted by Ssekamwa, (1997) there was an attitude in society that agriculture education was meant for students who were below average and therefore incapable of coping with academic subjects. In a report about the status of BTVET in Uganda, Okinyal, (2006) notes that although most vocational subjects are science based, students who pass sciences do not enroll in vocational institutions neglecting the subsector to low grade students. To be particular, at the heart of every student is a national attitude that implies that agriculture in farm institutes is designed for children of the poor (Osuala, cited in Azubuike, [2011]).

Participants revealed that Instructions were given mainly in theoretical mode, relating to the cognitive aspect more than the psychomotor aspect. There were not enough tools and materials to use during the process of instruction. The theory of practice recognizes that true learning originates from practice to theory and back again (Mjelde, (2006a). For that matter, proper teaching should allow indivivaul learners to construct knowledge and meaning by themselves through experience using their hands. This is because skills are inseperable from their accompanying knowlegde and attitudes (Bernett, 1999 p. 157). Agriculture training methods used in farm institutes may not have equipped learners with the attitudes necessary for the world of work. The way instructors teach may make trainees dislike their trade. Analysing from the afore mentioned statements, in order to enhance

[30] Complexities and contradictions in Vocational Education in Uganda: presentation to the post graduate students of Vocational Pedagogy Kyambogo University on 12th Oct. 2011

more positive attitudes in trainees, one needs to expose trainees to more practical tasks which will as well develop their psychomotor skills.

Agriculture labour market needs people with more psychomotor skills because the field demands more of hands-on experience. Psychomotor requires use of the hands in a skill coupled with the knowledge of how and when to use the skill. Acquiring skills and attitudes takes place simultaneously and with interactions between cognitive and psychomotor domains. Training with psychomotor domains guarantees development of hands-on skills which will always be applied in the labour market while emphasis on cognitive domains develops the mental aspect but with limited performance of practical tasks.

Hence manipulative skill development needs a blending of mind and muscle. Sharma, (1994) argues that attitudes can only be developed in direct application to the actual experience of the trainee and the worker. Therefore lecture method did not expose learners to direct experience and hence did not develop the right attitudes. It is through constant experimentation during practical tasks in laboratories', institute farms and workplaces where students muscle, mind and attitudes are developed. Trainees and graduates revealed that instructors did not properly supervise the practical tasks. When asked about the importance of supervision, one of the graduates had this to say;

> "*we were not supervised during practicals especially early morning and evening practicals. Because of this we used to dodge them and we did not take them serious*"[31].

[31] Response from a graduate who works as a NAADS coordinator in Kabale District

Lack of supervision by instructors affected attitudes of trainees because their presence during practical tasks motivated and assisted learners to connect new information with existing knowledge in meaningful ways. Learners master the tasks and derive meaning out of the tasks if they perform the tasks together with experts, (Mjelde, 2005 p. 56). Learners must be fully aware of what to do, how to do it, and why things are done that way (Petty, 1993 p.135). Lack of supervision showed that practicals were not taken seriously by the farm institutes which resulted into some trainees failing to attach value on them.

Failure to supervise was because some of the instructors had a negative attitude towards agriculture teaching as evidenced in a response from one of the instructors who said;

> *"Agriculture is a tiresome subject one wakes up at 6.00 am to conduct early morning practicals, it is not easy especially if you are a woman and have children to prepare for school..."*[32]

The absence of instructors sends a wrong signal to the trainees since the instructors are their role models. Trainees end up following suit. Teaching in farm institutes demands extra effort than that of an ordinary teacher in theoretical subjects. It can be analyzed that the failure by instructors to perform their work is due to low motivation and poor working conditions.

As noted earlier in the discussion, this extra effort was sometimes not rewarded. In circumstances where instructors did not manage to pay for services to help in domestic chores at home, they prioritized between activities at home and in the farm institute. Others ended up looking for more than one job; the reason why some instructors were part timing

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[32] Response from a farm institute instructor in Shema district

in order for them to cover the economic gap. They did not have enough time to counsel learners and show them the importance of skills, and what skills meant to them and to others if they could master them (Sharma, 1994). This would stimulate the feeling of need within the students and they would come to value work as their means of livelihood.

It was observed that most trainees do not want to do manual work evidenced by the level of absenteeism from farm activities. In separate interviews with some trainers about whether practical sessions are well attended by the trainees, these were some of their responses;

> *"Not every student reports for practicals, early morning practicals are a challenge to most students. Majority report after thirty minutes and some never report*[33]*."*
>
> *"Classroom practicals are well attended but field practicals like cultivation and fencing are a problem. Some lazy students miss the practicals*[34]*."*
>
> *"Sometimes students need to be pushed. Some pretend to be sick, they cause headache. When you relax they will never come*[35]*"*.

The above voices indicate that trainees did not respect manual work. Similarly, my personal experience during a visit to Arapai Agricultural College with students of Masters in Vocational Pedagogy (MVP) we observed that only half of the class was available and they reported one hour late. The cause for this negative attitude could have also originated from the trainees homes. Borrowing a leaf from Nigeria, there were few parents who

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[33] A response from a farm institute instructor at one of the farm institutes in Mbarara district

[34] A response from a farm institute instructor at one of the farm institutes in Mbarara district

[35] A response from a farm institute instructor at one of the farm institutes in Shema district

wanted their children to become farmers after attending school (Tibenderana, 2003 p 55). This is because training in agriculture did not give a lot of financial rewards and prestige.

The teaching methods used by instructors like lecture, project work and laboratory experiments were devoid of relevance and meaning which caused learners to lose faith and confidence in their ability to learn. This was due to inadequate tools and failure to supervise the tasks and ensure individual participation. Mjelde, (2006 p. 191) affirms that learners find learning relevant if it has personal meaning and allows for individual perspectives and self realization. Therefore students who frequently agriculture practical sessions did not regard manual tasks as facilitating learning which would be useful to them in the labour market. Historically, practical activities in agriculture were used as punishment for the wrong doers. At times teachers punished students to take hoes to dig during lesson or games or resting time and even after school.

All this showed students that agriculture was not a good subject to be taken seriously. They therefore looked for ways of evading the subject. It was further found out that farm institutes had fewer males than females (Table 4.2). Male students were more than female students. Additionally, male instructors were more than female instructors.

Table 4.2: Distribution of males and females in farm institutes

Institution	Boys	Girls	Male instructors	Female instructors
Rwampara	381	91	16	04
Rwentanga	297	63	15	06
Kitagata	300	85	15	05

Instructors and principals explained that agriculture is regarded as a heavy job requiring a lot of physical strength which females did not possess. Therefore lighter activities like

weeding, planting, harvesting, sorting and grading were dominated by females while slashing; carrying heavy loads, castration, slaughtering, fencing and construction were dominated by males. Interviews with employers revealed the same scenario where by females tended to like lighter activities leaving tough tasks to men. However this gender distribution could have greatly influenced the ability to do manual work.

In fact studies have shown that some jobs best suit girls more than boys (Byrne, 1978 p 83). For example males have inclination towards practical oriented courses or more manual tasks and activities such as agriculture, seamanship and fisheries while home economics and handcrafts were developed for females (Mjelde, 2006, p 33).

It was also common that students from pastoral regions purposely reported for animal production and therefore were not interested in crop activities. They reluctantly participated in activities associated with crop production because they were traditionally cattle keepers. They therefore wanted to practice activities which they could go back home and practice. This was because it gave the skills learnt in the farm institute more meaning. Borrowing a leaf from Vygotskys theory of experiential learning which is geared towards problem solving (Blum, 1996), classroom activities needed to be reality based and applicable to the real world and aiming at solving particular problems. If not, learners showed disinterest in the activities a situation as to why trainees shunned crop activities. However when agriculture graduates who did not get enough training in crop science get employment involving crop activities, such people may not perform to their expectations because they do not have the attitude needed to do the work.

However, contrary to the trainees' perceptions about manual work employers were generally comfortable with the graduates' performance. Personal interviews with some of them about the attitude of farm institute graduates towards manual work revealed the following responses:

> "*...they may have other issues but not with manual work. In this project, paper work is only used during record keeping*[36]."
>
> *"I do not have any problem with them. What they do not know, they consults their colleagues*[37]".
>
> *"What we need hear are people who love practical work. If they hated work, you would not find them here*[38]."

This is probably because it is paid employment which means that they are constrained to work in order to earn a living. Experience shows that some people join agriculture trade because of the desire for self sustenance. After training in skills and attitudes, farm institute graduates join the labour market and their competences are rewarded which is not done during the training session.

On the other hand, attitudes, agriculture teaching methods and age of learners influence the application of acquired competences in the labour market (Blum, 1996). In addition when students regard what they learn as being useful beyond the classroom, transfer of learning

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[36] Response from an employer of one of the graduates of farm institutes who owns a mixed farm in Shema district

[37] Response from an employer of one of the graduates of farm institutes dealing in fruit farming Kabale district

[38] Response from a farm manager at one of the Zonal Agriculture Research Institute Development (ZARID) in Kabale district

is improved. Therefore mature students who join the labour market and find activities commensurate with what was in the farm institutes make employers happy.

It was observed that graduates who trained more in agricultural skills tended to remain in agricultural related fields than those who trained less (Table 4.3). Agriculture certificate holders who had upgraded to diploma level stayed in the trade. Only one among those that had not attained a diploma was working in agriculture related field.

Table 4.3: Job distribution of farm institute graduates and their qualifications

Qualification	Agriculture field	Other fields	Not employed
Certificate & Diploma	23	-	-
Certificate	01	2[39]	3
		3[40]	

Therefore the training level determines the relationship between attitude development and training method. When trainees are exposed to more agriculture training, the belief in themselves grows as they undergo more new experiences. Farm institute graduates who were interested proceeded to higher levels while those that were unhappy, run away from the trade. The level of employment at certificate level was different from diploma level. At certificate level, work demanded more of physical might while after diploma, work became more supervisory with a lot of decision making coupled with higher remuneration. This motivated employees to have a positive attitude and stay in the trade.

Agriculture teaching methods, views, training level and labour market requirements shape the attitude of agriculture workers. Much as agriculture is taken to be a subject for students

[39] These graduates were shop attendants in Agro-chemical shops

[40] These graduates were "Bodaboda" cyclists.

who are academically weak and poor, when students are exposed to more agriculture training, confidence in themselves and positive attitudes grow as they undergo more new experiences. Therefore all agriculture trainees, graduates/employees and instructors should be subjected to regular training since training develops positive attitudes in individuals.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Agriculture training at farm institute level is thought to produce graduates who are skilled, knowledgeable and with a good /positive attitude towards their trade. This training is meant to produce graduates/ workers who fit the agricultural labour requirements. However it has been observed that farm institute graduates do not properly fit in the agricultural labour requirements. It is believed that the skills, knowledge and attitudes of any vocational trainee depend on the programmme offered, type of personnel for instructions, methods of instruction and materials available.

This study was set to provide information on;

i. the training methods used in farm institutes,

ii. whether the methods used prepare trainees to meet the labour market requirements,

iii. the attitude of trainees at farm institutes towards their trade.

Lecture method was the most preferred against other agriculture teaching methods like project work, laboratory experiments and field investigations that would have helped to equip trainees with hands-on skills needed in the labour market. It was evident that instructors continued to be more concerned about finishing the syllabus to enable students write examinations instead of actually helping them to develop hands-on skills. The graduates had a lot of theories-knowledge with less practical experience.

Agriculture training methods used did not prepare trainees to meet the labour market requirements. There was limited consideration of the agriculture labour market. The

methods which would have been essential in imparting skills needed in the labour market like visits to work places, industrial training, Information Communications Technology(ICT) were never practice. Other essential methods like laboratory experiments and project work were inadequately done. As a result, fresh graduates from farm institutes faced challenges in performing practical tasks during the first tasks at their newly acquired jobs. The major challenges faced were in areas of Soil analysis, Silk worm management, Modern bee keeping, Apple production, Animal surgery, Mushroom garden setting, Management of birds under deep litter system, Vaccination, insemination and injection of farm animals. The attitude of agriculture trainees and graduates towards their trade was found to be negative. The lecture method of agriculture teaching that dominated in farm institutes did not equip learners with attitudes and skills needed in the labour market. The study showed that attitude development was synonymous to skills development. Similarly training levels also affected attitudes of trainees and graduates towards agriculture trade. The more the training, the more the interest that developed. Hence graduates that were retrained stayed in the trade while those that did not retrain quit the trade.

5.2 Conclusion

In farm institutes, content delivery was dominated by theoretical approaches with lecture method dominating. Methods regarded as essential in equipping trainees with skills like field visits and laboratory experiments were performed at minimal rates which made them graduate people with theoretical knowledge. Farm institutes lacked up to date training facilities, tools and materials. Specific equipment was required to satisfy the need for practical training and hands on experience and the institutes lacked the resources.

In addition some instructors were not competent enough while others lacked the will to conduct practical teaching. Agriculture teaching methods used had a limited consideration of labour market requirements. There was limited effort to relate agriculture teaching in farm institutes with the labour market. There were few practical sessions in farm institutes, no field visits and no industrial training for students which would connect farm institutes with agriculture labour market. As a result graduates faced challenges related to practical skills during their first days of employment and were retrained in order to fit the labour market.

Those that did not undergo further training left the trade and were doing other things not related to agriculture. Agriculture trainees did not like manual work. They did not value manual work since they were to a large extent trained theoretically and felt that manual work would not benefit them. On the contrary, graduates tended to like manual work partly because they were rewarded or because they had under gone further training.

5.3 Recommendations

- A thorough review of agriculture methodologies that are used by instructors in farm institutes should be done. The study recommends that if agriculture is taught in a manner that is more practical, teachers would have an opportunity to explore and deal with all practical dimensions of the discipline. There should be close link between agriculture teaching in farm institutes and the labour market. Learners should be accorded opportunities to take part in community projects, visit work places, and go for industrial placements.

Effective teaching of agriculture exposés learners to issues such as excursions, field trips, work place visits and industrial training so that classroom knowledge connects well to practical realities outside the class where the labour market exists

- Uganda government through the MoES should ensure that enough resources are provided to farm institutes so that learners can use them to effectively acquire the needed work skills. Therefore income generating units within farm institutes should be boosted and others introduced so as to address the issue of sustainability of the farm institutes.

- Only professional instructors who have majored in agriculture should be recruited. These understand the content and the necessary teaching methods to use. They should also have retraining programmes for skilling and up skilling to cater for ever changing developments in the agriculture sector.

- In addition the curriculum content should be made flexible to include contemporary and emerging issues from time to time.

- More so, the attitude of trainees, graduates and by regular training since training develops positive attitudes in individuals.

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APPENDICES
DATA COLLECTION TOOLS

Appendix 1: Interview guide for principals

Introduction

The purpose of this study is to establish agricultural training in farm institutes and labour market requirements in Uganda. The information obtained will be used to improve on the training so as to suit labour market demands and requirements. All information collected from you will be strictly kept confidential.

SECTION A: Particulars of the respondent

Name of Institution .....

Name of Key Informant .....

Age: (21-30) ☐ (31-40) ☐ (41-50) ☐ Over 50 ☐

Highest level of education.....

Profession.....

SECTION B:

B1 How are you appointed to be the principal of this committee?

B2 What is your work as far as this institution is concerned?

B3 How do you raise the funds for the school?

B4 How often do you equip the lab/farm with new tools and materials?

B5 How often do you receive money from government?

B6 What criteria do you use to recruit trainees to this institution?

B7 How is gender distributed among trainers and students in your institution?

B8 Which methods do you use to teach theoretical and practical content?

B9 How do you cater for workplace requirements in your institution?

B10 Is it easy for your graduates to get jobs?

B10 What is the attitude of the trainees towards their trade?

Thank you once again for you time.

Appendix 2: Interview guide for the instructors

Dear Sir/Madam,

I am carrying out research on Agricultural training in Farm institutes and labour market requirements in Uganda. The data is intended to improve on training of agriculturalists in Uganda. I request you to give me some of your precious time and answer a few questions I have prepared. The information will be treated with utmost confidentiality and used specifically for this study.

Thank you for accepting.

Name of Key Informant .....

Age: (21-30) ☐ (31-40) ☐ (41-50) ☐ Over 50 ☐

Highest level of education.....

Awarding Institution.....Year.....

Profession.....

General information

1. Which courses do you teach at the department?
2. How long have you taught the course(s) mentioned above?
3. What is your view about the content given to the students?
4. Do you take part in curriculum design/review process at the department?
5. If yes, how often has the curriculum been reviewed? If No, why do you think so?

SECTION C: Teaching/training

1. How do you organize students learning process? (individually, group work)
2. What methods of teaching do you use?
3. How do you determine the choice method to be used?
4. How do you conduct a lecture lesson?
5. Do you supervise your students during the learning process? If yes, under what circumstances?
6. Does the course you teach has practical aspects? If yes, how do you handle them?
7. How often do you engage your learners in practical tasks?

8. How much time is allocated to practical tasks compared to theory?
9. Do you examine practicals and what percentage does is contribution to the pass mark?

Training methods and labour market requirements

1. What type of tools and materials do you use during training?
2. Are they sufficient for the students?
3. How do the tools, materials and equipment used during instruction relate to those on labour market?
4. What relationship is there between the curriculum and the workplace requirements?
5. Describe how you manage your teaching to meet the changing requirements of workplaces
6. What development would you wish to see in your teaching and the section at large?
7. What challenges do you face while conducting your duties?

Attitude

8. What is the attitude of the trainees towards practical work?
9. Do the trainees normally come in time and in large numbers to attend?
10. Give a comment on the trainees' attitude towards their trade.

Thank you once again for you time.

Appendix 3: Interview guide for employers

Dear Sir/Madam,

I am carrying out research on Agricultural training in Farm institutes and labour market requirements in Uganda. The data is intended to improve on training of agriculturalists in Uganda. I request you to give me some of your precious time and answer a few questions I have prepared. The information will be treated with utmost confidentiality and used specifically for this study.

Thank you for accepting.

SECTION A – Particulars of the respondent

Name of Organization.....

Name of Key Informant .....

Age 21-30 ☐ 31-40 ☐ 41-50 ☐ Over 50 ☐

Highest level of education.....

Profession.....

Ethnicity.....

.

Title of Key Informant .....

1. Has the organization recruited any fresh graduates in the agricultural field from our institutions in the last

(a) (0-2) years? Yes ☐ No ☐

(b) (2-5) years Yes ☐ No ☐

If the answer is yes how do you rate the attitude of each of them?

(0-2) Years.....

(2-5) Years .....

2. What kind of procedure do you use to recruit vocational graduate employees?

a) Advertisements of vacancies in newspapers ☐

b) Internal advertisements of vacancies ☐

c) Direct application of graduates ☐

d) Placement service unit at the training institutions ☐

e) Personal contacts to graduates ☐

f) Private employment agencies ☐

g) Binding students by scholarships ☐

h) Others (specify).....

2. What do you have to say about the grades in examinations sat by trainee?
3. What types of skills are required from your employees?
4. Do you retrain your new recruits on employment?
5. How do you rank your workers? Very competent, competent, not competent
6. What do you suggest to be added or subtracted from the agriculture training in higher institutions of learning?
7. How do you rate the performance of ladies to men?
8. Do your workers like to perform manual work?
9. What is the attitude of the workers towards work?

Thank you once again for you time.

Appendix 4: Interview guide for the agriculture expert

Dear Sir/Madam,
I am carrying out research on Agricultural training in Farm institutes and labour market requirements in Uganda. The data is intended to improve on training of agriculturalists in Uganda. I request you to give me some of your precious time and answer a few questions I have prepared. The information will be treated with utmost confidentiality and used specifically for this study.

Thank you for accepting.

SECTION A –Particulars of the respondent

Name of Organization.....

Name of Key Informant .....

Age 21-30 ☐ 31-40 ☐ 41-50 ☐ Over 50 ☐

Highest level of education.....

Profession.....

1. How are you appointed to this office?
2. What types of skills are required from agriculture graduates from vocational training institutions?
3. Which competences do you normally find lacking in new recruits from agriculture training institutions?
4. Do you think the training institutions have done a lot to equip the trainees with the skills mentioned above?
5. Comment on the teaching methods used in agriculture training institutions and the needs of agriculture labour market.
6. Comment on the performance of female employees in relation to males.
7. Do your workers like manual work?

Thank you once again for you time.

Appendix 5: Questionnaire for trainees

Dear Sir/Madam,
I am carrying out research on Agricultural training in Farm institutes and labour market requirements in Uganda. The data is intended to improve on training of agriculturalists in Uganda. I request you to give me some of your precious time and answer a few questions I have prepared. The information will be treated with utmost confidentiality and used specifically for this study.

Thank you for accepting.

SECTION A: particulars of the respondent

Name of Key Informant .....

District of birth.....

Tick the appropriate answer

Age: (21-30) ☐ (31-40) ☐ (41-50) ☐ Over 50 ☐

SECTION B: Teaching methods

Tasks

1. Did you participate in discussions?

   A) Yes B) No

2. Do you get a lot of notes and handouts?

   A) Yes B) No

3 What types of tasks are you given?

   A) Practical B) Theoretical C) Both theory and practical

4 How often are you supervised during your practical lessons?

   A) High B) Minimal C) No supervision

5 How often do you get explanation for what you do especially in practicals

   A) Always B) Whenever needed C) No explanations

6 Do you learn in groups, pairs, or individual

   A) Groups' B) pairs C) individual

7 How do you rate your instructor in relation to his work

A) Very knowledgeable, B) knowledgeable C) Not knowledgeable

8 How easy is it to access tools, materials, and equipment from the store/farm

A) Easy to access, B) takes time to accessC) difficult to access

9 What kinds of tools do you use?

A) Very Modern B)modern C) Old

10 Where are they stored?

A) Separate stores B)laboratory, C) farm

11 How often do you visit the farm/field to perform outside class practices?

A) Many times B) rarely C) never

12. What do you comment about the teaching methods used by your instructors?

A) Very good B) Good C) Not good

13 Do you think there are better ways of handling the teaching process in terms of teaching methods? If yes, explain.....

14 Which is the commonest teaching method used by instructors in you institute?

Tick in the appropriate box

Teaching methods mostly used by instructors	Tick	skills acquisition	knowledge acquisition
Lecture			
Class discussions			
Visits to work places			
Project work/group work			
Lab experiments			
Industrial training			
ICT			

3 Time on tasks

1 How much time is allocated to a theory lesson per week?

A) 1-2hrs, B)3-4hrs C)5 hrs and above

2 How much time is allocated to a practical lesson per week?

A) 1-2 hrs B) 3-4 hrs C) 5 hrs and above

3 Do you feel the time allocated for practical lessons is enough?

A) Enough B) Relatively enough C) Not enough

4 At what time do you conduct your practical lessons

A) Early morning before classes B) Evening after classes

C) During the weekends D) During study time

SECTION 3: Training and labour market requirements

1. Have you ever been for industrial training/field placement? .....
2. How many times did you participate in industrial training?

A) Once B) Twice C) Three times & above

3 How much time did you spend during each period of the training?

A) 1-2 weeks B) 2-4weeks C) 4weeks & above

4 Explain your experience during industrial training

A) Very interesting B) Interesting C) Boring

5 How did you find the work during industrial training?

A) Very easy B) easy C)difficult

6. What are some of the practical things you were not able to do during your industrial training? .....
7. How did you cope up? .....
8. Were there any particular comments from your supervisors about your abilities? If yes, what were they? .....
9. Did you learn anything new during the training different from what you learnt while at the college?

If yes, please explain.....

Attitudes

Note: SA: Strongly agree, A: Agree, UD: Undecided, DA: Disagree SDA: Strongly disagree

Please (√) tick the most appropriate answer

S.No	Statement	SA	A	UD	DA	SDA
	This course is the best for you					
	Teachers used the best methods of teaching					
	You are satisfied with your teacher's methods of teaching.					
	Your teachers are friendly and approachable for you					
	Your teachers have command on their subjects					
	Your teachers come and leave the class on time.					
	You will get all the skills that you want to work					
	All students are very good to you					
	You will learn everything want from this course					
	This course will help you to get employment or start your own business					
	This course leads to very dirty jobs					
	Your parents/guardian forced you to join this course					
	I wish I had gone for another course					
	Farm institutes were your first choice at senior four.					
	Your teachers discouraged you and insulted you in class					

Appendix 6: Questionnaire for graduates

Dear Sir/Madam,
I am carrying out research on Agricultural training in Farm institutes and labour market requirements in Uganda. The data is intended to improve on training of agriculturalists in Uganda. I request you to give me some of your precious time and answer a few questions I have prepared. The information will be treated with utmost confidentiality and used specifically for this study.

Thank you for accepting.

SECTION A: Particulars of the respondent

Name of Key Informant .....District of birth.....

1. Age: (21-30) ☐ (31-40) ☐ (41-50) ☐ Over 50 ☐

2. Gender Male Female

3. When did you complete your studies? .....

4. Where are you working as at the moment? .....

SECTION B: Training methods

Tasks

1 Did you participate in discussions?

A) Yes B) No

2 Did you get a lot of notes and handouts?

A) Yes B) No

3 What types of tasks were you given?

A) Practical B) Theoretical C) Both theory and practical

5 How often were you supervised during your practical lessons?

A) High B) minimal C) no supervision

6 How often did you get explanation for what you did especially in practicals

A) Always, B) whenever needed C) no explanations

7 Did you learn in groups, pairs, or individual

A) Groups' B) pairs C) individual

8 How do you rate your instructor in relation to his work

A) Very knowledgeable, B) knowledgeable C)not knowledgeable

9 How easy was it to access tools, materials, and equipment from the store/farm

A) Easy to access, B) takes time to access C) difficult to access

10 What kinds of tools did you use?

A) Very Modern B) modern C) old

11 Where were they stored?

A) Separate stores B) laboratory, C) farm

12 How often did you visit the farm/field to perform outside class practices?

A) Many times B) rarely C) never

13 What do you comment about the teaching methods used by your instructors?

A) Very good B) Good C) not good

14 Do you think there are better ways of handling the teaching process in terms of teaching methods? .....

If yes, explain.....

15 Which was the commonest teaching method used by instructors in you institute?

Tick in the appropriate box

Teaching methods mostly used by instructors	**Tick**	**skills acquisition**	**knowledge acquisition**
Lecture			
Class discussions			
Visits to work places			
Project work/group work			
Lab experiments			
Industrial training			
ICT			

2 **Time on tasks**

1 How much time was allocated to a theory lesson per week?

A) 1-2hrs, B) 3-4hrs C) 5 hrs and above

2 How much time was allocated to a practical lesson per week?

A) 1-2 hrs B) 3-4 hrs C) 5 hrs and above

3 At what time did you conduct your practical lessons

A) Early morning before classes B) Evening after classes

B) During the weekends D) During study time

4 Do you feel the time allocated for practical lessons was enough?

A) Enough B) relatively enough C) not enough

Training and labour market requirements

5 Did you go for industrial training? .....

6 How many times did you participate in industrial training?

A) Once B) twice C)three times and above

7 How much time did you spend during each period of the training?

A) 1-2 weeks B) 2-4weeks C) 4weeks and above

8 Explain your experience during industrial training

A) Very interesting B) interesting C) boring

9 How did you find the work during industrial training?

A) Very easy B) easy C) difficult

10 What are some of the practical things you were not able to do during your industrial training? .....

11 How did you cope up? .....

12 Were there any particular comments from your supervisors about your abilities? If yes, what were they? .....

13 Did you learn anything new during the training different from what you learnt while at the college? .....

If yes, please explain.....

14 Which organizations have you worked with since you completed your studies?

.....

15 How did you get to work with this/these organization(s)? (Was it advertised?

.....

16 Were there certain things that you were not able to do at the time of your recruitment to this job? .....

17 What practical things were you not able to do during your first days at work?

.....

18 How were you been able to cope?

.....

19 Are there any particular comments from your supervisors about your abilities? If yes, what are they? .....

Have you ever received any form of training at the place of work? .....

20 If yes, what core competences were targeted? .....

.....

21 Did you learn anything new different from what you learnt while at the training institution? If yes, please explain.....

22 Do you find what you studied in the training institution relevant to what you are doing? .....

23 How is learning at the training institution different from that at work?

.....

24 Do you work under supervision of anybody? If no, why?

.....

25 Comment about the teaching methods used by the teaching staff

.....

26 Do you think there should have been a better way of handling the teaching/learning process in terms of teaching methods?

.....

26 If yes, what do you think should have been a better way?.....

Attitudes

Note: SA = strongly agree, A = Agree, UD = Undecided, DA =Disagree SDA = Strongly disagree

Please (√) tick the most appropriate answer

S.No	Statement	SA	A	UD	DA	SDA
	This course is the best for you					
	Your teachers used the best methods of teaching					
	You were satisfied with your teacher's methods of teaching.					
	Your teachers are friendly and approachable for you					
	Your teachers had command on their subjects					
	Your teachers came and left the class on time.					
	You got all the skills that you wanted to work					
	All students were very good to you					
	You learnt everything you wanted from the course					
	The course helped you to get employment/start your own business					
	This course leads to very dirty jobs					
	Your parents/guardian forced you to join this course					
	You wish you had gone for another course					
	Your teachers discouraged and insulted you in class					
	You joined farm institutes because it was your first choice.					

Appendix 7: Observation checklist

1. The learning organization in the classroom
2. Time spent on task
3. Time given for breaks
4. Teaching methods used
5. Types of tools and materials used in instruction
6. Organization and storage of tools and material
7. Nature of operation of the available tools
8. Teachers mastery of vocational pedagogy skills
9. Provision for social skills, mentoring, guidance and coaching to learners
10. Trainees enthusiasm in performing task

Appendix 8: Document study check list

1. Curriculum/programme documents
2. Time Table
3. Charts