

**Investigating an Agricultural Extension Training Program from an
Adult Education Perspective in Oromia Region, Ethiopia: an
Exploratory Case Study**

By

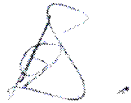
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A dissertation submitted in partial fulfillment of the requirements for the
degree of Master of Education at the University of KwaZulu-Natal

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DECLARATION

I, K.S. Guta, hereby declare that this is my own original work and that it has not been submitted to any other university for the award of a degree.

A handwritten signature in black ink, appearing to be 'K.S. Guta', with a small horizontal line at the end.

Abstract

The agricultural extension package program is initiated by the government of Ethiopia. It is initiated to reduce poverty and bring development in the country. The basic underpinning principle of this program is that, if the productivity of the farmer is increased, on the one hand it is possible to bring sustainable development in Ethiopia and on the other hand it will help to get the raw material for the industry and reduce the migration of the work force from rural to urban areas. Agriculture is the source of livelihood for over 80% of the population and the majority of the poor live in rural areas. About 59.5% of the population is illiterate. The government gives overriding primacy to the welfare of rural populace. Agriculture is also believed to be a potential source to generate primary surplus to fuel the growth of other sectors of the economy.

The main feature of the target group is that majority of them are illiterate and their mode of production is subsistence. Of the many kinds of intervention to bring development; educating the society is the major one. Indeed the government offers training to the subsistence farmers with the intention of enhancing their productivity via development agents. DAs are there to facilitate empowerment of the farmers, lead the process of technology transfer and change the attitude of farmers. DAs work with subsistence farmers to introduce the modern system of farm and farm related activities. To do so a series of teaching - learning processes are evident in the program.

The purpose of the study is to see the kind of teaching - learning processes that are evident in the program and to see how the principles and theories of adult education relate to the program. Thus, the research tries to explore the learning approaches and practices evident in the extension package program, the perception of DAs and farmers about the training and the actual and potential role of literacy in an agricultural extension program.

The research adopts an interpretivist paradigm and some aspects of critical paradigm to understand the data and the context. It is qualitative in nature. The study is conducted on

a sample of 18 participants (15 farmers and 3 extension package workers). Semi-structured interviews were conducted with three DAs, focus group discussions with twelve farmers, observation while the training was taking place in the field and document analysis to get factual information. The research results are reported in the form of discussion and findings.

Indeed it is revealed that farmers are divided into two as the leader and follower farmers. Accordingly the types of trainings are divided into two as general and special training. Literacy ability of the farmers is one of the criteria to be eligible for special training. That resulted in the exclusion of the majority of farmers from the special training program.

ERIC Keywords: Extension package program, Development agents, Literacy, Adult education, Follower farmers, Leader farmers

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List of Acronyms

ADLI	Agricultural Development Led Industrialization
AE	Adult Education
ANFE	Adult and Non-formal Education
CSA	Central Statistics Authority
DA	Development agent
ETEC	Ethio-Education Consultant
FDRE	Federal Democratic Republic of Ethiopia
FSC	Farmers Service Cooperatives
HDI	Human Development Index
MOFED	Ministry of Finance and Economic Development
MOA	Ministry of Agriculture
MOE	Ministry of Education
PADETES	Participatory Demonstration and Training Extension System
SDPRP	Sustainable Development and Poverty Reduction Program
UNDP	United Nations Development Program

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CHAPTER ONE: BACKGROUND AND CONTEXT OF THE STUDY

1.1 Introduction

Ethiopia is one of the most drought stricken Sub-Saharan African countries. Ethiopian agriculture is virtually all small-scale, subsistence-oriented and crucially dependent on rainfall. As Fikadu and Birhanu (1999/2000: 9) discuss, more than 95 per cent of the country's agricultural output is generated by subsistence farmers who use traditional tools and farming practices. The food production is by far lower than food requirements since the population growth rate (3 per cent) is higher than agricultural production growth rate (1.8 per cent) (World Bank, 1995 in Mohammad, 2001: 86). In fact, the imbalance between population growth rate and the agricultural production growth rate is one of the highly pronounced national problems in the country. Due to this fact the attainment of food self-sufficiency becomes the primary concern of agricultural policy in the country. There are also other objectives that include generation of export earnings, sources of income and employment for the majority, since the economy of the country depends largely on agricultural production (Mohammad, 2001: 86).

The government of Ethiopia thus designed a special program to mitigate the existing problem of food insecurity and to bring sustainable development. The fundamental development objectives of the Federal Democratic Republic of Ethiopia (FDRE) are to build a free-market economic system in the country, which will enable:

- the economy to rapidly grow;
- the country to extricate itself from dependence on food aid; and
- poor people to be the main beneficiaries from economic growth.

(Ministry of Finance and Economic Development (MOFED), 2002/03: 7)

To do so the country developed a program known as the Sustainable Development and Poverty Reduction Program (SDPRP). To bring the desired change the government prefers to work with the rural community where about 80 per cent are living, the majority of whom are poor. As a matter of fact, the proportion of the population below the poverty

line is 44 per cent based on 1999/2000 census with a great variation among rural and urban. It is 45 and 37 per cent in rural and urban area respectively (MOFED, 2002/03: 5). In line with this, 78 percent of the population earns less than 2 US dollar per day (EFA Global Monitoring Report, 2006: 169). To curb the situation, the government gives primacy to the welfare of the rural populace. Agriculture is also believed to be a potential source to generate primary surplus to fuel the growth of other sectors of the economy.

Given that poverty reduction will continue to be the core agenda of the country's development, the strategy is built on four pillars (building blocks). These are: Agricultural Development Led Industrialization (ADLI); the Justice System and Civil Service Reform; Decentralization and Empowerment; and Capacity Building in Public and Private Sectors (MOFED, 2002/03: 5).

“ADLI is strategy which aims to use agriculture as the base for the country's overall development” (Ethiopian Embassy, 1998:2). This strategy is designed to enhance the productivity of small landholder farmers and to assure food security both in the rural and urban areas. Within the framework of ADLI, as the Ethiopian Embassy (1998: 2) discusses, the government has also introduced specific policies and provided technical and institutional support to farmers, in its drive to increase food production through intensive cultivation. These policies included fertilizer supply and distribution, improved seed supply and distribution, development of small-scale irrigation, conservation of natural resources and environment, agricultural research and extension work as well as marketing and price policy.

Within ADLI the new system of agricultural extension is known as the "Participatory Demonstration and Training Extension System" (PADETES) - a system based on demonstrating and training to farmers in proven technologies in a participatory manner (Ethio-embassy, 1998: 2).

In a country like Ethiopia where more than 80 per cent of the population are living on farms and engaging in farm-related activity, it is feasible to have ADLI as a development strategy. As I have tried to show above, this strategy has something to do with

participation, demonstration and training. On the other hand, about 60.2 per cent of adults are illiterate (EFA Global Monitoring Report, 2006). This puts the success of the program under question.

Negusse and Yousuf (2001), Tesfaye (1997) and many others have done research and conducted evaluations on the effectiveness of extension package program from the productivity and sustainability perspectives. But no attention is given to see the effectiveness of the program from the perspective of farmers' educational background. This was what prompted this study to investigate an agricultural extension training program from an adult education perspective.

1.2 Context/Background of the Study

1.2.1 Context of Literacy in Ethiopia

Ethiopia is located in the northeast of Africa, in the so called 'Horn of Africa'. It is found south of Eritrea, east of Sudan, north of Kenya, west of Djibouti and northwest of Somalia as shown in the figure below:

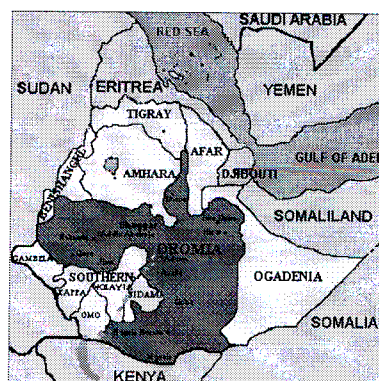


Figure 1: *Map of Ethiopia showing all the regions*

One of the major characteristics of the society is that about 59.5 per cent of the population is illiterate with a great disparity among the regions. This regional disparity was illustrated in one of Oxfam's documents developed by OXFAM (undated) "in Delanta 70 per cent of the community are illiterate; in Metta the figure is 78 percent for women and 31 percent for men; the figures in Jijiga are 79 percent of men and 98 percent of women are illiterate". One can see that the vast majority of the nation is living without the ability to read and write. Despite having a vast majority of illiterate people in the country, the Federal Government said nothing in the new education and training policy statement about adult education except its contribution for access to basic education for out of school age children (MOFED, 2002/03: 67-69).

According to Ramirez (2004: 13) people without basic education are people who are denied access to important information about health, social, cultural, and political issues as well as sources of pleasure and enrichment. In his effort to show the relationship between literacy and development; Greaney (1996: 5) states that "without a sizable literate population it is difficult for nations to develop the human resources necessary to create viable economies, essential services, and civil societies".

When Mercer, et al (1999: 11) discuss about the feature of adult and non-formal education (ANFE) in Ethiopia, they say that "this sub sector is characterized by a lack of policy, proper organization and professionalisation". They also assert that

some of the other problems of the sub-sector revolve around: the quality and relevance of training; low participation of women; insufficiency of resources; insufficiency of systematic record-keeping and follow-up; weak organizational structure, co-ordination and supervision; and variety of competence among regions.

1.2.2 Background to the Study

According to the Central Statistics Authority (in Kuris 2003: 3), the total population of Ethiopia is more than 70 million. As it is further discussed, in the year 2002 children below 15 years of age constitute 43.8 per cent of the country's total population. Apparently 20.6 per cent of the total population falls within the youth population (15 – 24) age bracket. The old age population constitutes only 3 per cent. This implies that Ethiopia is characterized by a young age structure. Thus, the dependency ratio of the country is quite high which intensifies the burden on the working population as they have to support the non working population.

HIV/AIDS is another potential threat in addition to food insecurity for the country. The country is one of the Sub-Saharan African countries where HIV/AIDS infection is high. "One out of every thirteen adults is believed to be infected. In urban areas more than one out of every six adults is being infected." In fact, "it is already putting a brake on the economic growth in the worst affected country through diversion of investment, deficit-creating pressures on public resources, and loss of adult labor and productivity" (MOFED, 2002/03: 6). In a very poor country like Ethiopia where there are meager resources, this epidemic is crippling the effort towards the move for development.

The country has a variety of peoples and diverse cultures. This is because of the fact that the country is formed from multi ethnic groups that have their own respective languages and ways of living. As Guddina (2003: 13) describes, the country was created by expansion and conquest which resulted in national domination by one or two ethnic groups over the multitude of others until recently.

Due to the above reason and many other factors the country has gone through a number of devastating civil wars. The main causes of these wars were the quest for democracy and freedom. There are three major ethnic nationalist perspectives in the country

(Guddina, 2003: 14). The differences basically concern the way they interpret the historical road to modern Ethiopia and the political solutions they provide for the country's contemporary problems. They range from unification and expansion to colonization (Guddina, 2003: 14). This political question has a lot to do with instability and the series of civil wars. Indeed it can be considered as one of the causes for underdevelopment of the country.

Since 1991 Ethiopia has adopted a system of ethnic federalism. Accordingly, the country is divided into nine different regions. Most of the regions have their own work language (regional language). In line with this, each of them has their own medium of instruction in primary schools.

Following the end of the civil war that resulted in Eritrean independence in 1991, a sharp decline in defense expenditure took place and funding was re-oriented towards social and economic development. Accordingly, spending on human development (education and health) has been increasing in relative terms and has been even more pronounced subsequently after the launch of the education, agriculture and health sector development programs in 1997/98. Total spending on education increased from 2.6 per cent of GDP in 1992/93 to 5.5 per cent of GDP in steady growth over the years up to 2001/02. That resulted in a sound increase in the primary school enrollment rate of students from 49.9 per cent in 1998/99 to 70 per cent in 2003/04 (EFA Global Monitoring Report, 2006: 286).

Though such an impressive achievement was gained in primary school enrollment of school age children, nothing is said about adult education by the government. Indeed, literacy activity is still considered as being of secondary importance in a country where the bulk of the population is still illiterate.

Among other factors, the development of a given country is determined by its human resources. Human resource development is largely a function of educational level. The Human Development Index (HDI), as calculated by UNDP (in Sandhaas, 2005: 9),

includes three dimensions: a) a long and healthy life, b) knowledge, and c) a decent standard of living. Knowledge is strongly associated with education and with literacy in particular. Moreover, the adult literacy rate has a two-thirds weighting in the definition of a country's education index, while the remaining one third corresponds to the combined primary, secondary and tertiary gross enrolment ratio (Sandhaas, 2005: 9). If one looks at Ethiopia from this perspective, it is easy to see that the productivity level of the citizens is quite low as is witnessed by the country's incapability to insure food self sufficiency. This is so because of the fact that the majorities of the citizen is denied the access to basic education and live far from urban centers.

Oromia, the biggest region in the country with approximately two fifths of the total population, can fairly be represented by the above facts as far as the poverty level, access to basic education, literacy ratio and extension work is concerned. Though different ethnic groups occupy the region, the Oromo ethnic group is the majority and the regional work language has been Afan Oromo since 1991.

1.2.2.1 Adult Education in Ethiopia

A brief background to adult education in Ethiopia will help to put in context this focus. Throughout Ethiopia an adult and non-formal education program was carried out in the form of campaign for more than a decade until 1990. Even though I didn't come across much research conducted on the effectiveness of the program, from my own experience as one of the participants in the campaign as an adult and non-formal education facilitator, it is difficult to say that the program was successful. As Mercer, et al (1999: 11) discuss, some of the serious limitations of the program included that the teaching-learning process was not student centred, the curriculum was prepared at a central level, the materials were more subject centred than problem centred, and the facilitators were not well oriented and lacked commitment. This experience, together with the change in government, resulted in the total rejection of the importance of adult education in the country until recently.

In fact adult basic education is characterized by a lack of proper policy, meager resources and negative attitudes from political bodies (Mercer, et. al, 1999: 13). This is because of the fact that government presumes adult education as mere literacy activity that would contribute little to the development of the country.

1.2.2.2 Agricultural Extension Work in Ethiopia

The self reliance of farmers is conditioned by a number of factors such as economy, technology, utilization of resources, land policy of the country, the level of education, the type of training and the like. Cognizant of the contribution of training to improve the productivity of farmers, the government of Ethiopia is offering training to the farmers via development agents (DAs) all over the country. The training emphasizes improving the productivity of the farmers.

About 80% of Ethiopians live in rural areas; most of these people are engaged in subsistence farming or pastoralism. Altitudes in Ethiopia range greatly. The low lands are characterized by dry, sometimes drought stricken areas occupied mainly by nomadic or semi-nomadic pastoralists. The mid-altitude and the high altitude areas are densely populated and the inhabitants make their living in farming (Percy, 1997: 1). Oromia, the biggest region in the country, is situated mainly in mid and high altitudes.

Tafesse's assessment (Tafesse 2003: 55) shows the overall growth rates of the country and agricultural productivity have a positive correlation. This is so because of the fact that the economy of Ethiopia is dependent on agriculture both to get hard currency and to support the livelihoods of the majority of the population. Indeed, the productivity of agriculture has a potential to determine the overall development of the country. This duty and responsibility is by and large entrusted to DAs. Thus, DAs have a very important role to play in the development of the country because they are working with the rural community.

The ruling party is convinced that, to reduce poverty and bring development in the country; it is important to develop a strategy that takes into account the rural community. This strategy is known as Agricultural Development Led Industrialization (ADLI). The basic underpinning principle of this program is that, if the productivity of the farmer is increased, on the one hand it is possible to bring sustainable development in the country and on the other hand it will help to get the raw material for the industry and reduce the migration of the work force from rural to urban areas (MOFED, 2002/03: 3). The broad thrust of Ethiopia's sustainable development and poverty reduction program, (Ethiopian Embassy: undated: 2) thus, consists of:

- An overriding and intentional focus on agriculture as the sector is the source of livelihood for over 80% of the population where the bulk of the poor live. The government gives overriding primacy to the welfare of rural populace. Agriculture is also believed to be a potential source to generate primary surplus to fuel the growth of other sectors of the economy (industry);
- Strengthening private sector growth and development especially in industry as means of achieving off-farm employment and output growth (including investment in necessary infrastructure);
- Rapid export growth through production of high value agricultural products and increased support to export oriented manufacturing sectors particularly intensified processing of high quality skins/leather and textiles;
- Undertaking major investment in education and strengthen the ongoing effort on capacity-building to overcome critical constraints to implementation of development programs;
- Deepening and strengthening the decentralization process to shift decision-making closer to the grass root population, to improve responsiveness and service delivery;

- Improvements in governance to move forward in the transformation of society, improve empowerment of the poor and set framework/provide-enabling environment for private sector growth and development;
- Agricultural research, water harvesting and small scale irrigation;
- Focus on increased water resource utilization to ensure food security.

Based on the above guiding principles the Ministry of Agriculture is working to achieve the above stated objectives via extension package work with the farmers. Most of extension package workers (whom I also refer to as Development Agents) have completed high school with one year to three years of training on agricultural extension work.

They are there to facilitate empowerment of the farmers, the process of technology transfer and change the attitude of farmers. That is; development agents (DAs) are required to help farmers so that they become business minded: they can survey what their customers would like to get, know what to produce, for whom to produce and when to produce (Belay and Abebaw, 2004: 141). This is so because of the government's strong need to transform subsistence farmers to business oriented farmers both to get hard currency and to improve their livelihood.



Figure 2:- *A farmer plowing his fields*

Federal government strongly believes that unless agriculture lays a favorable condition for industry (secondary-modern goods producing sectors) and services (tertiary-distributive and other services), it is not possible to ensure accelerated growth and sustainable development (MOFED, 2002/03: 5). In an agrarian economy such as Ethiopia, the resources for development of the industrial sector need to be generated primarily through the creation of a strong bond between agriculture and industry and through subsequently exploiting these linkages via the concerted efforts of non-state actors, particularly the peasant private sector (MOFED, 2002/03: 6).

This is so because of the fact that in Ethiopia agriculture has to continue to serve as an engine of growth in both the domestic economy and international trade. That is, there has to be progress in terms of commercialization, with labor intensive farming, increasing proportion of marketable output and correspondingly decreasing ratio of production for own consumption (Ethiopian Embassy, undated: 3). Furthermore; extension of credit service to subsistence farmers will help both to capacitate them and also to pave a way to the establishment of rural banks (MOFED, 2002/03: 11).

The new system agreed upon between central and regional levels is based on the package approach and is called the 'participatory demonstration and training extension system' (PADETES). This system combines technology transfer and human resource development (Percy, 1997: 2). Thus, one of its objectives is to empower farmers to actively participate in the development process.

1.3 Rationale for the Study

My own interest in doing this research stems from the fact that government is producing a number of DAs yearly from different agricultural institutions all over the country. The intention is that trainees work with the farmers to achieve the desired results. The main features of the target groups are: most of them are illiterate and their mode of production is subsistence. My experience is that these communities are suffering from a number of problems such as lack of clean water, lack of infrastructure like schools, roads and health facilities, harmful traditional practices, early marriage and the like.

Of the many kinds of intervention to bring development; educating the society is the major one. Here the question arises as to what kind of education would satisfy the needs of subsistence farmers? The type of education that will help to empower the rural community politically, culturally and economically should be given (Freire, 1972: 80). Because this community is suffering from political, cultural and economic problems those are imposed by different authorities from inside and outside. They have to develop systems of critical thinking (Mezirow in Jarvis, 1995: 96): observe their own practices; be able to distinguish between good and harmful ones; and be able to take steps to avoid harmful ones.

Though adult education has a long tradition in the country being handled by different bodies, be it on a small scale or at national level, comprehensive research designed to strengthen and support sustainability of the program is not done as desired. Indeed, the research would help to show the possible links between development and adult education.

Thus, the research tries to explore what kind of training is being offered by extension package workers and how it can be enriched.

The findings from this research could be useful to:

- Different governmental and non-governmental organizations working in the area of adult education.
- Different governmental and non-governmental organizations working in the area of agricultural activity.
- Curriculum development specialists and textbook writers who prepare materials for adult education.
- National and regional policy makers who design education policy and farmers training.

1.4 Key Questions

- What learning approaches and practices are evident in the extension package training program?
- How do the extension package workers and farmers perceive the training program?
- What is the actual and potential role of literacy in the agricultural extension program?

1.5 Delimitation of the Study

This study is limited to the Oromia region. It focus on the training (teaching and learning process) delivered by extension package workers to the farmers from an adult education perspective, to see if there is any possibility of improving the training and to examine the perceptions of both the workers and the adult farmers about the program in relation to adult education.

1.6 Limitations of the Study

The study is conducted based on the information obtained from three DAs, twelve farmers, observation conducted in the research area and document analysis. It is difficult to make a general conclusion based on small numbers of respondents in limited areas as compared to the vastness of the region. The generalizability of the research indeed might be threatened by the limitedness of the respondents. However, one of the unique features of qualitative research is that it is more appropriate and convenient method of research where little is known about the program. In addition, since the program is run by government, there is a significant level of homogeneity in the program across the board. Indeed I believe that the research is quite helpful to serve as the starting point for any interested researcher to provide general picture of the existing situation concerning the training, adult literacy levels, perceptions of the trainees and trainers about the possible link between literacy and training to improve the productivity of the farmers.

1.7 Ethical Issues

To fulfill the ethical issues I secured permission from Oromia Region Bureau of Agriculture. I did the same from Ambo District Agriculture Office. In addition, all participants of the study are assured of confidentiality of their names by signing an agreement of confidentiality. Accordingly, I used code to transcribe the respondents reply so that everything is in order. The participants of the study would also be allowed access to the findings of the study.

1.8 Definition of Terms

Adult and non formal education is a type of education that helps adults and out of school children to get educational opportunities.

Extension package is a program aimed at improving the productivity of subsistence farmers.

Development Agents (Extension package workers) are people trained in agriculture who are working with subsistence farmers to enhance the productivity of the farmers.

Participatory demonstration and training extension system (PADETES) is the new system of training of farmers so that farmers can use selected seeds, modern technology and new methods of farming to enhance their productivity.

Subsistence farmers are farmers who own small pieces of land (two hectares on average) and use traditional ways of farming.

Livelihood – refers to the knowledge, skills and methods used to produce or obtain food, water, clothing and shelter necessary for survival and well being of the society.

Model farmers are agent farmers who are capable of adopting new skills and training both to change knowledge into practice and transfer it to follower farmers; they are literate farmers who have completed primary education.

Follower farmers are farmers who are not literate and/or not willing to take risks; they are willing to adopt the new skill and training only after they make sure that it is profitable. They follow model farmers.

Farmers' training centers are training centers designed to train model farmers to assist the efforts of technology transfer so that subsistence farmers will improve their farming practices.

1.9 Overview of the Report

The study views an agricultural extension training program from an adult basic education perspective in Ethiopia. It focuses on the training (teaching and learning processes) delivered by extension package workers to the farmers from an adult basic education perspective, to see if there is any possibility of improving the training and to examine the perceptions of both the workers and the adult farmers about the program in relation to literacy and adult education .

Chapter one gives the background of the country. It focuses on the situation of literacy, adult education and agricultural extension in Ethiopia.

Chapter two is the literature review which covers the concept of adult education in relation to the dependency and modernization theories of development.

Chapter three shows how the research was conducted using a qualitative research design.

This includes the use of the following methods of data collections:

- Semi structured interviews with the development/extension package workers
- Focus group discussions with the trainees/farmers
- Direct observation of the extension package training that was held in Gosu ward.
- Relevant document analysis

Chapter four dealt with findings. It is treated under the following headings:

- The objectives of the training program;
- What are the duties and responsibility of development agents;
- Types of training;
- Criteria for selection of the trainees;
- Methodology;

- Farmers learning ability as viewed by development agents;
- Impacts of illiteracy on the training program from both trainees and trainers perspectives;
- Correlation between literacy and productivity
- Importance of adult education from farmers and development agents perspectives;
- Access to relevant information

Chapter five discusses the findings, closely relating them to the literature review in chapter two, and arranged to answer the research questions.

**Investigating an Agricultural Extension Training Program from an
Adult Education Perspective in Oromia Region, Ethiopia: an
Exploratory Case Study**

By
Kebede Soressa Guta

A dissertation submitted in partial fulfillment of the requirements for the
degree of Master of Education at the University of KwaZulu-Natal

2007

DECLARATION

I, K.S. Guta, hereby declare that this is my own original work and that it has not been submitted to any other university for the award of a degree.

A handwritten signature in black ink, appearing to be 'K.S. Guta', with a small dot at the end.

Abstract

The agricultural extension package program is initiated by the government of Ethiopia. It is initiated to reduce poverty and bring development in the country. The basic underpinning principle of this program is that, if the productivity of the farmer is increased, on the one hand it is possible to bring sustainable development in Ethiopia and on the other hand it will help to get the raw material for the industry and reduce the migration of the work force from rural to urban areas. Agriculture is the source of livelihood for over 80% of the population and the majority of the poor live in rural areas. About 59.5% of the population is illiterate. The government gives overriding primacy to the welfare of rural populace. Agriculture is also believed to be a potential source to generate primary surplus to fuel the growth of other sectors of the economy.

The main feature of the target group is that majority of them are illiterate and their mode of production is subsistence. Of the many kinds of intervention to bring development; educating the society is the major one. Indeed the government offers training to the subsistence farmers with the intention of enhancing their productivity via development agents. DAs are there to facilitate empowerment of the farmers, lead the process of technology transfer and change the attitude of farmers. DAs work with subsistence farmers to introduce the modern system of farm and farm related activities. To do so a series of teaching - learning processes are evident in the program.

The purpose of the study is to see the kind of teaching - learning processes that are evident in the program and to see how the principles and theories of adult education relate to the program. Thus, the research tries to explore the learning approaches and practices evident in the extension package program, the perception of DAs and farmers about the training and the actual and potential role of literacy in an agricultural extension program.

The research adopts an interpretivist paradigm and some aspects of critical paradigm to understand the data and the context. It is qualitative in nature. The study is conducted on

a sample of 18 participants (15 farmers and 3 extension package workers). Semi-structured interviews were conducted with three DAs, focus group discussions with twelve farmers, observation while the training was taking place in the field and document analysis to get factual information. The research results are reported in the form of discussion and findings.

Indeed it is revealed that farmers are divided into two as the leader and follower farmers. Accordingly the types of trainings are divided into two as general and special training. Literacy ability of the farmers is one of the criteria to be eligible for special training. That resulted in the exclusion of the majority of farmers from the special training program.

ERIC Keywords: Extension package program, Development agents, Literacy, Adult education, Follower farmers, Leader farmers

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I would like to take this opportunity to thank God. He is good to me. He delivered me from the power of darkness and leads me in my way so that I can see his goodness in my life. Indeed God is good all the time.

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The best part is reserved for my wife for her support tolerance and taking care of our baby boy.

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List of Acronyms

ADLI	Agricultural Development Led Industrialization
AE	Adult Education
ANFE	Adult and Non-formal Education
CSA	Central Statistics Authority
DA	Development agent
ETEC	Ethio-Education Consultant
FDRE	Federal Democratic Republic of Ethiopia
FSC	Farmers Service Cooperatives
HDI	Human Development Index
MOFED	Ministry of Finance and Economic Development
MOA	Ministry of Agriculture
MOE	Ministry of Education
PADETES	Participatory Demonstration and Training Extension System
SDPRP	Sustainable Development and Poverty Reduction Program
UNDP	United Nations Development Program

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CHAPTER ONE: BACKGROUND AND CONTEXT OF THE STUDY

1.1 Introduction

Ethiopia is one of the most drought stricken Sub-Saharan African countries. Ethiopian agriculture is virtually all small-scale, subsistence-oriented and crucially dependent on rainfall. As Fikadu and Birhanu (1999/2000: 9) discuss, more than 95 per cent of the country's agricultural output is generated by subsistence farmers who use traditional tools and farming practices. The food production is by far lower than food requirements since the population growth rate (3 per cent) is higher than agricultural production growth rate (1.8 per cent) (World Bank, 1995 in Mohammad, 2001: 86). In fact, the imbalance between population growth rate and the agricultural production growth rate is one of the highly pronounced national problems in the country. Due to this fact the attainment of food self-sufficiency becomes the primary concern of agricultural policy in the country. There are also other objectives that include generation of export earnings, sources of income and employment for the majority, since the economy of the country depends largely on agricultural production (Mohammad, 2001: 86).

The government of Ethiopia thus designed a special program to mitigate the existing problem of food insecurity and to bring sustainable development. The fundamental development objectives of the Federal Democratic Republic of Ethiopia (FDRE) are to build a free-market economic system in the country, which will enable:

- the economy to rapidly grow;
- the country to extricate itself from dependence on food aid; and
- poor people to be the main beneficiaries from economic growth.

(Ministry of Finance and Economic Development (MOFED), 2002/03: 7)

To do so the country developed a program known as the Sustainable Development and Poverty Reduction Program (SDPRP). To bring the desired change the government prefers to work with the rural community where about 80 per cent are living, the majority of whom are poor. As a matter of fact, the proportion of the population below the poverty

line is 44 per cent based on 1999/2000 census with a great variation among rural and urban. It is 45 and 37 per cent in rural and urban area respectively (MOFED, 2002/03: 5). In line with this, 78 percent of the population earns less than 2 US dollar per day (EFA Global Monitoring Report, 2006: 169). To curb the situation, the government gives primacy to the welfare of the rural populace. Agriculture is also believed to be a potential source to generate primary surplus to fuel the growth of other sectors of the economy.

Given that poverty reduction will continue to be the core agenda of the country's development, the strategy is built on four pillars (building blocks). These are: Agricultural Development Led Industrialization (ADLI); the Justice System and Civil Service Reform; Decentralization and Empowerment; and Capacity Building in Public and Private Sectors (MOFED, 2002/03: 5).

“ADLI is strategy which aims to use agriculture as the base for the country's overall development” (Ethiopian Embassy, 1998:2). This strategy is designed to enhance the productivity of small landholder farmers and to assure food security both in the rural and urban areas. Within the framework of ADLI, as the Ethiopian Embassy (1998: 2) discusses, the government has also introduced specific policies and provided technical and institutional support to farmers, in its drive to increase food production through intensive cultivation. These policies included fertilizer supply and distribution, improved seed supply and distribution, development of small-scale irrigation, conservation of natural resources and environment, agricultural research and extension work as well as marketing and price policy.

Within ADLI the new system of agricultural extension is known as the "Participatory Demonstration and Training Extension System" (PADETES) - a system based on demonstrating and training to farmers in proven technologies in a participatory manner (Ethio-embassy, 1998: 2).

In a country like Ethiopia where more than 80 per cent of the population are living on farms and engaging in farm-related activity, it is feasible to have ADLI as a development strategy. As I have tried to show above, this strategy has something to do with

participation, demonstration and training. On the other hand, about 60.2 per cent of adults are illiterate (EFA Global Monitoring Report, 2006). This puts the success of the program under question.

Negusse and Yousuf (2001), Tesfaye (1997) and many others have done research and conducted evaluations on the effectiveness of extension package program from the productivity and sustainability perspectives. But no attention is given to see the effectiveness of the program from the perspective of farmers' educational background. This was what prompted this study to investigate an agricultural extension training program from an adult education perspective.

1.2 Context/Background of the Study

1.2.1 Context of Literacy in Ethiopia

Ethiopia is located in the northeast of Africa, in the so called 'Horn of Africa'. It is found south of Eritrea, east of Sudan, north of Kenya, west of Djibouti and northwest of Somalia as shown in the figure below:

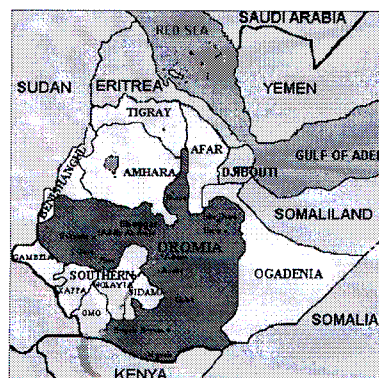


Figure 1: *Map of Ethiopia showing all the regions*

One of the major characteristics of the society is that about 59.5 per cent of the population is illiterate with a great disparity among the regions. This regional disparity was illustrated in one of Oxfam's documents developed by OXFAM (undated) "in Delanta 70 per cent of the community are illiterate; in Metta the figure is 78 percent for women and 31 percent for men; the figures in Jijiga are 79 percent of men and 98 percent of women are illiterate". One can see that the vast majority of the nation is living without the ability to read and write. Despite having a vast majority of illiterate people in the country, the Federal Government said nothing in the new education and training policy statement about adult education except its contribution for access to basic education for out of school age children (MOFED, 2002/03: 67-69).

According to Ramirez (2004: 13) people without basic education are people who are denied access to important information about health, social, cultural, and political issues as well as sources of pleasure and enrichment. In his effort to show the relationship between literacy and development; Greaney (1996: 5) states that "without a sizable literate population it is difficult for nations to develop the human resources necessary to create viable economies, essential services, and civil societies".

When Mercer, et al (1999: 11) discuss about the feature of adult and non-formal education (ANFE) in Ethiopia, they say that "this sub sector is characterized by a lack of policy, proper organization and professionalisation". They also assert that

some of the other problems of the sub-sector revolve around: the quality and relevance of training; low participation of women; insufficiency of resources; insufficiency of systematic record-keeping and follow-up; weak organizational structure, co-ordination and supervision; and variety of competence among regions.

1.2.2 Background to the Study

According to the Central Statistics Authority (in Kuris 2003: 3), the total population of Ethiopia is more than 70 million. As it is further discussed, in the year 2002 children below 15 years of age constitute 43.8 per cent of the country's total population. Apparently 20.6 per cent of the total population falls within the youth population (15 – 24) age bracket. The old age population constitutes only 3 per cent. This implies that Ethiopia is characterized by a young age structure. Thus, the dependency ratio of the country is quite high which intensifies the burden on the working population as they have to support the non working population.

HIV/AIDS is another potential threat in addition to food insecurity for the country. The country is one of the Sub-Saharan African countries where HIV/AIDS infection is high. "One out of every thirteen adults is believed to be infected. In urban areas more than one out of every six adults is being infected." In fact, "it is already putting a brake on the economic growth in the worst affected country through diversion of investment, deficit-creating pressures on public resources, and loss of adult labor and productivity" (MOFED, 2002/03: 6). In a very poor country like Ethiopia where there are meager resources, this epidemic is crippling the effort towards the move for development.

The country has a variety of peoples and diverse cultures. This is because of the fact that the country is formed from multi ethnic groups that have their own respective languages and ways of living. As Guddina (2003: 13) describes, the country was created by expansion and conquest which resulted in national domination by one or two ethnic groups over the multitude of others until recently.

Due to the above reason and many other factors the country has gone through a number of devastating civil wars. The main causes of these wars were the quest for democracy and freedom. There are three major ethnic nationalist perspectives in the country

(Guddina, 2003: 14). The differences basically concern the way they interpret the historical road to modern Ethiopia and the political solutions they provide for the country's contemporary problems. They range from unification and expansion to colonization (Guddina, 2003: 14). This political question has a lot to do with instability and the series of civil wars. Indeed it can be considered as one of the causes for underdevelopment of the country.

Since 1991 Ethiopia has adopted a system of ethnic federalism. Accordingly, the country is divided into nine different regions. Most of the regions have their own work language (regional language). In line with this, each of them has their own medium of instruction in primary schools.

Following the end of the civil war that resulted in Eritrean independence in 1991, a sharp decline in defense expenditure took place and funding was re-oriented towards social and economic development. Accordingly, spending on human development (education and health) has been increasing in relative terms and has been even more pronounced subsequently after the launch of the education, agriculture and health sector development programs in 1997/98. Total spending on education increased from 2.6 per cent of GDP in 1992/93 to 5.5 per cent of GDP in steady growth over the years up to 2001/02. That resulted in a sound increase in the primary school enrollment rate of students from 49.9 per cent in 1998/99 to 70 per cent in 2003/04 (EFA Global Monitoring Report, 2006: 286).

Though such an impressive achievement was gained in primary school enrollment of school age children, nothing is said about adult education by the government. Indeed, literacy activity is still considered as being of secondary importance in a country where the bulk of the population is still illiterate.

Among other factors, the development of a given country is determined by its human resources. Human resource development is largely a function of educational level. The Human Development Index (HDI), as calculated by UNDP (in Sandhaas, 2005: 9),

includes three dimensions: a) a long and healthy life, b) knowledge, and c) a decent standard of living. Knowledge is strongly associated with education and with literacy in particular. Moreover, the adult literacy rate has a two-thirds weighting in the definition of a country's education index, while the remaining one third corresponds to the combined primary, secondary and tertiary gross enrolment ratio (Sandhaas, 2005: 9). If one looks at Ethiopia from this perspective, it is easy to see that the productivity level of the citizens is quite low as is witnessed by the country's incapability to insure food self sufficiency. This is so because of the fact that the majorities of the citizen is denied the access to basic education and live far from urban centers.

Oromia, the biggest region in the country with approximately two fifths of the total population, can fairly be represented by the above facts as far as the poverty level, access to basic education, literacy ratio and extension work is concerned. Though different ethnic groups occupy the region, the Oromo ethnic group is the majority and the regional work language has been Afan Oromo since 1991.

1.2.2.1 Adult Education in Ethiopia

A brief background to adult education in Ethiopia will help to put in context this focus. Throughout Ethiopia an adult and non-formal education program was carried out in the form of campaign for more than a decade until 1990. Even though I didn't come across much research conducted on the effectiveness of the program, from my own experience as one of the participants in the campaign as an adult and non-formal education facilitator, it is difficult to say that the program was successful. As Mercer, et al (1999: 11) discuss, some of the serious limitations of the program included that the teaching-learning process was not student centred, the curriculum was prepared at a central level, the materials were more subject centred than problem centred, and the facilitators were not well oriented and lacked commitment. This experience, together with the change in government, resulted in the total rejection of the importance of adult education in the country until recently.

In fact adult basic education is characterized by a lack of proper policy, meager resources and negative attitudes from political bodies (Mercer, et. al, 1999: 13). This is because of the fact that government presumes adult education as mere literacy activity that would contribute little to the development of the country.

1.2.2.2 Agricultural Extension Work in Ethiopia

The self reliance of farmers is conditioned by a number of factors such as economy, technology, utilization of resources, land policy of the country, the level of education, the type of training and the like. Cognizant of the contribution of training to improve the productivity of farmers, the government of Ethiopia is offering training to the farmers via development agents (DAs) all over the country. The training emphasizes improving the productivity of the farmers.

About 80% of Ethiopians live in rural areas; most of these people are engaged in subsistence farming or pastoralism. Altitudes in Ethiopia range greatly. The low lands are characterized by dry, sometimes drought stricken areas occupied mainly by nomadic or semi-nomadic pastoralists. The mid-altitude and the high altitude areas are densely populated and the inhabitants make their living in farming (Percy, 1997: 1). Oromia, the biggest region in the country, is situated mainly in mid and high altitudes.

Tafesse's assessment (Tafesse 2003: 55) shows the overall growth rates of the country and agricultural productivity have a positive correlation. This is so because of the fact that the economy of Ethiopia is dependent on agriculture both to get hard currency and to support the livelihoods of the majority of the population. Indeed, the productivity of agriculture has a potential to determine the overall development of the country. This duty and responsibility is by and large entrusted to DAs. Thus, DAs have a very important role to play in the development of the country because they are working with the rural community.

The ruling party is convinced that, to reduce poverty and bring development in the country; it is important to develop a strategy that takes into account the rural community. This strategy is known as Agricultural Development Led Industrialization (ADLI). The basic underpinning principle of this program is that, if the productivity of the farmer is increased, on the one hand it is possible to bring sustainable development in the country and on the other hand it will help to get the raw material for the industry and reduce the migration of the work force from rural to urban areas (MOFED, 2002/03: 3). The broad thrust of Ethiopia's sustainable development and poverty reduction program, (Ethiopian Embassy: undated: 2) thus, consists of:

- An overriding and intentional focus on agriculture as the sector is the source of livelihood for over 80% of the population where the bulk of the poor live. The government gives overriding primacy to the welfare of rural populace. Agriculture is also believed to be a potential source to generate primary surplus to fuel the growth of other sectors of the economy (industry);
- Strengthening private sector growth and development especially in industry as means of achieving off-farm employment and output growth (including investment in necessary infrastructure);
- Rapid export growth through production of high value agricultural products and increased support to export oriented manufacturing sectors particularly intensified processing of high quality skins/leather and textiles;
- Undertaking major investment in education and strengthen the ongoing effort on capacity-building to overcome critical constraints to implementation of development programs;
- Deepening and strengthening the decentralization process to shift decision-making closer to the grass root population, to improve responsiveness and service delivery;

- Improvements in governance to move forward in the transformation of society, improve empowerment of the poor and set framework/provide-enabling environment for private sector growth and development;
- Agricultural research, water harvesting and small scale irrigation;
- Focus on increased water resource utilization to ensure food security.

Based on the above guiding principles the Ministry of Agriculture is working to achieve the above stated objectives via extension package work with the farmers. Most of extension package workers (whom I also refer to as Development Agents) have completed high school with one year to three years of training on agricultural extension work.

They are there to facilitate empowerment of the farmers, the process of technology transfer and change the attitude of farmers. That is; development agents (DAs) are required to help farmers so that they become business minded: they can survey what their customers would like to get, know what to produce, for whom to produce and when to produce (Belay and Abebaw, 2004: 141). This is so because of the government's strong need to transform subsistence farmers to business oriented farmers both to get hard currency and to improve their livelihood.

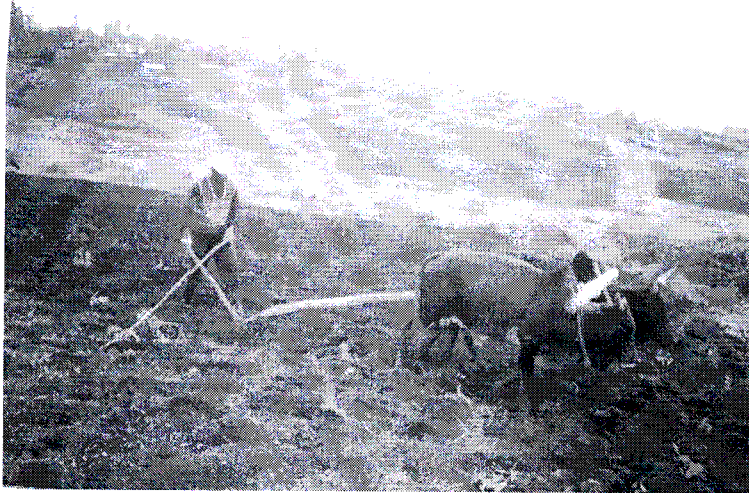


Figure 2:- *A farmer plowing his fields*

Federal government strongly believes that unless agriculture lays a favorable condition for industry (secondary-modern goods producing sectors) and services (tertiary-distributive and other services), it is not possible to ensure accelerated growth and sustainable development (MOFED, 2002/03: 5). In an agrarian economy such as Ethiopia, the resources for development of the industrial sector need to be generated primarily through the creation of a strong bond between agriculture and industry and through subsequently exploiting these linkages via the concerted efforts of non-state actors, particularly the peasant private sector (MOFED, 2002/03: 6).

This is so because of the fact that in Ethiopia agriculture has to continue to serve as an engine of growth in both the domestic economy and international trade. That is, there has to be progress in terms of commercialization, with labor intensive farming, increasing proportion of marketable output and correspondingly decreasing ratio of production for own consumption (Ethiopian Embassy, undated: 3). Furthermore; extension of credit service to subsistence farmers will help both to capacitate them and also to pave a way to the establishment of rural banks (MOFED, 2002/03: 11).

The new system agreed upon between central and regional levels is based on the package approach and is called the 'participatory demonstration and training extension system' (PADETES). This system combines technology transfer and human resource development (Percy, 1997: 2). Thus, one of its objectives is to empower farmers to actively participate in the development process.

1.3 Rationale for the Study

My own interest in doing this research stems from the fact that government is producing a number of DAs yearly from different agricultural institutions all over the country. The intention is that trainees work with the farmers to achieve the desired results. The main features of the target groups are: most of them are illiterate and their mode of production is subsistence. My experience is that these communities are suffering from a number of problems such as lack of clean water, lack of infrastructure like schools, roads and health facilities, harmful traditional practices, early marriage and the like.

Of the many kinds of intervention to bring development; educating the society is the major one. Here the question arises as to what kind of education would satisfy the needs of subsistence farmers? The type of education that will help to empower the rural community politically, culturally and economically should be given (Freire, 1972: 80). Because this community is suffering from political, cultural and economic problems those are imposed by different authorities from inside and outside. They have to develop systems of critical thinking (Mezirow in Jarvis, 1995: 96): observe their own practices; be able to distinguish between good and harmful ones; and be able to take steps to avoid harmful ones.

Though adult education has a long tradition in the country being handled by different bodies, be it on a small scale or at national level, comprehensive research designed to strengthen and support sustainability of the program is not done as desired. Indeed, the research would help to show the possible links between development and adult education.

Thus, the research tries to explore what kind of training is being offered by extension package workers and how it can be enriched.

The findings from this research could be useful to:

- Different governmental and non-governmental organizations working in the area of adult education.
- Different governmental and non-governmental organizations working in the area of agricultural activity.
- Curriculum development specialists and textbook writers who prepare materials for adult education.
- National and regional policy makers who design education policy and farmers training.

1.4 Key Questions

- What learning approaches and practices are evident in the extension package training program?
- How do the extension package workers and farmers perceive the training program?
- What is the actual and potential role of literacy in the agricultural extension program?

1.5 Delimitation of the Study

This study is limited to the Oromia region. It focus on the training (teaching and learning process) delivered by extension package workers to the farmers from an adult education perspective, to see if there is any possibility of improving the training and to examine the perceptions of both the workers and the adult farmers about the program in relation to adult education.

1.6 Limitations of the Study

The study is conducted based on the information obtained from three DAs, twelve farmers, observation conducted in the research area and document analysis. It is difficult to make a general conclusion based on small numbers of respondents in limited areas as compared to the vastness of the region. The generalizability of the research indeed might be threatened by the limitedness of the respondents. However, one of the unique features of qualitative research is that it is more appropriate and convenient method of research where little is known about the program. In addition, since the program is run by government, there is a significant level of homogeneity in the program across the board. Indeed I believe that the research is quite helpful to serve as the starting point for any interested researcher to provide general picture of the existing situation concerning the training, adult literacy levels, perceptions of the trainees and trainers about the possible link between literacy and training to improve the productivity of the farmers.

1.7 Ethical Issues

To fulfill the ethical issues I secured permission from Oromia Region Bureau of Agriculture. I did the same from Ambo District Agriculture Office. In addition, all participants of the study are assured of confidentiality of their names by signing an agreement of confidentiality. Accordingly, I used code to transcribe the respondents reply so that everything is in order. The participants of the study would also be allowed access to the findings of the study.

1.8 Definition of Terms

Adult and non formal education is a type of education that helps adults and out of school children to get educational opportunities.

Extension package is a program aimed at improving the productivity of subsistence farmers.

Development Agents (Extension package workers) are people trained in agriculture who are working with subsistence farmers to enhance the productivity of the farmers.

Participatory demonstration and training extension system (PADETES) is the new system of training of farmers so that farmers can use selected seeds, modern technology and new methods of farming to enhance their productivity.

Subsistence farmers are farmers who own small pieces of land (two hectares on average) and use traditional ways of farming.

Livelihood – refers to the knowledge, skills and methods used to produce or obtain food, water, clothing and shelter necessary for survival and well being of the society.

Model farmers are agent farmers who are capable of adopting new skills and training both to change knowledge into practice and transfer it to follower farmers; they are literate farmers who have completed primary education.

Follower farmers are farmers who are not literate and/or not willing to take risks; they are willing to adopt the new skill and training only after they make sure that it is profitable. They follow model farmers.

Farmers' training centers are training centers designed to train model farmers to assist the efforts of technology transfer so that subsistence farmers will improve their farming practices.

1.9 Overview of the Report

The study views an agricultural extension training program from an adult basic education perspective in Ethiopia. It focuses on the training (teaching and learning processes) delivered by extension package workers to the farmers from an adult basic education perspective, to see if there is any possibility of improving the training and to examine the perceptions of both the workers and the adult farmers about the program in relation to literacy and adult education .

Chapter one gives the background of the country. It focuses on the situation of literacy, adult education and agricultural extension in Ethiopia.

Chapter two is the literature review which covers the concept of adult education in relation to the dependency and modernization theories of development.

Chapter three shows how the research was conducted using a qualitative research design.

This includes the use of the following methods of data collections:

- Semi structured interviews with the development/extension package workers
- Focus group discussions with the trainees/farmers
- Direct observation of the extension package training that was held in Gosu ward.
- Relevant document analysis

Chapter four dealt with findings. It is treated under the following headings:

- The objectives of the training program;
- What are the duties and responsibility of development agents;
- Types of training;
- Criteria for selection of the trainees;
- Methodology;

- Farmers learning ability as viewed by development agents;
- Impacts of illiteracy on the training program from both trainees and trainers perspectives;
- Correlation between literacy and productivity
- Importance of adult education from farmers and development agents perspectives;
- Access to relevant information

Chapter five discusses the findings, closely relating them to the literature review in chapter two, and arranged to answer the research questions.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1 Introduction

This review covers the definitions and fields of adult education, literacy, development and agricultural extension. It examines some of the potential advantages of adult education for development in general and how it can be related to agricultural extension work in particular. In addition, it shows that agricultural extension work is basically education aimed at enhancing the livelihood of rural communities.

The aim of this review is to see how the practice of adult education can possibly be linked with development in general and agricultural productivity in particular. Indeed it discusses the link between literacy and extension work.

2.2 Definitions of Adult Education

Adult education (AE) is the type of education that helps to enlarge the understanding of adults, to be active participants in development activities, to make their own decisions, and to implement those decisions by themselves. Adult education “includes training, but is much more than training. It includes what is generally called ‘agitation’, but is much more than that. It includes organization and mobilization, but it goes beyond them to make them purposeful” (Nyerere, 1988: 11).

An elaborated definition of adult education is forwarded by UNESCO General Conference of 1976 (in McGivney and Murray, 1991: 8) as follows:

Adult education denotes the entire body of organised education processes, whatever the content, level and method, whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and

universities as well as in apprenticeship, whereby persons regarded as adult by the society to which they belong develop their abilities, enrich their knowledge, improve their technical or professional qualifications or turn them in a new direction and bring about changes in their attitudes or behaviour in the twofold perspective of full personal development and participation in balanced and independent social, economic and cultural development.

From this definition it is plain to see that AE comprises all types of education: from basic up to tertiary level that can be offered to adults aiming at enriching and improving their technical and/or professional competence. Moreover, it will help to promote attitudinal development and result in enhancing meaningful participation. And thus, it will help in bringing social, economic and cultural development.

Another attempt at a definition, from the Exeter Conference of 1969, states that adult education (cited in NEPI, 1993: 4) is:

a process whereby persons who no longer attend school on a regular full-time basis... undertake sequential and organized activities with the conscious intention of bringing about changes in information, knowledge, understanding, or skill, appreciation, and attitudes; or for the purpose of identifying or solving personal or community problems.

This implies that AE will help to give educational opportunities to adults who cannot attend school on a full-time basis and want to upgrade themselves to cope with the rapidly changing world, to identify and solve personal and community problems.

2.3 The Social Purpose of AE

The very purpose of AE is derived from its major characteristics. Different writers in the area have tried to discuss the purposes of adult education based on their philosophical

orientation. Some emphasise its economic significance (most modernization theorists) and others show its potential contribution to empowerment (radical adult educators).

For Nyerere the purpose adult education is to facilitate and to bring about change and to determine what kind of change people want. Indeed, the first purpose of adult education “is to inspire both a desire for change and an understanding that change is possible”; the second purpose is “helping people to work out what kind of change they want, and how to create it” (Nyerere, 1988: 10). People living in poverty or under exploitation must be able to recognise both that the life they lead is miserable and that they can change it by their own action either individually or in cooperation with others. Thus, education should help to inculcate the idea that change is both necessary and possible.

Though different writers give different emphases as far as the purpose of AE is concerned; it can be agreed that it will help to serve the following purposes (NEPI, 1993: 4, 5):

- the facilitation of changes in a dynamic society (particularly to rapid technological and social change);
- the support, development, and maintenance of a just and democratic social order through the education of an informed citizenry;
- an increase in productivity (through the training, education, and development of individuals and the education of society);
- the enhancement of personal growth (through learner centred self-actualization and perspective transformation activities).

These purposes are necessarily linked to the core beliefs that have been generally accepted by most AE thinkers, namely that (NEPI, 1993: 5):

- society can, and should, be improved;
- learning should continue throughout life;
- adults can learn and should be treated with dignity and respect;
- all adults can learn and should have access to the means of learning the things they need in order to function in society;

- adults have as much right to education as children (in particular those adults deprived of education as children); and
- adults should be educated in a different way to children, not because their cognitive processes are dissimilar, but because their education, life context, and background of experience are different.

2.4 What is Development?

Definitions of development have stressed the general improvement in the quality of life of individuals, families and communities through greater participation in decision-making, opportunities for productive employment and access to consumer goods and basic services such as good water supplies, medicine, education and communications (McGivney and Murray, 1991: 7). Human development is about much more than the rise or fall of national incomes. It is about creating an environment in which people can develop their full potential and lead productive and creative lives in accord with their needs and interests. People are the real wealth of a nation (Sandhaas, 2005: 9). Indeed human development can be defined as follows (UNDP, 1990 Human Development Report cited in McGivney and Murray, 1991: 7):

Human development is a process of enlarging people's choices. The most critical of these wide-ranging choices are to live a long and healthy life, to be educated and have access to resources needed for a decent standard of living. Additional choices include political freedom, guaranteed human rights and personal self-respect.

Thus, it is more than economic growth which is only a means – if a very important one – in enlarging people's choices. Fundamental to enlarging these choices is building human capabilities for human development to lead long and healthy lives, to be knowledgeable, to have access to the life of the community. Without these, many choices are simply not

available and many opportunities in life are inaccessible (UNDP, 2001: 9 in Sandhaas, 2005: 8).

2.5 Correlation between Adult Education and Development

Different organizations that work in development programs explicitly state that the effectiveness of training of adults is largely dependent of their educational background. To be more specific, the competency of adults in acquiring new knowledge is dependent on their literacy level. The International Labour Organization (ILO), working in Nigeria on income-generating activities for women in health development, reports that “functional literacy should be included ... to increase the impact of training in new skills and technologies” (Sandhaas, 2005: 12). Similarly, the Food and Agriculture Organization (FAO) of the United Nations confirms the concept that the stepping up of farm production by new technology must have training as part and parcel of the development process, and conversely, that training and literacy as isolated processes are of little avail in a developing society (Sandhaas, 2005: 12).

The literacy rate and wealth distribution of most developed countries are high as compared to underdeveloped countries. On the contrary, countries with lower literacy rates are economically poor. Gillette (1983) in Lyster (1992: 13) asserts that illiterates are not only unable to read and write but in most cases they are very poor, hungry, vulnerable to illness, and uncertain that even his/her present miserable circumstances will not decline to the point where life itself becomes the issue. Indeed the correlation between illiteracy and other features of poverty and underdevelopment is clear. “The fact that illiteracy correlates very highly with poverty does not mean that illiteracy causes poverty. Illiteracy is a feature of poverty, not its cause. People are illiterate because of poverty; they are not poor because they are illiterate” (Lyster, 1992: 16).

Literacy can help to uplift families’ ways of living in general, that is, the way they think, their perception about education, relationships they have and their productivity. This doesn’t, however, mean that literacy will ensure better living. It is concerned with the

human capability to decode and reproduce written or printed materials. As Graff (1988) argues, writing and reading are mechanical techniques. Neither writing nor reading is a change agent. Their impacts are determined by the manner in which human beings exploit them.

According to the Education For All Global Monitoring Report (2006: 164) in the world there are about 690-720 million people who lack minimum literacy skills in a written language. Two-thirds of them are women. The vast majority of the illiterate population is concentrated in developing countries. About 98.4 percent of non-literates live in developing countries. Of this total, about 18.3 percent of non-literates live in Sub-Saharan countries. 59.7 percent of adult population in Sub-Saharan Africa is illiterate.

The situation in Ethiopia follows the same lines as the above. About 59.5 percent of the adult population is illiterate: 66.2 percent of females and 51.2 percent of males (EFA Global Monitoring Report, 2006: 286). About 30 percent of school age children are out of school (EFA Global Monitoring Report, 2006:318). Of those who enrolled in school significant numbers of children stop their education before completing primary education. In addition only 2.7 percent of the population go for tertiary level of education (EFA Global Monitoring Report, 2006: 351).

In line with this the country is one of the poorest countries in the world. According to EFA Global Monitoring Report (2006: 169) 78 percent of the total population earn below 2 US dollar per day. Among the number of factors for poverty of the country, exclusion of the masses from opportunities is the major one. I can say the human capital of the country is not developed. Indeed the productivity of the people is not satisfactory. And therefore adult education should contribute to develop the human capital of the country.

A consensus has emerged that adult education and development are inter-related and mutually dependent parts of the same process; and that to bring about meaningful social or economic change, education needs to be linked with other sectors and concerns in an integrated development strategy: “it is not enough to provide information for people to

discuss and merely educate them in an abstract way. The education countries develop should be designed in such a way that it will help to bring direct change in the quality of people's lives if possible" (Institute of Development Studies, 1974 in McGivney and Murray, 1991: 9). It is, therefore, impossible to conceive of development in the absence of education any more than education in the absence of development.

"As development is for Man (sic), by Man and of Man; education also has to be for Man, by Man and of Man" (Nyerere, 1988: 7). Its purpose is the liberation of human beings from the restraints and limitations of ignorance and dependency. Education has to increase people's freedom – to increase their control over themselves, their own lives, and the environment in which they live.

Adult education must be directed at helping people to develop themselves. As Nyerere argues:

It has to contribute to an enlargement of man's (sic) ability in every way. In particular it has to help men to decide for themselves – in cooperation- what development is. It must help men (sic) to think clearly; it must enable them to examine the possible alternative courses of action; to make a choice between those alternatives in keeping with their own propulsions; and it must equip them with the ability to translate their decisions into reality" (Nyerere, 1988: 8).

Development cannot be seen without the liberation of human beings. Political consciousness, cultural advancement and economic empowerment of the community are the function of education. Thus adult education can have tremendous impact on the development of society.

2.6 Roles of Adult Education in Civil Society

2.6.1 Informal Adult Education

Informal adult education can range from pure entertainment to serious lectures. It requires less commitment of time, money and energy from participants than do organized classes. As a result they are likely to attract people with somewhat less intense interest (Knowles 1950:24 in Smith, 2002: 4).

The major problems of our age deal with human relations; the solutions can be found only in education. Skill in human relations is a skill that must be learned; it is learned in the home, in the school, in the religious institutions, on the job, and wherever people gather together in small group. Indeed informal adult education can result in the following outcomes (Knowles, 1950: 24 in Smith, 2002: 6-7):

- *Adults should acquire a mature understanding of themselves.* They should understand their needs, motivations, interests, capacities and goals. They should be able to look at themselves objectively and maturely. They should accept themselves and respect themselves for what they are, while striving earnestly to become better.
- *Adult should develop an attitude of acceptance, love and respect toward others.* This is the attitude on which all human relations depend. Adults must learn to distinguish between people and ideas and to challenge ideas without threatening people. Ideally, this attitude will go beyond acceptance, love, and respect, to empathy and sincere desire to help others.
- *Adults should develop a dynamic attitude toward life.* They should accept the fact of change and should think of themselves as always changing. They should acquire the habit of looking at every experience as an opportunity to learn and should become skilful in learning from it.
- *Adults should learn to react to the causes, not the symptoms, of behaviour.* Solutions to problems lie in their causes, not in their symptoms. We have learned

to apply this lesson in the physical world, but have yet to learn to apply it in human relations.

- ***Adults should acquire the skills necessary to achieve the potentials of their potentialities.*** Every person has capacities that, if realized, will contribute to the well-being of himself and of society. To achieve these potentials requires skills of many kinds – vocational, social, recreational, civic, artistic, and the like. It should be a goal of education to give each individual those skills necessary for him to make full use of his capacities.
- ***Adults should understand the essential values in the capital of human experience.*** They should be familiar with the heritage of knowledge, the great ideas, the great traditions, of the world in which they live. They should understand and respect the values that bind men together.
- ***Adults should understand their society and should be skilful in directing social change.*** In a democratic society, people participate in making decisions that affect the entire social order. It is imperative, therefore, that every factory worker, every salesman, every politician, every housewife, every farmer, and the like know enough about government, economics, international affairs and other aspects of the social order to be able to take part in them intelligently.

Adults are parts of their society and shape the future of a given country. Thus, there is a need to update their views about the world and help them to revise their practices and perceptions. In Ethiopia there are many ethnic groups with different competing interests that result in conflicts. Adults need to work on the causes of conflicts rather than on symptoms. Adult education should help the participants to have wider views about the society, the interests of different ethnic groups, the potential sources of conflicts and how they can possibly be resolved so that adults will contribute to build harmonious relationships among different ethnic groups. And helps adult to have positive regards for themselves and skilful in directing social change.

2.6.2 Adult Education can Cultivate Human Capital

Human capital is the knowledge, skills, abilities and capacities possessed by people. Some of these skills, abilities and capacities are innate, meaning we are born with them. Most of them, however, require us to spend time, effort and money in order to accumulate and maintain them. It can be accumulated in formal schooling, non- formal schooling, on-the-job training, work experience, investments in health, outreach and extension programs; life experience, information about goods, services, employment opportunity, etc (Alber, 2005: 2).

The Human Development Index (HDI), as calculated by UNDP (United Nations Development Program) includes three dimensions: a) a long and healthy life, b) knowledge, and c) a decent standard of living. Knowledge is strongly associated with education and with literacy in particular. Moreover, the adult literacy rate has a two-thirds weight in the definition of a country's Education Index, while the remaining one third corresponds to the combined primary, secondary and tertiary gross enrolment ratio (in Sandhaas, 2005: 9).

What literacy can mean for both individuals and society is the betterment of people's lives: enhanced self-esteem, ability to read instructions on medication and civic documents, ability to learn new things which will help them to expand their knowledge, ability to cope with the majority, etc. Adult basic education (literacy) provides people with the option of becoming members of a self-confident and informed populace that can understand issues, represent themselves, take responsibility for self-improvement and family health, and better participate in civic affairs (UNESCO, 2000: 2).

As stated above, education will, among other things, help to improve productivity of the learners. Research undertaken on agricultural productivity in some countries by the World Bank (in UNESCO, 2004: 2) has revealed that a short period of intensive education and training given to adult farmers has raised their farm output by over 24 per cent compared to their output before they had had the training. The education of adults is

very crucial not only because they are the productive force that can put to work what they have learned immediately, but also they are the prime movers for the development of their communities and the reduction of the level of poverty on a continuous basis (ETEC, 2005: 2). If effectively carried out, education of adult can be the vehicle for creating the learning society.

2.6.3 Adult Education can help to Control HIV/AIDS Transmission

AIDS has been called the worst health calamity since the Black Death plague in the middle ages. Developing countries have been hard hit, particularly sub-Saharan Africa. Of the estimated 36 million people worldwide who have AIDS 25 million live in sub-Saharan Africa. More than one-fourth of adults in Zimbabwe have AIDS, as do more than one-third of adults in Botswana. More than 10 percent of adults in Ethiopia, Kenya, South Africa, Zambia, and several other countries in sub-Saharan Africa are infected. Factors contributing to the spread of AIDS in Africa include unsafe sexual practices, ignorance about the disease and the high price of AIDS drugs (World Bank 2001: 2).

The prospects for addressing the AIDS epidemic in sub-Saharan Africa are not good. The public health system in most African countries is quite poor, so that communicating information to the public about safe sexual practices and treating those who become infected are both very difficult. Sub-Saharan Africa has been ravaged by war and political instability during the last two decades (World Bank 2001: 2).

As adult education is more flexible and part of life it can contribute to introduce and promote change. It assists people to control both change which they may induce, and that which is forced upon them by nature (Nyerere, 1988: 8). Thus, it will help the community to be well informed about what HIV/AIDS is and how its transmission can possibly be controlled.

2.6.4 Adult Education can help to Combat Poverty

We are living in the era of globalization where there are freer flows of information, achievement of science and universal rule of law, a greater access to education and health for most, and an acceptance of the principles of equality for all human beings.

Notwithstanding these achievements we still live in a world of great inequality. A good part of humanity is still denied access to an equal share of the planet's wealth; to justice; to a decent living; the disparity between those who have and those who do not in terms of food, health care, and social security continues to be appalling. This disparity is not just between urban and rural communities, developed and developing nations, it is everywhere. As we are in the beginning of the new millennium human development should not be measured by scientific and technological achievement, level of freedom only and certainly not by the number of bombs, guns and people at arm but by simple yardstick of the level of equal opportunity for all people (Dhanarefan, 2001: 1). Development should be described by the extent of fair distribution of the planet's wealth and access to basic facilities to human beings.

Throughout the ages education has been the most powerful agent of change. Many of the world's leading thinkers, political leaders, development of individuals through the provision of learning – a basic human right and social responsibility must therefore be protected. It is this desire to empower individuals that led to those who met in Jomtien, Thailand 1989 to declare among other things that: every person: child, youth and adult should be able to benefit from educational opportunities designed to meet their basic learning needs (Dhanarefan, 2001: 3).

Though it is difficult to make a direct correlation between education and income, I can tell that the education and living conditions of individuals in the society do have a strong correlation. From my observation I have seen that the farmers who have education are

more efficient and more productive and most of the time they try to diversify their source of income through engaging themselves to different types of farm related activities as compared to the farmers with no education. And they lead a better life as compared to farmers with no education. (In Ethiopia land can not be sold indeed farmers can have only a small plot of land). If we look at urban dwellers on the other hand better education results in better jobs and those who are engaged in private business: entrepreneurs with better education tends to be more profitable than those who have less education.

2.6.5 Adult Education helps to Enhance Meaningful Participation

“The need for change cannot be packaged and sold; it is reached, rather, by means of a totality of reflection and action” (Freire 1972: 42). Meaningful participation begins with understanding of the real situation. Adult education should help to contribute to the development of a truly participative society so that participants/learners will be able to discuss the problems of their country, their continent, their world, their work and the problem of democracy itself. Education is an act of love and thus courage (Walters 1989: 84-5). It cannot fear the analysis of reality or under pain of realizing itself as a force to avoid creative discussion.

Indeed, in order for education to play a meaningful role and to strengthen democratic practice it is important to help the learners to express their ideas freely, to develop systems of independent thinking, to believe in negotiation, and the like. School should serve as the training ground; this should especially be true in adult education class. Adult education classes should emphasise mainly consciousness raising; that is the processes by which learners can develop a critical understanding about themselves and their environment; work for the betterment of livelihood. As Nyrere (1988: 15) says “adult education must help to enable them to examine the possible alternatives in keeping with their own propulsions; and it must equip them with the ability to translate their decisions into reality.” It has to be directed at helping community to develop themselves. It has to contribute to an enlargement of man’s ability in every way. In particular it has to help men to decide for themselves.

Freire (in Walters, 1989: 86) in his literacy classes established 'culture circles' designed to enhance participation of the learners. In the 'culture circle' instead of a teacher there was coordination, instead of syllabi there are learning units based on the specific politically relevant problems. The teaching-learning process was carried out via a problem posing approach. The participants (groups) debate either to clarify situations or seek action arising from that clarification. Through teaching adults how to read they were attempting to move the learners from a naive to a critical attitude. Freire (in Walters, 1989: 86) discusses the need for developing critical thinking as follows:

...the more accurately men grasp true causality, the more critical their understanding of reality will be. Their understanding will be magical to the degree that they fail to grasp causality. Further critical consciousness always submits that causality to analysis: what is true today may not be tomorrow. Naive consciousness sees causality as static, established, and thus is deceived in its perception.

Thus, education is an important agency in preparing people to critically evaluate their own practices and to change them for the better. It is so important because of the need to enlarge the community's understanding to fit with the rapidly changing world. The potential to think logically and make informed decision can be achieved and developed in adult education classes. In way adult learners will get the opportunity to develop the system of critical thinking and how to be active participant in any development activity.

2.6.6 Adult Education can help to Bring Social Transformation

Education has a lot to do with creating, synthesising and enhancing new knowledge both at an individual and a societal level. Education helps individuals to be delivered from the power of ignorance, superstition and helps to empower learners. "The need for change cannot be packaged and sold; it is reached, rather, by means of a totality of reflection and

action” (Freire 1972: 42). Meaningful participation begins with understanding of the real situation.

Adult education should help the learners to reflect upon their own experiences to harmonize their reflections and actions so that they can act upon their socio-cultural milieu in order to humanize and transform it. This is because individuals live in the community, and communal life affects the life of individuals in many ways. On the other hand, however, individuals can play a role to modify and develop the existing culture. Indeed adult education must help learners to play their own roles in the society rather than become role players performing role prescribed by others. As far as reflection is concerned Freire (in Jervis, 1983: 86) says the following:

If there is not something radical about the educational process, the question needs to be posed as to how it differs from socialization. Education actually has to provide people with an opportunity to process and to reflect upon their experiences, it must allow them to reach different conclusions about them and to choose whether or not they will behave in a conformist manner.

Mezirow (who emphasis individual transformation) regards education as a liberating force. He actually saw it from a psychological perspective. Learning occurs as a result of reflecting upon ones own experience. “Our understanding and beliefs are more dependable when they produce interpretations and opinions that are more justifiable or true than would be those predicted upon others’ understanding or beliefs” (Mezirow and Associates, 2000: 4). Thus, formulating more dependable beliefs about our experience assessing their contexts, seeking informed agreement on their meaning and justification, and making decisions on the resulting insight should be central to the adult learning process.

As different scholars in the field agree, adult education classes should be participatory. Both participants/learners and facilitators have their own experiences. That means they

have something to share. If the class is democratic enough participants will get the opportunity to reflect on their own experience and thought. This reflection might result in individual as well as societal transformation. Because, if we look at it from an individual perspective while the participants discuss the given topic/s the learner will get the opportunity to scrutinize the idea/s from different angles and broaden his/her horizon (Mezirow and Associates, 2000:5). On the other hand, a community is a group of individuals. “In the adult education class participants as a whole get the opportunity to deal with their common problems, reach to consensus and take action” (Nyerere, 1988: 8). This means adult education classes can result in societal transformation. This is true especially in developing countries where societies do have a number of problems in common that need communal action. For example, in Ethiopia the rural community does have agreed norms though some of them are not worthy of being adhered to. Deviation from the custom is considered as a betrayal irrespective of whether their customs are worthy to live with or not. Indeed enlightenment and transformation should embrace not only individuals but also community.

Learning occurs in one of four ways: by elaborating existing frames of references, by learning new frames of reference, by transforming points of views, or by transforming habits of mind (Mezirow, 2000: 19). In adult education class learners should get the opportunity to elaborate where they are; what are more helpful and what are less relevant and need revision. Lessons should incorporate net experience so that they will have wider understanding. Expose learners to different cultures and ways of living so that they might transform their frame of reference. It should help them to have positive regard about their situation and show that it is possible to change their situation (poverty for example should not be something that a given society should accept as the will of God and if they work hard it can be changed).

Transformative learning may occur through objective or subjective reframing. Objective reframing involves critical reflection on the assumptions of others encountered in a narrative or in task-oriented problem solving, as in action learning. Subjective reframing

involves critical self-reflection of one's own assumptions about the following (Mezirow, 2000: 22):

- A narrative – applying reflective insights from someone else's narrative to one's own experience.
- A system – economic, cultural, political, educational, communal, or other – as in Freire's (1970) conscientization, consciousness raising in the women's movement and civil rights movement.
- An organization or work place
- Feelings and interpersonal relations – as in psychological counselling or psychotherapy.
- The ways one learns, including one's own frame of reference, persons, in some adult education programs- as in Isaac (1993) "triple loop learning".

To wrap up, adult education should be less structured and it is organised in such a way that it fits with the needs and interests of adult learners. They should get the opportunity to transform themselves in any of the aforementioned ways of learning.

2.6.7 Adult Education can help to Enhance Women's Empowerment

Many studies demonstrate adult education can help to gain social and personal benefits (Dhanarefan 2001: 7). For example:

- It improves the health condition of families.
- It helps to control the population growth rate. An educated society generally has a much lower rate of population growth. This is because education often leads to a higher income, greater empowerment of women, more uninhibited access to family planning services, a dramatic fall in fertility rates and a much smaller family size.
- It is a road to empowerment. In communities especially where religious and other cultural traditions condemn women to a life of servitude and destitution, the only hope for breaking that viciousness seems to be a provision to take education to women and girl children.

Development strategies will not be effective in the long term unless women are involved. Women's empowerment strengthens countries to grow, to reduce poverty, and to govern effectively (Sen, 1997: 7, 8). This shows that there is a need to reduce gender inequality in areas such as education, employment and property rights. Access for better education and employment ensures better income for the family. This in turn results in better access to health facilities and better nutrition. These might result in reducing infant mortality and in lower fertility rates.

Some of the major characteristics of empowerment are (Sen, 1997: 6):

- Empowerment is the process of gaining power, both control over external resources, and growth in inner self-confidence and capability;
- While external change agents can catalyze the process or create a supportive environment, ultimately people empower themselves;
- Genuine empowerment may not be a neutral process, and those embarking on it must be prepared for social upheavals;
- Empowerment is not a zero-sum game, but there may be winners and losers in certain senses;
- Group processes are often critical to empowerment, but personal transformation of individuals is also essential;
- Empowerment is not synonymous with, and is indeed a more powerful concept than decentralization, participation, or "bottom-up" approaches.

In 1979, Kindervatter defined adult education as empowering (in Lepotho, 1995: 27). By this she meant education as a process which helps people to gain control of their lives through raising awareness, taking action and working jointly in order to exercise greater control. Thus adult education should give due emphasis in women education for two reasons. First women have the right to education. Second educating female will enhance the effort to create a literate society.

2.7 The link between literacy and development

2.7.1 What is Literacy?

Understandings about what literacy is become more in depth and complex with time and ideology. Gillette and Ryan (in Lyster, 1992: 10) say that “a person is literate who can with understanding both read and write a short simple statement on his everyday life.”

Some theorists look at literacy from the point of view of its contribution to emancipation. Freire (1973 in literacy trust, undated):

To acquire literacy is more than to psychologically and mechanically dominate reading and writing techniques. It is to dominate those techniques. It is to dominate those techniques in terms of consciousness; to understand what one reads and write what one understands: it is to communicate graphically. Acquiring literacy does not involve memorizing sentences, words or syllables – lifeless objects unconnected to an existential universe – but rather an attitude of creation and re-creation, a self-transformation producing a stance of intervention in one’s context.

More recently UNESCO (2002) defined literacy in relation to its functionality as follows:

A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning in his or her group and community and also for enabling him/her to continue to use reading, writing and calculation for his or her own and the community’s development.

But this doesn’t mean that how to approach literacy program is always easy and plain. Different scholars developed different approaches that are by and large based on their philosophical background. Some look at literacy purely from its technical perspective,

others from ideological and some others tends to be eclectic. Hereunder I touch on some of the theories that discuss how literacy and development are possibly linked to each other.

2.7.2 Literacy as an ideological practice

Some scholars in the area tend to say that literacy is a context-free practice. They are known as proponents of autonomous model of literacy. Proponents of ideological model of literacy, on the other hand, believe that it is embedded within the culture.

The proponents of ideological model of literacy believe that the notion of literacy as context free is meaningless. They assert that “literacy is not simply the neutral, technical skill of reading and writing but something which is embedded in social relations. It is fundamentally a social practice and is therefore ideologically bound” (Lyster, 1992: 20). According to this definition, literacy is therefore a continuum with no single and simplistic competency. Rather, how and what is taught reflects the social structure and relations of power within the society.

Proponents of the autonomous model, on the other hand, view literacy as a technical, homogeneous, and uniformly used skill. They associate literacy with progress, civilization, individual liberty, and social mobility. They see the consequences of literacy in terms of economic development and the cognitive development skills, empathy, abstract and context free thought, rationally, and the use of an elaborated language code (Lyster, 1992: 20).

2.7.3 Modernization theory

The fundamental premise of modernization theory is that there is a single process of social evolution in terms of economic growth; that is, from a traditional subsistence mode of production to modern surplus production (Youngman, 2000: 54). It argues that underdeveloped countries are not developed because of their internal characteristics, such

as the lack of educated and skilled manpower. In the hope of modernization many developing countries expanded schooling. However it resulted in problems. These problems included levels of social demand which exceeded the resources available, establishment costs and internal inefficiencies, and the growth of the educated unemployed (Youngman, 2000: 56).

Similarly adult education, within a modernization framework, is expected to meet the following objectives: a) to provide those who had never been to school with the knowledge and skills for national development; b) to upgrade partially qualified people to be more effective in their jobs; and c) to give training to the educated jobless (Youngman, 2000: 57). Indeed “literacy education is linked to modernization through the notion of investment in human capital. Just as investment in other forms of capital it is considered necessary for development, so developing countries must also invest in human capital” (Lyster, 1992: 26).

Even if the role of literacy in development was indeed significant, there was nothing automatic or determining about the literacy and development connection (Bhola, in Lyster, 1992: 32).

2.7.4 Dependency theory

Dependency theorists are against the idea that there are stages of economic development through which all countries pass in evolution to advanced industrialization. They argue that the advanced capitalist economies were developed on the basis of surplus drawn from the periphery, and this route cannot be replicated in present-day underdeveloped countries (Youngman, 2000: 63). Dependency theory, thus, appeals to those who see themselves as working with oppressed groups to affect fundamental social transformation.

Many third world countries including South Africa tried to develop system of education that upholds dependency theory. In South Africa, for example, as Baatjes and Mathe

(2004: 7) state, “illiteracy amongst adults is viewed as not only a deeply-rooted social problem, but a result of a determinate structure and dynamic of classes and a consequence of the apartheid capitalist organization of production”. Adult education in the apartheid era worked to bring social transformation. Thus, adult education is used as a tool to organize and empower people to understand the causes of their oppression and act to change their situations (Lyster, 1992: 27).

2.7.5 Neoliberal Theory

Although neoliberal theorists fall within the overall framework of the proponents of capitalist development, their views diverge significantly from modernization theory in their emphasis on the market. According to these theorists the poor development performance of third world countries was a result of erroneous policies by third world governments that allowed too large a public sector, overemphasized physical capital formation to the neglect of human skills, and introduced too many economic controls and regulations. In fact they urge third world countries to introduce new policies (Youngman, 2000: 68).

The implications of neoliberal theory for education are twofold. First, it is argued that the education services provided by governments should be oriented to the needs of business. Education and training are seen in terms of developing the human resources necessary for economic growth and successful competition in the world market. Second, it encourages reduction of public expenditure on education: introduction of user charges and increased private-sector involvement (Youngman, 2000: 69).

2.8 Agricultural Extension and development

2.8.1 Introduction

In the early nineteenth century formal agricultural education and agricultural research became organized in Europe and North America (Bembridge, 1991: 19). The intention of agricultural education is to disseminate new knowledge found by research among

farmers. In addition, “widespread agricultural problems, especially serious outbreaks of crop diseases, and adverse economic conditions affecting agricultural production, required that farmers be given assistance to overcome such difficulties to adapt to new circumstances (ibid)”. Since then agricultural extension started to be recognized as an essential ingredient in rural development gradually and recently it became world phenomenon (Albrecht, 1990: 43).

Thus, a start was made to recruit and organize bodies of trained, specialized extension personnel whose task would be to go out among the farming population to offer it information and guidance on the principles of good crop and animal husbandry and the possibilities of change open to it through the adoption of recently developed and recommended farming practices (Bembridge, 1991: 19).

The underlying hypothesis is that “basic training enables the farmer to adapt at a later stage his (sic) own decision to the changed circumstances, to absorb new information and to modify his (sic) farming techniques accordingly” (Albrecht, 1990: 43). The training of farmers takes place under the program known as agricultural extension. The extension service now tries to serve all farmers with information available from anywhere (Van den Ban and Hawkins, 196: 8).

2.8.2 What is extension?

There is no single definition of extension which is universally accepted or which is applicable to all situations. Furthermore, extension is a dynamic concept in the sense that the interpretation of it is always changing. Extension, therefore, is not a term which can be precisely defined, but one which describes a continual and changing process in rural areas (Oakley and Garforth, 1985: 9). But there is a great deal of agreement in the literature regarding agricultural extension among different writers (Bembridge, Albrecht, Perraton et al and Oakely and Garforth). It is the means by which knowledge is transmitted to farmers to improve their productive activities. The term comes from

universities and colleges that extended their agricultural services beyond the campus to farmers in rural areas.

Oakley and Garforth (1985: 8) say “Extension is essentially the means by which new knowledge and ideas are introduced into rural areas in order to bring about change and improve the lives of farmers and their families. Without it farmers would lack access to the support and services required to improve their agriculture and other productive activities”. It is not concerned directly with generating knowledge; that is done in specialized institutions such as agricultural research centers, agricultural colleges or engineering departments. Extension takes this knowledge and makes it available to the farm family. According to Bembridge (1991:18) the ultimate goal of extension is to improve the quality of rural life, as well as to increase the quantity and quality of a country’s production. Rural extension, therefore, is the process whereby knowledge is communicated, in a variety of ways, to the farm family. This process is usually guided and supported by an extension agent who works at the program and project level, and who is in direct contact with farmers and their families.

Extension is an informal educational process directed toward the rural population. This process offers advice and information to help them solve their problems. Extension also aims to increase the efficiency of the farm family, increase production and generally increase the standard of living of the farm family (Oakley and Garforth, 1985: 9).

The objective of extension is to change farmers’ outlook toward their difficulties. Extension is concerned not just with physical and economic achievements but also with the development of the rural people themselves. Extension agents, therefore, discuss matters with the rural people, help them to gain a clearer insight into their problems and also assist them to decide how to overcome these problems (Oakley and Garforth, 1985: 10).

Bembridge (1991: 18) see agricultural extension as a field of profession education practice aimed at: teaching people about new ideas in their own context and life situations and how to identify and assess their own farming needs and problems

- helping rural people to develop leadership and organizational skills
- inspiring them to action

All the above statements underline extension as an educational process which works with rural people, supports them and prepares them to confront their problems more successfully. If the current ideas and practices of extension are considered, four main elements can be identified within the process of extension: knowledge and skills, technical advice and information, farmers' organization, and motivation and self-confidence.

2.8.2.1 Knowledge and skills

Although farmers already have a lot of knowledge about their environment and their farming system, extension can bring them other knowledge and information which they do not have (Oakley and Garforth, 1985: 11). For example, knowledge about the cause of the damage to a particular crop, the general principles of pest control, or the ways in which manure and compost are broken down to provide plant nutrients are all areas of knowledge that the agent can usefully bring to farmers.

Agricultural extension help farmers to acquire the knowledge and technical and managerial skills required to cope effectively with those needs and problems (Bembridge, 1991: 18). The application of knowledge often means that the farmer has to acquire new skills of various kinds. For example, it helps to acquire the skills to operate unfamiliar equipment, organizational skills to manage a group project and the skill to assess the economic aspects of technical advice given (Oakley and Garforth, 1985: 11).

2.8.2.1 Technical advice and information

Extension also provides advice and information to assist farmers in making decisions generally to enable them to take action. This can be information about prices and markets, for example, or about the availability of credit and inputs. The technical advice will probably apply more directly to the production activities of the family farm and to the action needed to improve or sustain this production. Much of this technical advice will be based upon the findings of agricultural research (Perraton, et al, 1983: 65).

2.8.2.3 Farmers' organization

Farmers need some form of organization, both to represent their interests and to give them a means of taking collective action. Extension, therefore, should be concerned with helping to set up, structure and develop organizations of local farmers. This should be a joint venture and any such organization should only be set up in consultation with the farmers (Oakley and Garforth, 1985: 12). Such kinds of organizations will serve as a channel for disseminating information and knowledge.

One of the main constraints to development that many farmers face is isolation, and a feeling that there is little they can do to change their lives. Some farmers will have spent all their lives struggling in difficult circumstances to provide for their families with little support or encouragement. It is important for extension agents to work closely with farmers, helping them to take the initiative and generally encouraging them to become involved in extension activities (Oakley and Garforth, 1985: 12). Among other contributing factors, organization of farmers can help farmers to share experiences and to encourage one another about the possibility to break the vicious circle of poverty.

2.8.3 The function of agricultural extension

Extension education has four major functions in agricultural development (Bembridge, 1991: 25):

- The first serves to assist farmers in adopting an attitude conducive to acceptance of technological change.

- The second function is the dissemination to the farmers of the results of research and the transfer of farmers' problems back to the research organization through subject-matter specialists.
- The third function is to help farmers gain managerial skills to operate in a commercial economy through the provision of training and guidance in problem-solving and decision-making.
- A fourth and often neglected function of agricultural extension is to promote the conservation and best use of natural resources, especially soil, vegetation and water, and to inculcate a conservation consciousness among both urban and rural communities.

Farmers living in less developed countries are still tradition-bound and are not willing to take risks unless they are convinced of the economical viability, feasibility and compatibility of the program. Only through effective and dynamic extension education programs, new knowledge can be transmitted and acquired by farmers (Perraton, et al, 1983: 63). The ultimate aim is to assist farmers in problem-solving, looking at alternatives and knowing sources at alternatives and knowing sources of information aimed at making individuals and organizations self-reliant.

2.8.4 Principles of extension

2.8.4.1 Extension works with people, not for them

Extension works with rural people. According to Oakley and Garforth (1985: 13-16) "only the people themselves can make decisions about the way they will farm or live and an extension agent does not take these decisions for them". Rural people can and do make wise decisions about their problems if they are given full information including possible alternative solutions. By making decisions, people gain self-confidence. Extension,

therefore, presents facts, helps people to solve problems and encourage farmers to make decisions. People have more confidence in programs and decisions which they have made themselves than in those which are imposed upon them.

2.8.4.2 Extension is accountable to its clients

Oakley and Garforth (1985: 13-16) say that development agents have two sets of masters. Development agents are expected to follow official policies and guidelines in their work. On the other hand, extension is the servant of the rural people and it has the responsibility to fulfill the need of the people in its area. This means that the rural poor should have a say in deciding how effective extension actually is. Extension programs, therefore, should be based on people's needs, as well as on technical and national economic needs. The extension agent's task is to bring these needs together.

2.8.4.3 Extension is a two-way link

The aims of agricultural extension are straight-forward. They are to communicate information, mainly about better farming practice, in order that farmers can produce more food. Often, of course, an extension service does more than this: it may provide inputs for farmers such as seed, fertilizer or credit, or advice on activities beyond cultivation, such as post-harvest technology or marketing. Its central aim, however, is most often to provide advice about better farming techniques. Agricultural extension services therefore assume that knowledge is available, usually from agricultural research stations, about improved methods of farming. In practice, although not in theory, extension services have often worked on the assumption that one-way transmission, of message to the farmer, is all that matters (Perraton, et al, 1983: 65).

In order for an extension service to meet the needs and interests of farmers, however, it should not be one way-process in which the extension agent transfers knowledge and ideas to farmers and their families. Such advice, which is often based upon the findings of agricultural and other research stations, is certainly important but the flow of

information from farmers to extension and research workers is equally important. Extension should be ready to receive farmers' ideas that can occur at different stages (Oakley and Garforth, 1985: 16):

- When the problem is being defined
- When recommendation are being tested in the field
- When farmers put recommendations into practice.

2.8.4.4 Extension cooperates with other rural development organizations

Extension service is only one aspect of the many economic, social and political activities that seek to produce change for the better in rural society. Indeed extension agents are required to work in collaboration with political institutions, support organizations, health services, local schools, community development and the like (Malik, 2001: 74).

2.8.4.5 Extension works with different target groups

Extension should recognize that not all farmers in any one area will have the same problems. Some will have more land than others and will be keen to try out new ideas. Others, with fewer resources, will probably be more cautious. Extension cannot offer a single "package" of advice, suitable to all farmers. Different groups need to be identified and the agent will have to develop programs appropriate to each group (SeEVERS et al, 1997: 4)

2.8.5 Extension and Adult Education

It has been seen that the extension agent's task is an educational one. Farmers and their families need to learn new skills, knowledge and practices in order to improve their farming and other productive activities. As they do so, they develop new attitudes toward farming and new practices, and to extension itself; this in turn influences their future behavior (Oakley and Garforth, 1985:17). Extension agents, however, must also be

prepared to learn from farmers about the way they farm, and keep themselves up to date with relevant developments in agricultural knowledge.

In this educational work of extension, the agent should be aware of a number of principles of learning.

2.8.5.1 The educator must also be a learner

Education is not a process of filling empty vessels with knowledge. Farmers already have a lot of knowledge about their environment and about their farming system. Extension must build on the knowledge that already exists. Oakley and Garforth (1985: 16) assert that “an extension agent needs to learn as well as to teach. He (sic) must learn what farmers already know about agriculture: for example, how they describe and explain things that happen on their farms and what they know already”.

2.8.5.2 Dialogue and practice are important for learning

The farmers need to be given chance to ask questions, to put the new information into their own words and to discuss it with the extension agent: much more will be learned and remembered. Furthermore, when a new practical skill is being taught, the farmers must have a chance to practice it. The extension agent can then correct any initial mistakes, and the farmer will gain the confidence to use the new skill (Oakley and Garforth, 1985: 19).

2.8.5.3 Learning and adoption occur in stages

Different types of learning are involved in extension. Before a group of farmers can decide to try out a new practice, they must first learn of its existence. They may then have to learn some new skills. Oakley and Garforth (1985: 19) say that there are five steps that one can consider in the process of imparting new ideas into the farmers. They are awareness, interest, evaluation, trial and adoption.

Awareness – a farmer learns to the existence of the idea but knows little about it.

Interest – the farmer develops interest in the idea and seeks more information about it, from either a friend or the extension agent.

Evaluation – how the idea affects the farmer must now be considered. How will it be of benefit? What are the difficulties or disadvantages of this new idea? The farmer may seek further information or go to a demonstration or meeting, and then decide whether or not to try out the new idea.

Trial – very often, farmers decide to try the idea on a small scale. For example, they may decide to put manure or fertilizer on a small part of one field and compare the result with the rest of the field. To do this they seek advice on how and when to apply fertilizer or manure.

Adoption – if the farmers are convinced by the trial, they accept the idea fully and it becomes part of their customary way of farming.

2.8.6 Farmers differ in their speed of learning and adaptation

In any rural community, the readiness to accept new ideas and put them into practice varies from farmer to farmer depending on each farmer's previous experience with new ideas, the personality of the farmer and the amount of land and other resources available. Oakley and Garforth (1985: 20) place farmers into three categories based on their speed of learning ability, as innovators, early adopter and majority.

Innovators are farmers who are eager to accept new ideas. Usually there are only a few people in this class in a farming community. They are often farmers who, having spent some years outside the village, feel that they can make their own decisions without worrying about the opinions of others.

Early adopters are farmers who are cautious and want to see the idea tried and proved under local conditions are known as early adopters. They express early interest but must first be convinced of the direct benefit of the idea by result demonstration. Usually this group of farmers includes local leaders and others who are respected in the community.

The majority – if the rest of the farmers adopt a new idea, they will do so more slowly and perhaps less completely. Many farmers will lack the resources to adopt the new idea at all, while others may only do so slowly and with caution. The majority who can and do adopt the idea are likely to be more influenced by the opinions of local leaders and neighbors than by the extension agent or the demonstration he/she arranges.

Extension must, therefore, be aware of the existence of different farming groups and plan its programs accordingly. The smallest and the poorest farmers will need particular attention, as they may lack the basic resources needed to become involved in extension activities. The point to stress, therefore, is the existence of farmer groups with different resources and skills in any one community, and the need for extension to respond to these groups accordingly.

2.8.7 The role of extension agents

The role of extension agents come out from the unique feature of extension service. The extension service (Seevers et al, 1997: 3, 4) is unique in that:

- it is an agency that provides services to any person without discrimination.
- it is an educational institution that differs greatly from the common mission of an educational institution in that it:
 - had no fixed curriculum or course of study,
 - confers no degrees and give no diplomas,
 - operates informally off campus and uses farms, homes, and places of business as classrooms,

- uses instructors with a wide range of subject-matter expertise, has large and heterogeneous audience,
 - offers subject matter that is more practical than theoretical for immediate application to the solution of problems,
 - is educational in nature with teaching conducted informally using a wide variety of teaching methods, and
 - requires a change of both mental and physical behavior for the application of the subject matter.
- The clientele participation is purely voluntary.
 - A technical service is provided to the clientele.
 - The field of work is broad and primarily grounded in agriculture, home economics, and related areas.
 - Programs are based upon needs and expressed desires of the people and communities.
 - The information provided is research based.
 - It is dedicated to work with the family.
 - It depends upon volunteer leaders who help plan, implement, and evaluate educational.
 - Its programs are flexible and valuable in emergencies.

Basically the mission of extension system is to enable people to improve their lives and communities through learning partnerships that put knowledge to work (SeEVERS et al, 1997: 1). In the past, much extension effort was concentrated on the progressive farmer who was expected to spread new ideas to others. It has been seen, however, that this does not always work, because progressive farmers often have different problems. They have more land, more education and are usually more involved in the marketing of their product (Oakley and Garforth, 1985: 16). Thus, extension agents have to work to meet the need and interests of each house hold accordingly.

As extension work is involved with people to improve the livelihood of the rural community, the role of development agents should address the needs and interests of the

farm community. Bembridge (1991: 28) discusses the role of an extension agent as “farmers needs and problems are his (sic) concern. His (sic) task is not to solve their problems for them or supply their needs, but rather to show how to tackle their problems by themselves and meet their needs with their own resources. He (sic) must understand the fundamental dynamics of human behavior”.

This doesn't mean, however, that it is all about human interaction. Technical knowledge and skills are also important and necessary. The professional extension worker must have knowledge of agricultural science and practical farming. The extension worker's role is essentially to help, support and actively encourage them to develop their own initiative and tackle their own problems. His/her place is mainly in the village or work area, not in the office (Bembridge, 1991: 27).

This role and the personal skills required by the professional extension worker pertaining to organization and planning, analysis and diagnosis of problems, understanding of rural life, agricultural policies, leadership and initiative are very important roles of extension workers (Bembridge, 1991: 28).

2.8.8 Factors that affect effectiveness of extension work

For the extension system to carry out its educational function effectively the following must exist (Bembridge, 1991: 28):

- Strong commitment and financial support from government for research and extension.
- A cadre of well-trained, dedicated extension staff committed to helping rural farmers attain a higher quality of life. They should be adequately qualified and sufficient in number. Subject-matter specialists must be provided to back up the extension service.
- Continual production-oriented research which should present improved practices considered dependable and predictable by the farmers. The improved practices must be economically viable, culturally compatible and technically feasible.

- Necessary inputs such as fertilizers, pesticides, improved seeds, cultivation implements, livestock remedies, and stock feed; credit and marketing facilities together with any other recommendation must be available to the farmers at the right time and at a reasonable cost.
- Adequate back-up support of the extension service to enable it to provide the necessary extension education programs to the farmers through the village-level extension workers.
- Ongoing and effective in-service training and extension information systems.

Perraton, et al, (1983: 70) discuss the major factors that determine the effectiveness of agricultural extension as they are features of the society, facilities available, present farming practices and acceptance of changes in farming. These factors are depicted in figure below.

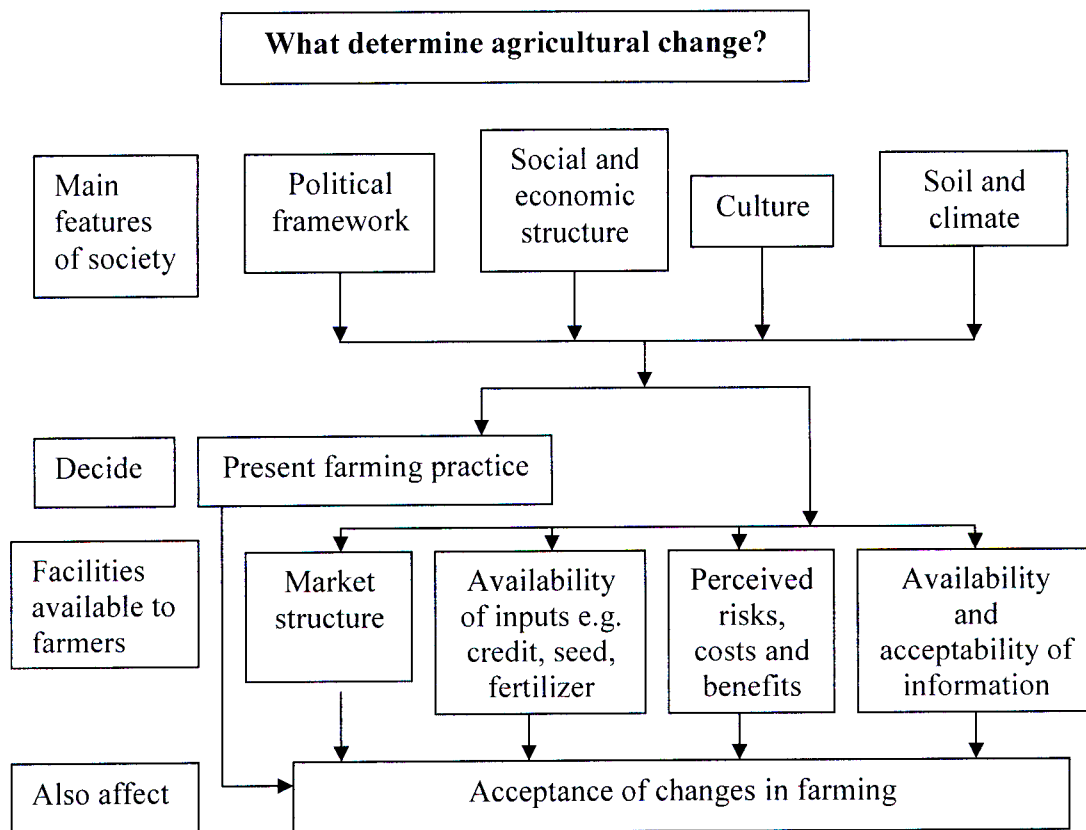


Table 1:- Factors that affect agricultural changes (source: Perraton, et al, 1983: 70)

2.8.9 Challenges of extension/ draw back of extension package

The function of the 'extension system' is to deliver ideas, information or sometimes physical inputs to the farm families. But the information the extension agents offer to the farm family is not always adequate to satisfy their need. Axinn (1997: 16) asserts that unlike the acquisition system, it is owned, operated and controlled by outsiders (usually by people from cities). Rather than to acquire for the village what the residents request, it is designed to deliver what these outsiders think the village needs.

In fact it has become evident that as extension systems have grown in size and complexity, they have ceased to be controlled by farming people. The personnel of such systems feel more accountable to their employers or professions than they do to their farmer clientele. This is reflected in the lack of relevance to local needs and interests in some extension programs (Axinn, 1997: 16).

One of the critical differences between the successes and the failures is the extent to which the people who are supposed to benefit from the program have a voice in deciding the content, the objectives, and the methods used by the system. In other words, the extent to which the clientele participate in all aspects of planning and implementing the program is directly related to its success (Axinn, 1997: 20).

In reality, however, the rural community is considered as less knowledgeable and as having to take orders and direction from the experts. That threatens the self-reliance of the participants and shrinks the success of the program.

One of the important limits on what an extension service can do is the background knowledge and educational level of the farmers to whom it is addressed. To take a practical example, if farmers are illiterate, an extension service can make little use of print to provide information to them. In developing countries, therefore, there is an overlap between the aim of extension and the aims of basic education. (Perraton, et al, 1983: 65)

In addition, Perraton and et al (1983: 72) argue that extension services have often themselves not been particularly efficient. They have been criticized on both broad and narrow grounds. The broadest-based criticisms have shown that much agricultural extension is socially regressive, concentrating its benefits on richer rather than poorer farmers, and tending to widen the gap between the rich and the poor. Extension services concentrated on the needs of men, even in societies where women do most of the agriculture. From a narrower perspective five major difficulties have been identified as confronting agricultural extension:

- extension agents have been too young and under-trained so that they could persuade neither through the authority of age nor through superior knowledge.
- Often they have lacked an appropriate organizational structure so that they have been inadequately supervised, been given ill-considered tasks and have had to waste their time on bureaucratic trivia.
- They have been too thin on the ground to have any significant impact on many farmers.
- Too often agents have had little to teach that would benefit farmers.
- There have been inadequate channels for farmers or extension agents to communicate with research workers.

2.8.10 The Nature of Agricultural Extension in Some Countries

Throughout the world training farmers was recognized long ago as an essential ingredient in rural development. The underlying hypothesis is that basic training enables the farmer to adapt to changed circumstances, to absorb new information and to modify his or her farming techniques accordingly (Albercht, et al, 1990: 43).

2.8.10.1 Ethiopia

The new system agreed upon between central and regional levels is based on the package approach and is called the ‘participatory demonstration and training extension system’ (PADETES). This system combines technology transfer and human resource

development (Percy, 1997: 2). The program is intended to encourage an increased use of farms inputs (improved seeds, chemical fertilizers and pesticides), creating Farmers' Service Cooperatives (FSC) so that it will help in stabilizing local markets in order that farmers will not be discouraged with cheap price for their products. In fact, the country's agricultural extension effort is by and large to increase yield as much as possible using chemical fertilizers, high yielding varieties and other inputs (Nigussie and Yousuf, 2001: 80).

2.8.10.2 Kenya

In Kenya the aim of farmer training center (FTC) was and still is today to train male and female subsistence formers to be market oriented (Albercht, et al, 1990: 43). The objectives influenced the training programs in a characteristic way. The basic training was reduced from two year to one year, and by today it lasts only one week, which means that short courses in every specific technique to produce marketable crops have replaced integrated programs (Albercht, et al, 1990: 43). The people reached by the one and two year training phase and later by short courses were mainly progressive male and female farmers.

2.8.10.3 Rwanda

In Rwanda the government adopted a systematic extension approach developed by the Swiss agricultural project as its National Extension System and it is known as CFSME. It has an integrated function in that it deals with creating awareness, training and motivating and proposed resources ensure that these activities form an integral part of socio-economic and cultural context (Albercht, et al, 1990: 51).

2.8.10.4 Turkey - The "Training and Visit System" of the World Bank

The organization structure was developed by an Israeli firm of consultants. The advisers' plan of operation comprised (Albercht, et al, 1990: 61):

- Working out weekly programs
- Keeping in touch with farmers
- Passing problems on to "specialists" at the next level

- Collecting data on yields, leased land, etc., for the annual report of farmer education service
- Giving the agricultural bank the names of farmers entitled to credit
- Attending further training courses lasting one and half month in the winter.

The organizers of Training and Visit regard a clear political willingness to reform the existing extension service as a precondition for introducing efficient extension. The organization, the content of extension and the selection of farmers have to be completely restructured according to the principles of unification, simplification and the creation of priorities (Albercht, et al, 1990: 61)

The training and visit system tries to achieve changes in production technologies used by the majority of farmers through assistance from well trained extension agents who have close links with agricultural agents. The management has four tasks (Van den Ban and Hawkins, 196: 259):

- to develop the basic framework of the extension system in which everybody knows what he or she is supposed to do;
- to organize the support necessary to enable all extension agents to do their work well;
- to supervise how well extension agents perform their task and, if necessary, to help them perform this task better;
- to coordinate the extension work with agencies outside the extension service, such as research, provision of supplies and marketing.

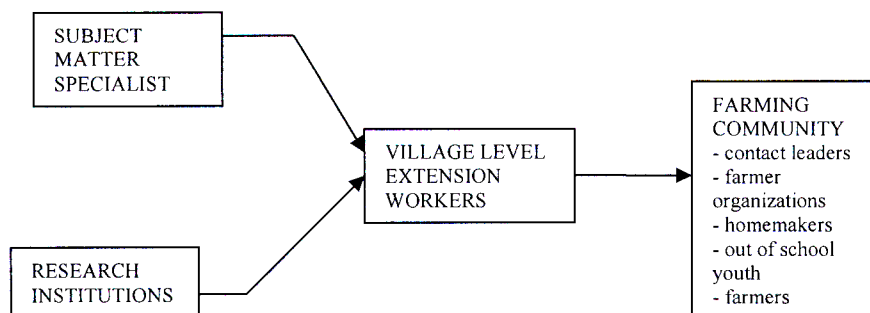


Table 2:-*The information flow chart of training and visit system (Bembridge, 1991, p28).*

The extension service has an important duty to inform research organizations of farmer's problems which require solving. It is pointless doing research on the assumption that irrigation and resources to buy fertilizers and other inputs are available to farmers who in fact have few resources and rely on optimal use of scarce resources if they wish to make a major contribution to agricultural development (Van den Ban and Hawkins, 196: 261).

2.9 Towards a conceptual framework

This research study adopts as its conceptual framework the ideological model of literacy; the dependency theory of development; and modernization framework for understanding agricultural extension. The primary objective of extension package workers is to improve the productivity of subsistence farmers.

Due emphasis is given to agricultural extension program to enhance to productivity of the farmers because it is believed that HRD is the base for development. Thus, there is a series of teaching and learning process taking place in the program. This training can be taken as one form of adult education. For the purpose of the research adult education can be defined as "a process by which adults, who are already engaged in continuous learning ...engage in more structured programmes of learning in a planned and purposeful way at different times throughout their lives" (Rogers, 1992: 29).

Though, it needs careful assessment on the overall program, I can tell that their effort can fairly fall under the basic tenets of modernization theory for the emphasis of extension

package program in Ethiopia is on improving the productivity of farmers. The fundamental premise of modernization theory is that there is a single process of social evolution in terms of economic growth; that is, from the traditional subsistence mode of production to modern surplus production (Youngman, 2000, p54). This theory calls for investment on human capital so that productivity of the target groups will increase (Lyster, 1992, p26). In the case of the Agricultural Development Lead Industrialization program, the Ethiopian government is investing a huge amount of money in order to train farmers on how to improve their productivity. Here, it is possible to observe that human resource development and productivity are central in the program.

Dependency theorists are against the idea that there are stages of economic development through which all countries pass in evolution to advanced industrialization; they argue that the advanced capitalist economies were developed on the basis of surplus drawn from the periphery, and this route cannot be replicated in present-day underdeveloped countries (Youngman, 2000, p63). Dependency theory, thus, appeals to those who see themselves as working with marginalized groups to affect fundamental social transformation. Theorists like Nyerere and Freire see education as an instrument for social change, either for liberation or domestication (in Mulenga, 2001, p454, 455). They believe that education for domestication is of little help. They argue that one of the major purposes of adult education should be to develop critical thinking among the society so that they can understand and promote social change. Indeed I am interested to see how this view is affecting the effort from a dependency theory point of view that is critical of modernization theory.

In addition, this study tried to see some of the major draw backs of extension program in that it tends to consider farmers as less knowledgeable, in most cases the program tends to give due emphasis to leader farmers and neglects the need of poor farmers.

2.10 Summary

This literature review looked at the various definitions, concepts and understandings of adult education, development and agricultural extension work. It covered the link between adult education and development. Particularly it dealt with the contribution of adult education for better livelihood of rural community. It tried to show the link between literacy and development; how literacy could possibly affect the effectiveness of farm communities. In addition, it has also been seen some of the major possible draw backs of extension program in that it tends to consider farmers as less knowledgeable, in most cases the program tends to give due emphasis to leader farmers and neglects the need of poor farmers. Usually these leader farmers are farmers who have better education, economy and exposure.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter explains the type of research done and the methods used in the study, showing how the subjects were selected and how the data was collected from them. The methods used to collect different data from different respondents are discussed and the situation in the area under scrutiny is elaborated.

3.2 Research Design and Paradigm

The study adopts an interpretivist paradigm and some aspects of a critical paradigm to understand the data and the context. It is qualitative in nature. “The emphasis is on interpretive understanding (*verstehen*) rather than causal and nomothetic explanation in terms of universally valid law (Babbie and Mouton, 1998:33). Thus the interpretivist paradigm helps the understanding of individuals in terms of their own interpretations of reality and understanding of society in terms of the meanings which people ascribe to the social practices in that society (Babbie and Mouton, 1998: 33). On the other hand, the critical paradigm provides an understanding of society in terms of power relations and contending interests.

The study adopts an exploratory small-scale case study approach. The objective was to provide an exploration and description of the program regarding its strengths and weaknesses and to try to seek the possibilities for improving its educational aspects. An exploratory design is considered as appropriate for the study because the effectiveness of the program had not been studied from an adult education perspective. In this regard, when Gillham (2000: 11) discusses the merits of qualitative research, he says that it is helpful to investigate situations where little is known about what is there or what is going on; to explore complexities that are beyond the scope of more ‘controlled’ approaches; to ‘get under the skin’ of a group or organization to find out what really happens – the

informal reality which can only be perceived from the inside; and to carry research into the process leading to results rather than into the significance of the results themselves.

In fact the research is unique in its exploration of this particular context for it tried to see the educational aspects of agricultural extension work among the rural farmers. To the best knowledge of the researcher, no research was conducted before in the area of interest. Thus, it is believed that qualitative methods were best suited to investigate the agricultural extension program from its educational point of view and to explore the link between adult education and the program and how one affects the other.

3.3 Study Areas, Sample and Sampling Strategy

The study is conducted in Ambo district located in West Shoa of the Oromia province in Ethiopia. Ambo district is chosen for the study because: (i) it can fairly show the real situation of the farmer in the region in terms of their literacy level; (ii) I know the area very well. I have enough knowledge of the geography and language of the area. This knowledge, coupled with my informal relation with some of the DAs, enabled me to access easily the research area and information.

The study focused on the teaching-learning process observed between the extension package workers and the farmers. The extension package workers and the farmers were the main interest. The study was intended to be conducted on a sample of 18 participants (15 farmers and 3 extension package workers). However, it was actually conducted on 12 farmers and 3 extension package workers. This happened because of the absence of the anticipated participants in the focus group discussion. Purposive sampling is appropriate for this study to address the issue of representativeness of different groups in the community. This is because of the fact that it is best for exploratory studies which are concerned with generation of wider information for better understanding of what kind of adult education takes place in extension package program. The selection took into account the gender, age and literacy level.

As the sampling was purposive sampling it helped me to include different groups of farmers. The participants of the focus group discussion were selected with the help of the development workers with one of the three wards of the research area. Indeed three leader farmers and nine follower farmers were identified as the participant of focus group discussion.

3.4 Methods and tools of data collection

3.4.1 Methods of data collection

After the selection of cases to be studied, I used a variety of techniques and tools to collect data from a variety of sources. The methods and tools used in collecting the data were:

- Semi-structured interview,
- Focus group discussion,
- Observation,
- Document analysis

I recorded the data using tape recorder and taking notes. The data were transcribed using local language carefully translated into English.

3.4.1.1 Semi-structured interview

Of the different kinds of interviews available to me, I selected the semi-structured interview format. The semi-structured interview was used because the study was designed to explore the kind of teaching-learning process that was taking place between DAs and farmers, to investigate their views and attitudes about adult education and how they perceive their work from that perspective. On the other hand semi-structured interviews help the researcher to guide the respondents in the area of interest as compared to structured interview which I can say it is helpful for limited time study. As the semi-structured interview has established framework, analysis would greatly simplified (Bell, 1993: 138).

Interviews have often been used to establish the variety of opinion concerning a particular topic. They have been used to establish relevant dimensions of attitudes. Interviews are often used to form tentative hypotheses about the motivation underlying behavior and attitudes, although this use is much debated (Shaughessy et al, 2000: 160). It allows the researcher to generate a great deal of data relatively quickly. While I was conducting the interview I noticed that it is both possible to guide the interviewee into the right direction and also to collect wider information whenever the need arises by probing.

3.4.1.2 Focus group discussion

Powell et al (1996: 499) define focus group discussion as “a group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research” (in Gibbs, 1997: 2). This was used to assess how the farmers view their training from an adult education perspective and to see if at all they recognize the impact of literacy on their productivity. There is also another important purpose as far as focus group discussion is concerned as Gibbs (1997: 2) says. Focus group discussions have special value for those who want to assess how several people work out a common view, or the range of views, about some topic. They allow you to see how people interact in considering a topic, and how they deal with disagreement. Thus, they can help to explore the view and attitude of the group, to identify their priorities and to evaluate the effectiveness of the service (Pickering & Clement, 2001: 266-269). In fact I got the opportunity to see how people interact among themselves and come up with differences due to their views towards life.

3.4.1.3 Observation

There are three kinds of observational variables; descriptive, inferential and evaluative (Brown, undated). I heavily depended on the inferential observation. I say so because I tried to infer the type of training from an adult education point of view. Here it is worth mentioning that I only observed the DAs follow-up visits because of the fact that training in FTC was not delivered for the year 2006.

3.4.2 Tools of data collection

The following tools were designed to correspond to the methods of data collection used to collect the data/information needed for this study:

3.4.2.1 The interview guide

This was used to generate information from the DAs. It was designed to cover all the research questions (see Appendix I). The interview guides, focus group discussion schedule and observation checklist were developed side by side so that they might help to compare and contrast the data. This was done to ensure consistency of the information collected using a variety of tools and methods.

3.4.2.2 Focus group discussion schedule

This was done to generate information from the farmers. It was designed to secure information from focus group discussion participants. This was done to see the outlook and attitude of two different parties (farmers and DAs) on the same issue.

3.4.2.3 Observation checklist

This was used to collect information on the training, teaching process and organization of the program. The checklist designed for this purpose was used in a flexible way to accommodate the issues during the observation. I observed the interaction between extension package workers and the farmers while they were working in the field to observe what kind of adult education was taking place and observed the effectiveness of the training from adult education perspective.

3.4.2.4 Document Analysis

This was used to collect information about the overall situation of Ethiopia to provide an appropriate context for the study. It mainly focused on the factual information that is believed to have impact on the training. In addition, this was used in a flexible way to accommodate issues not taken into account during the time of planning this study.

3.5 The details of how the above methods and tools were used

3.5.1 Key informant interviews

I conducted interviews with three DAs.

Interviewee	Sex	(Schooling) + (Tertiary study)	Work experience
A	F	12 + 3yrs	12 years
B	M	12 + 9month +1yr	10 years
C	F	10 + 3yrs	3 years

Table 3: - *The profile of interviewees*

As can be seen from the table the study had taken into consideration sex, educational background and work experiences of DA participants in the interviews. All of the respondents have training in agriculture. Respondent A and C are diploma graduates from agricultural institutions. Respondent B has got 9 months training and attended a one year diploma program. Both respondent A and C have specialized in Animal Science. Respondent C was trained as a general extensionist. As far as their work experience is concerned two of them have got 10 and above years of experience. The third one has got three years of experience which is enough to understand the situation and to reflect on the work and the work environment. It is noteworthy that none of the development agents has an educational qualification in extension education.

3.5.2 Focus group discussion

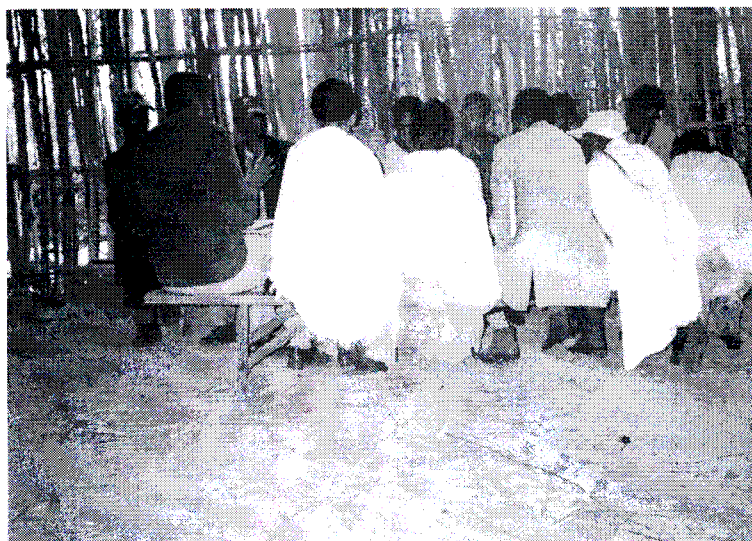


Figure 3: - *Focus group discussion with farmers in Gosu Kebele, Oromia.*

The focus group discussion was held with twelve farmers. They were selected from among the farmers purposively. Sex, age and their participation in the extension package were taken into consideration so that their representativeness could be ensured. As far as their participation in the training is concerned, three of them were leader farmers and nine of them were follower farmers. As far as their literacy ability is concerned three of them were functionally literate, three of participants were functionally illiterate and six of them were illiterate. As far as the age and participation of the farmers in the extension program from the sampling was not clear, in general there is a greater tendency to work with the young farmers.

Farmer	Sex	Role in program	Literacy level	age
A	F	Follower farmer	Illiterate	62
B	F	Follower farmer	Illiterate	43
C	F	Follower farmer	Illiterate	37
D	F	Follower farmer	Functionally illiterate	37
E	M	Leader farmer	Functionally literate	33

F	M	Leader farmer	Functionally literate	45
G	M	Leader farmer	Functionally literate	40
H	M	Follower farmer	Functionally Illiterate	45
I	M	Follower farmer	Functionally Illiterate	47
J	M	Follower farmer	Illiterate	43
H	M	Follower farmer	Illiterate	40
K	M	Follower farmer	Illiterate	45

Table 4:- the profile of focus group participants

3.5.3 Observation

I observed the interaction between extension package workers and the farmers while they were working in the field to observe what kind of adult education was taking place and the effectiveness of the training from an adult education perspective

3.5.4 Document Analysis

I dealt with the documents that detail the government's plan to modernize agriculture, the real situation of the country such as level of poverty, literacy and comparison of agricultural productivity using conventional way of farming and the new systems of farming.

3.6 Data analysis

Qualitative methods of data analysis were used to analyze the data collected from all the different sources using different methods. These were content, inductive and logical analysis. The different categories of information were categorized, analyzed, and interpretations were drawn from them in relation to the research questions.

As part of the analysis of the data I developed codes from the data itself and the research questions. As an illustration some of the codes that were derived from the data were training (T), types of training (TT), training objectives (TO), training methods (TM) and criterion of selection (TCS). In the same way different codes were developed from the research questions. As an example some of the codes that were derived from the research questions were teaching – learning (TL), teaching aids (TA), teaching process (TP), problems (P), attitude (A) and resources (R). These and other codes were generated based on their relevance to answer the basic question of the research and their centrality for the research in general.

As the case study falls under qualitative research, which seeks to describe and interpret people's feelings and experiences in human terms rather than through quantifications and measurement, I was doing it while the investigation was going on (Gillham, 2000: 11). "Carrying out the interview and recording it is one thing; transcribing and analyzing it is quite another (Gillham, 2000: 11)". Interview and transcription were carried side by side to take the advantage of my own memory while listening on the tape.

Initially all the data collected using the different tools carefully were studied separately as a first step. After this step the different categories from all the data sources in the study were again scrutinized to generate the general picture in the category. This involved looking at the categories applicable to all data sources and identifying the similarities running across the data sets to reach a conclusion on each aspect of the training.

3.7 Ethical issues

As far as ethical issue is concerned I got permission from Ambo District Agricultural Office to conduct interview and focus group discussion in Oddo-Liban, Gosu and Awaro Kebeles. In addition to this I signed sorts of contractual agreements with both the participants of focus group discussion and interview which helps to deal with the issue of confidentiality of information and their identity. The participants and agricultural offices

at different levels and all concerned parties are allowed to access after the approval of the dissertation.

3.8 Summary

This chapter reports the way the research was conducted. This includes the methods and tools used in collecting the research data, the sampling methods used, the population of study, and method of analyzing the data. In the next chapter, the findings of this study are presented in a manner that answers the research questions.

CHAPTER FOUR: PRESENTATION AND DISCUSSION OF THE FINDINGS

4.1 Introduction

In this chapter, the findings of this study are presented and discussed. As already mentioned in the earlier chapters, this study dealt with the learning approaches and practices demonstrated by development agents (DAs); the farmers' perceptions of adult education and how it can contribute to the training program.

The study was conducted based on the information obtained from three DAs and twelve farmers, and from observations conducted in the research area. It is difficult to make a general conclusion based on small numbers of respondents in a limited area as compared to the vastness of the region. Generalizability of the research indeed might be threatened by the limitedness of the respondents. However, one of the unique features of qualitative research is that it is a more appropriate and convenient method of research where little is known about the program. Indeed I believe that the research is quite helpful to serve as the starting point for any interested researcher.

The findings are presented and discussed under different headings:

- Farmers' access to basic information
- Teaching-learning activities in the extension program
- Perceptions of DAs and farmers about the training program
- The actual and potential role of literacy in an agricultural extension program

How the data was obtained was explained in chapter three. In this chapter, the data is presented.

Using the data collected from the two different sources using varied techniques as given in chapter three, the work of DAs was studied from adult education perspectives.

4.2 Farmers' access to basic information

This section is designed to show the situation of a rural community in Ethiopia as far as access to basic information is concerned. It is clear that education and productivity have a lot to do with access to information. The type and the amount of information a given society gets, has an impact on the life style of that society. Thus, it is good point to start with in order to show the link between agricultural productivity, adult education and the potential role of DAs to bring sustainable development to Ethiopia.

Access to basic information is fundamental in a given society that can determine their level of consciousness, self awareness, to understand the dynamics of change and to make informed decision. Ethiopia is a country with many national languages and two official languages. The official languages are English and Amharic. Currently more than ten languages are used as national languages. National languages are implemented up to regional level. Official languages are implemented at federal level. In most cases the rural communities understand and use the regional language. Afan Oromo is the regional language in Oromia where the research is situated. .

Of the few potential sources of information, newspapers and radio programs are the major ones for the majority of the society. In Ethiopia there are two state owned newspapers. One of them is published in the target language which rarely reaches farmers. Table 5 shows the number of daily published journals, total number of publications and rate of distribution in Ethiopia, Kenya and Rwanda.

Country	Number of titles	Total (1000)	Circulation Per 1,000 inhabitants
Ethiopia	2	23	0.4
Kenya	4	250	8
Rwanda	1	1	0.1

Table 5:- *Daily Newspaper (Sources EFA Global Monitoring Report, 2006: 294-5)*

As can be seen from the above table even if there seems some sorts of difference in terms newspaper distribution between the three countries (Ethiopia, Kenya and Rwanda), generally it is possible to say that distribution of newspaper is very small as compared to the total number of population in both in Ethiopia, Kenya and Rwanda. In Ethiopia out of 1000 people on average only 0.4 of them use newspaper as the source of information. In another word this means only 4 individuals out of 10,000 people are beneficiary of the daily newspaper. In Kenya it seems much better as compared to Ethiopia. 800 individuals out of 10,000 people have access to the newspaper. In Rwanda it is worse. Only 1 person out of 10,000 people has access to daily newspaper. Indeed it is quite reasonable to say that the people of these African countries are oral society.

In Ethiopia there are two state owned radio stations in the country to serve the people in the region. Time allotment of each broadcast in the target language is two hours per day: one hour in the morning and one hour in the evening. The target group of the media is the whole community (children, youth, adult, urban and rural): it is not particular to farmers. Farming and farm related activity are not primary concerns of the program. The rural community in Ethiopia is quite far from other sources of communication technology. To show the status of the country as far as communication technology is concerned in comparison with other countries, I present table 6 below.

Country	Radio receiver			Television receivers			PCs per 1000 inhabitants	Internet users per 1,000 inhabitants
	Total (1000)	Per 1000 inhabitants	% of inhabitants with a radio	Total (1000)	Per 1000 inhabitants	% of households with a television		
	1997	1997	2002	1997	1997	2002	2002	2002
Ethiopia	11750	194	21	320	5	2	1	0.7
Kenya	3070	107	87	730	25	17	6	13
Rwanda	38	273	45	23	163	36	-	70
Turkey	11300	173	49	20900	321	-	43	61

Table 6:- *Information communication technology (Source: EFA Global Monitoring Report, 2006: 295)*

As the above table depicts, only 21 per cent of the Ethiopians are beneficiaries of radio. Kenya has got better distribution where 87% of the populations are beneficiaries of broadcasts. Still Rwanda and Turkey are in a better condition as compared to Ethiopia where more than double the percentage of the population has access to radio services. The same case holds true as far as access to television and PCs are concerned. One can see that Ethiopia is in a desperate situation and it is the country that is unable to provide access to basic information for its citizens. Especially the rural community, which my research is interested in, is in a critical condition. From my own observation incorporated with the above data it is possible to say that the rural community can hardly get basic information about their region, country and the world at large.

Indeed, it is possible to say that DAs are one of the few sources of information for the majority of the farmers. According to both the interviewees and participants in the focus group discussion, the major sources of information for the farmers are DAs, local administrative organs with association of district's representatives, farmers' union and radio for some. Based on the respondents' replies and the researcher's own observation and experience, the major sources of basic information are identified in the table below that shows source of information, target groups, time allotment and objectives:

Source of information	Target groups	Time allotment	Objectives
Development agents	Farmers	Through out the year; during work hours	To enhance productivity of farmers
State radio	All groups of the society	2hrs/day	Entertainment, general information, news, advertisement and the like
Local administrators and government	Farmers	Occasionally	To acquaint farmers with government guidelines and

Farmers' union	Farmers	Accessible when the need arises	policy Facilitate the link between farmers, government agents, consumers and business men
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Table 7: - *Sources of information to the rural community*

4.2.1 Comments on the farmers' access to basic information

As it has been shown above in the table, the rural community is directly or indirectly dependent on government for all kinds of information. The sources of information are heavily focused on oral communication. Farmers are very far from written materials. To the researcher's knowledge there is no written material that is designed to serve the information needs of the farmers prepared either by government or non-governmental organizations. Though there is a need to conduct further research, it is not difficult to see that the rural communities are living without satisfactory information that might help them to make informed decisions. We are living in the age of information where part of the world is enjoying the advantage of access to digital technology and the other parts of the world are still striving to reach their own citizen with basic information in the most elementary ways with limited success. Mullis, et al (2004: 24) says "the world can fairly be divided into two based on the accessibility of information as the people who are accessible to the information 'information haves' and those who are denied the access to information 'information have-nots'".

The country's development effort can either be inhibited or fostered to the extent that its populace is able to make informed decisions in their day-to-day life. Making informed decisions is by and large the function of access to basic information. Lack of basic information about the world does have its own impact on farmers' productivity, self reliance, and their response towards thematic issues in their locality.

This can be witnessed by the country's poor performance in agricultural productivity. Even though the majority of the Ethiopian working population is engaged in farming and farm related activity, the country cannot yet ensure its own food security. This is so because of the fact that the Ethiopian farming system is traditional and subsistence based. It is not supported by technology and valuable information. Indeed I believe that unless the effort of DAs is supported by ensuring the access to basic information to the rural community, it is hardly possible to achieve the desired results in a highly competitive world of ours.

4.3 Teaching-Learning activity in extension program

This topic is discussed under the following sub-headings:

- Plan of the training program;
- What are the duties and responsibilities of DAs?;
- Types of training;
- Criteria for selection of the trainees;
- Methodology.

4.3.1 Plan of the training program

The purpose of the training program emerges from the very purposes of the country's long term development program and its plan to achieve food security in the short term. Ethiopian agriculture is based on subsistence farm households, whose mode of life and operation have remained unchanged for centuries. Agricultural productivity has been deteriorating from the early seventies until 1991, rendering a good proportion of the farm households unable to feed their families and frequently dependent on food aid (Ethio-embassy, undated). To counter the situation the government of Ethiopia designed an 'Agricultural Development Led Industrialization' (ADLI) strategy which aims to use agriculture as the base for the country's overall development. Primarily the strategy focuses on enhancing the productivity of small land-holding farmers to ensure food security both in the rural and urban areas. Within the framework of ADLI, the

government initiated a five-year Agricultural Development Program with the objective of closing the country's food demand and supply gap in the medium term. The government also introduced specific policies and provided technical and institutional support to farmers, in its drive to increase food production through intensive cultivation, development of small-scale irrigation, conservation of natural resources and environment, agricultural research and extension work as well as marketing and price policy (Ethio-embassy, undated).

The new system of extension activity is carried out in the form of a package. Mohammad (2005: 12) says that the new system follows the package approach for the development of the agricultural sector. In this approach all essential components, such as information on agricultural technology, provision of inputs and credit, and communication methods are provided to farmers as a complete set. The transfer of technology is done through demonstration for limited numbers of farmers (usually leader farmers). It is adopted on a cluster approach to transfer the knowledge through diffusion from farmer to farmer extension and through organizing field days for the purposes of practical demonstrations and on-site support.

The extension package program focuses mainly on assisting small-scale farmers to improve their productivity through disseminating research-generated information and technologies. Indeed DAs are working with subsistence farmers with the intention of enhancing their productivity. As DA 'A' (2006) put it:

Our main objective is to enhance the productivity of subsistence farmers with the introduction of proven agricultural inputs and techniques in order that farmers will be changed to commercial farmers so that they will be changed from weak households to strong households.

DA 'B' and 'C' also confirmed in the same way as they are there to work with subsistence farmers for their better livelihood. Having this as the long lasting objective,

they said that the short term objective is to play their parts so that farmers will try their best to ensure food self-sufficiency of the country.

As DAs said, they help farmers to enrich their experience via introducing modern ways of farming. They persuade farmers to use modern technology, selected seeds, pesticide and crop rotation. In addition, to decrease their dependency on rainfall, they introduce and encourage the culture of using small-scale irrigation.

My DAs depicted that their primary objective is to improve the productivity of the farmers. However, they have not restricted themselves to the stated objective. They deal with related activities such as conflict resolution, better hygiene practices and the like so that the farmers will be self-reliant and satisfy their basic needs. They help female farmers so that they will be as productive as their male colleagues.

In fact they offer invaluable support to subsistence farmers for they are one of the few sources of information to the majority of the farmers. This is so because of the fact that they were the only government agents who were working closely with subsistence farmers until recently.

4.3.2 The Duties and Responsibilities of DAs

The DA's contribution begins with awareness raising. As my respondents said their activity begins with the advocacy of advantages of the extension package program to improve the productivity of farmers. In their attempt, as DAs reported, to enhance productivity of the farmers, development agents serve as the mediators between farmers, agricultural researchers and agricultural experts at the higher levels. They act as leaders, co-workers, counselors and supervisors among the farmers. They work as the co-workers while they are demonstrating practically what they taught them theoretically in the field. They serve as counselors for the farmers; they assist farmers in addressing their problems whenever they face difficulties that might otherwise negatively affect their productivity.

They visit farms to monitor how things are going and to offer farmers timely feedback; they do supervisory work. On the other hand, DAs provide feedback about the suitability of different agricultural inputs to research institutions and agricultural experts at higher levels.

My respondents also asserted that they organize farmers into groups so that farmers will work together. Both the farmers and the development agents benefited from grouping the farmers. This is because of the fact that farmers get the opportunity to share experiences while working in their field. Development agents delegate leader farmers to each of the group who help to ease their burden.

DAs assist farmers to identify types of seeds, the crops of which have better price in the market and which can be produced in their localities, so that they will become commercial farmers. They help farmers to get high milk and meat yielding cattle and advise them how to utilize milk and milk products effectively. DAs help farmers to understand the impact of deforestation so that they will take responsibility for the conservation of the natural environment. Thus, DAs work to change each household from a weak household to strong household via introducing the new system of farming.

According to my DA interviewees, two of them were meant to work in the area of animal husbandry and the third one was meant to work in the area of horticulture. But all of them were working as general agricultural experts intervening in all areas of farm and farm-related activities. This was so because of the fact that in Ethiopia land is not privately owned and farmers are small land-holders. Farmers are working in all areas of related activities to make living possible. This in turn forces development agents to work as general agricultural experts within the rural community.

In general, as respondent 'C' (2006) stated "we are working in all areas of packages such as animal husbandry, utilization of selected seeds, fertilizers and pesticides, conservation of natural resources, small scale irrigation and horticulture". They were doing the aforementioned activities in collaboration with the agricultural research institute, District

Agricultural Office, Farmers Union and the Kebele (the lowest administrative office available at the grassroots level).

According to my respondents reply, one or two development agents will be assigned to a Kebele depending on the numbers of farmers. Under normal circumstance one extension package worker is assigned to serve from 210 to 230 farmers/households. As far as the service is concerned it is of two types: special and general extension services. In the special extension package program relatively small numbers of farmers take part. In this package program development agents are required to offer special training so that the participants will adopt the new ways of farming activity. In the general package program, all farmers will take parts and development agents are required to give close supervision and assistance whenever the need arises on when, how and how much fertilizer, pesticide and selected seeds should be used.

4.3.2.1 Comments on the duties and responsibilities of DAs

As reported above, extension package workers are trained to serve in a certain kind of specialization like animal husbandry, horticulture and the like. However, they were acting as general agriculturalists to address the needs of the local community. This was so because of the fact that farmers are small land holders: they are engaged in all areas of farm and farm related activities to make living possible.

Indeed it is wise to gear DAs training program in line with the needs and interests of the farm community so that DAs can be more efficient and more responsive to the farmers' needs. For farmers are small land holders, it is quite plain to see that they have to engage to related activities to use the resources available effectively. DAs should be trained as generalists or make some sort of adjustment in the training so that they can carry out the given task effectively.

4.3.3 Types of training

As mentioned above, DA's identified two types of training: special training and general training. They are different in terms of their duration, number of participants and uniqueness.

4.3.3.1 Special training

DAs discussed special training as the type of training which deals mainly with the introduction of new technology and methods of farming. It is offered to relatively few farmers. In most cases the trainees are considered as the model farmers. In terms of duration, it is carried out for a limited period of time. When the DA 'B' (2006) elaborated on one of the unique features special training, he said that "the introduction of new technology and methods of farming comprise a series of teaching learning processes". The other two respondents agreed with the reply of the respondent 'B'. In addition, they said that the training is offered at a farmers training center (FTC). This center is organized like school where a series of teaching-learning processes takes place. Trainers offer training in line with their profession. DAs confirmed that farmers are required to take notes. That is why only literate farmers who can read and write with understanding are eligible for the training.

Development agents offer thorough training to the leader farmers and work with them in the field to prove the effectiveness of the new methods of farming and to make sure that all the inputs are added accordingly to achieve the desired results. "While doing a kind of demonstration on the model farmers' farm, we (the DAs), in collaboration with leader farmers, train the follower farmers how to adopt the new system of farming and farm related activities" (DA 'C', 2006). As the respondents affirmed, that is how they try to combat the impact of illiteracy on the new systems of farming. But this doesn't mean that the problem is curbed fully. DAs witnessed from their experience that there is a significant difference between the two types of farmers in that literate farmers are willing to take a risk, they can afford to buy the necessary inputs, and are educable. Illiterate farmers, on the other hand, are not willing to take risks; a good number of them cannot afford to buy the necessary inputs; they need a lot of energy to make them understand the new methods; and they are heavily dependent on the development agents' assistance.

This dependency overburdened the DAs so that it was not always possible to support the farmers effectively.

4.3.3.2 General training

General training is a type of training which deal with routine activity and it is usually accompanied by close supervision and proper guidance. It is about providing information concerning when to plough, sow and harvest based on the expert information about the current fiscal year weather conditions. “We visit each household’s farm land that takes part in the package program, observe how farmers are doing it, discuss with them if they encounter any kind of problems and discuss the problems to find out the possible solutions,” one DA reported.

The reason for the distinction between leader and follower farmers, according to DAs, is to come up with a number of solutions to problems. For one thing it is believed that it will be more helpful to begin the new methods for effective administration with a few efficient farmers. It helps to combat the shortage of development agents. The other reason is that it helps to bridge the problem of the gap in farmers’ learning ability. Some of them tend to be fast learners and are willing to put new methods and ideas into practice as compared to their fellow workers.

Hereunder I summarize the basic tenets of special training and general training in table below based on the respondents’ input.

Type of training	Special	General
Target group	Leader farmers	Follower farmers
Purpose	Means to disseminate scientifically proven system of farming and new technology	Adopt the new system of farming from the leader farmers

Methodology	Lecture, discussion and demonstration are the major methods” “they use blackboard and teaching books.	Demonstration and discussion
Venue	FTC	Local farms, ‘under shade of tree’
Facilitators	DAs	DAs and Model farmers
Goals	Improve productivity	Improve productivity

Table 8: - *Types of training*

4.3.3.3 Comments on farmers training

Among a number of factors that affect farmers’ learning ability is their educational level. Usually literate farmers are fast learners and are willing to adopt the new methods of farming and farm-related activity as compared to illiterate farmers. To solve the learning problem that is evident among the farmers, the classification of farmers as model and follower farmers appears reasonable.

However, this differentiation has its own problems in that it widens the gap between farmers instead of narrowing it. This is because the training depends heavily on the model farmers. Model farmers are usually progressive farmers within the community. As Axinn argues:

One of the critical differences between the successes and the failures is the extent to which the people who are supposed to benefit from the program have a voice in deciding the content, the objectives, and the methods used by the system. In other words, the extent to which the clientele participate in all aspects of planning and implementing the program is directly related to its success (Axinn, 1997: 20).

During the focus group discussion and interview section it is confirmed that once the new system of farming is proved to be effective follower farmers are required to adopt it. Here it is plain to see that they cannot get the opportunity to participate in all aspect of planning and implementing the program. Thus, follower farmers are considered as less knowledgeable and as having to take the direction and advice from either DAs or model farmers. That threatens the self-reliance of the participants and shrinks the success of the program.

On top of that leader farmers are busy taking care of their own businesses and they may not be accessible as desired by follower farmers. This might lead follower farmers to be losers and end up with widening the gap instead of narrowing it (Perraton and et al, 1983: 72).

4.3.4 Criteria for selection of the trainees;

As discussed above, the farmers are divided into two as the model farmers and follower farmers. According to the DAs, this categorization is based on the following criteria:

- The ability to read and write with understanding;
- Their willingness to adopt the newly introduced ways of farming;
- Their ability to change into practice what they have learned;
- Their being exemplary in the community;
- Their willingness and commitment to work together (and the like).

In my further discussion with DAs about why the model farmers need to have the ability to read and write with understanding, they said that the participants are required take notes on what they have learned in FTC.

The rationale behind the above criterion was explained by one DA, and confirmed by the other two, as follows:

Model farmers are required to support government's effort to improve the productivity of farmers. This will happen in two ways. First, they have to improve their productivity applying the new system of farming. Second, they have to share their experience and disseminate information about the new system of farming" (DA 'C', 2006)

The assumption behind the saying is that while model farmers are working on their farms, follower farmers will get the opportunity to see the advantage of the newly adopted system of farming to improve their productivity. In addition model farmers are required to disseminate information for their group members.

According to the DAs account, to change into effect the efforts of both development agents, the farmers in a Kebele are divided into groups. Each group contains twenty to twenty five people. They have their own respective representatives/leaders. These leaders are model farmers. They are there to assist development agent's effort so that productivity of the farmers will increase. Thus, model farmers/leader farmers are responsible to assist follower farmers, report on the progress of their groups, and disseminate information that they get either from development agents and/or the district agricultural office. Besides, they serve as valuable information sources for research institutions.

4.3.5 Methods employed in the training

As mentioned above, the extension package workers deliver two types of training. Accordingly, they offer the training in different ways. Special training is the type of training that is offered at the FTC. This training is organized in a similar fashion to that of non-formal adult education classes. As I was informed, they use blackboard and teaching books. I did not get the opportunity to observe while the training was taking place. It is because the training was suspended for the year 2005/6. As my respondents said the beneficiaries of the programs are model farmers (leader farmers/agent farmers). They get

intensive training both theoretically and practically in the field for about four months. Lecture, discussion and demonstration are the major methods of teaching-learning used at the FTC.

The other type of training is known as general training. As my respondents replied, and confirmed by my own observations, it is delivered either under the shade of trees, in a farmers' hall, and/or in the field. It is more participatory; farmers are the main actors in this type of training. Development agents are there to supervise, to assist and to provide some valuable feedback based on their observation. It is more practical. Demonstration and discussion among themselves and with DAs are the key methodologies applied.

As far as demonstration, as the method of teaching, is concerned, DAs use model farmers and their farms to show methods practically to both the follower farmers and model farmers. This helps the participants to internalize practically in the field what they have learned theoretically.

The leaders of all groups are model farmers. The model farmers are required to serve as mediators between the extension workers and farmers. They are responsible to assist and to disseminate information they get from the development agents. DA 'B' (2006) said that "Model farmers do not get any kind of benefits except the fact that they are the prime beneficiaries in the package program". This perception was actually confirmed by the two other DA respondents. Government in general and DAs in particular are taking advantage of the communal way of life of the rural community. Communal life in the rural part of Ethiopia is very strong. Farmers are much attached emotionally to each other and are willing to share burdens and joys together.

As an educator I can say that it is important to encourage group work among the farmers in that they will get the opportunity to share experiences. As mentioned above, model farmers are required to assist their fellow brothers. But no one can make sure that model farmers are doing what they are required to do in the desired manner. It depends solely on their good will to work together and help others. To make things work as desired there is

a need to develop different strategies. In fact motivation, monitoring and assistance of model farmers should be principal.

In an attempt to find out if they use any kind of teaching aids they replied negatively. “We do not use any kinds of audio, visual or audiovisual material that helps the teaching learning process” was reported by DAs. In their further discussion DAs have confirmed that though they are using lecture and demonstration methods in general, sometimes they have difficulty in transferring the main theme of the lesson because of lack of teaching aids. Due to this and other factors some of them lack confidence in their ability.

4.3.5.1 Comments on methodology employed in the training

One of the unique features of adult education is its flexibility. Extension education is one type of adult education that demonstrates its flexibility from my observation. The extension agent uses a range of extension methods to bring the right kind of information and support to each stage of the process. He/she must arrange learning experiences that will lead people from one stage to the next (Oakley and Garforth, 1985: 19). The training is so flexible that it has no fixed place, method and time. As far as the method is concerned the training is purely guided by ‘the principle of appropriateness’ for the given topic. If the given topic is best delivered by discussion, it will be used as the method. The same case hold true for other methods.

However, this does not mean that everything is perfect. Though methodology is purely guided by ‘the principle of appropriateness’, it is challenged by lack of proper teaching aids. There are no audio, visual or audiovisual materials to support the teaching learning process. That makes the teaching learning process difficult sometimes, according to the DAs. But it is necessary to support farmers’ understanding in addition to its motivational value.

4.4 Perceptions of DAs and farmers regarding the training program

This topic is discussed under the following sub-headings:

- Farmers' learning ability as viewed by DAs;
- Importance of AE from farmers and DAs perspectives;

4.4.1 Farmers' learning ability as viewed by DAs;

DA 'B' said that, in the teaching learning-process, "farmers can be categorized into three parts: active learners who are also known as model farmers, cautious learners who are also known as follower farmers and reluctant learners (unwilling to adopt the new systems of farming)". In most cases active learners are farmers who are literate and relatively young. They follow attentively the training delivered by extension package workers. They exert maximum effort to change into practice the new methods of farming and the newly introduced agricultural inputs. Cautious learners are farmers who want to minimize risk. They want to make sure that the new method of production is profitable. In most cases they are followers of model farmers. They observe carefully the advantages and disadvantages of the innovative agricultural practice and show willingness after they are convinced that it is indeed profitable. In terms of age they are young illiterate farmers and middle aged adults. The third groups of farmers are farmers who are not willing to adopt the new method of farming. In most cases they are illiterate, resistant to change, most of the time they are elderly, they are from broken families (either husband or wife is deceased or divorce) and economically also they are poorer in the community. The findings can be fairly summarized as follows in the table below:

Active learners	Moderate learners	Reluctant learners
- Functionally literate	- functionally illiterate	- illiterate
- relatively young	- young and middle age adults	- middle age adults, elders, broken family
- risk takers	- minimize risk	- resistant to change
- relatively experienced	- less experienced	- traditional
- willing to learn new things	- willing to learn new things cautiously	- not willing to learn

Table 9:- *Farmers learning ability as viewed by DAs*

Slow learners are farmers with a number of limitations. To mention some of the major ones: a good number of farmers do have a problem in using fertilizers – they will not add the required amount of fertilizers into their farm; others lack confidence in our ability to assist them – they do not want to follow our advice strictly; still some others have difficulty in fully understanding the new techniques and changing it into practice.

(DA 'A', 2006)

DA 'B' said that “especially female farmers, in most cases they are widows, have got the problems of initiation and understanding” (DA 'B', 2006). This view is of course shared by the other respondents too. When I was conducting focus group discussion also I have noticed that illiterate farmers were passive in the program. Even when I encouraged them to reflect on the overall effectiveness of the package they hardly said anything based on their experience. They tended to repeat what others said rather than generating new ideas.

4.4.1.1 Comments on farmers learning ability as viewed by DAs

Some of the possible reasons for the above perceptions are that; those who can read and write with understanding have a better opportunity to understand the basic concepts of modernization, development and technology transfer. Literate farmers are more likely to think logically as compared with illiterate farmers. As great divide theorists says - literacy affects cognitive processes: i.e. literate people will develop the ability to think abstractly, logically, analytically, rationally, critically, and in Piagetian term, post operationally (Lyster, 1992: 22). One might argue whether or not literacy can help one to think critically if one look at it in a narrower sense as it is only the ability to read and write. But it is plain that if it is supported by sustainable reading habits it will help to achieve the desired result. Furthermore literate people are less superstitious than their illiterate partners. From my own experience I have seen that people who had educational opportunities also enjoy the indirect benefit like living with cosmopolitan society which helps them to minimize their superstitious thought. And thus they are willing to make

informed decisions. They can take notes and got the opportunity to revise what they have learned during the teaching learning process.

In most cases illiterate people on the other hand have limited experience. They tend to be doubtful and prefer to depend on their experience rather than to adopt the new techniques of production. They are deprived of the opportunity to revise what they have learned during the discussion period. This is partly because of the fact that they cannot take notes during the discussion period. They need lots of energy to understand the gist of the lesson.

As far as female farmers are concerned they engage in farming activity at a late age after their husbands are deceased. This is so because of the fact that farming activity is considered as men's duty; females will become farmers only when they become widows. Because of their literacy problem and because they are marginalized by the package program, they are less confident and are reluctant to participate in the package program as DAs have witnessed.

4.4.2 Importance of adult education from farmers' and DAs' perspective

Identification of the importance of adult education is founded on an understanding of what adult education is. The respondents seem to have different levels of understanding about adult education. Some of them tend to restrict the role of adult education to literacy activities; while others appear to have a broader understanding of it as the type of education designed to help adult learners at all levels and to improve the livelihood of the participants.

All three interviewees were asked the same question: whether they consider themselves as adult educators. Development agent A and C replied positively. DA 'C' (2006) said that "there is a lot of teaching and learning process in extension program which emphasizes enhancing the productivity of farmers. As DAs we work with farmers;

farmers are adults. Thus, it is plain to see that we are adult educators”. Development agent B replied to the same question negatively. He never considered himself as an adult educator. DA ‘B’ (2006) said that “my responsibility is to work with farmers for a better livelihood, which has nothing to do with adult education”. He views adult education as solely a literacy activity that deals only with literacy and numeracy. According to DA ‘B’ (2006) “adult educators should come out of the farmers who can carry out literacy activities. Literate farmers who have 8 or more years of schooling should be given the training to handle literacy activities”. His views about adult education were shared by the majority of focus group participants. They understand adult education as an activity which will help the illiterate part of the community to become literate.

Some of the farmers believe that it is too late for them to go to literacy classes; they prefer to work on their farm rather than to take time for literacy activities. A majority of the participants said that both literacy and taking care of one’s own business are good because one has to make sure that he/she can support his/her family’s living before worrying about literacy. They of course have considered literacy as of secondary importance and as having little impact on their productivity. This can be witnessed by their lack of interest to participate in the literacy classes from my own observation. The third party, who is not convinced that literacy and production have a correlation, says “we can’t see the relevance of adult education classes” (farmers’ focus group discussion, 2006).

In spite of the above differences, the participants (farmers’ focus group discussion, 2006) have identified the following points as the potential advantages of literacy:

- It helps farmers to be active participants in the training session;
- It helps farmers to improve the existing farming practices;
- It enables a person to sign rather than using finger print;
- It helps to facilitate communication.

4.4.2.1 Comments on the importance of adult basic education from DAs’ and farmers’ perspectives

As has been indicated above, the three DAs do not have the same understanding as far as what adult education is and who adult educators are. Of the three DAs, two of them know that they are adult educators for they are working with adults. The third one, however, did not acknowledge that he is adult educator even though he is engaged in the training of adults. He thought that adult education was restricted to literacy activities. This view and attitude is shared by a majority of farmers in the study actually. This is witnessed by their lack of willingness to participate in the program and from the reaction of some of the farmers during the focus group discussion session.

Though farmers seemingly have different levels of understanding about adult education, the majority of them practically are not enthusiastic about adult basic education. I say so from my own observation while conducting the research and my personal experience of the program. As discussed in chapter one, though 59.2% of the total population is illiterate, literacy is not considered important by adults. Literacy classes are dominated by out-of-school age children. I believe that farmers do not participate in literacy classes because of their narrow conception about adult basic education as it is good only to acquire the ability to read and write.

However, as discussed by different institutions and scholars, adult education is not just a literacy activity that contributes little to the development of the overall well being of individuals. Rather, adult education denotes the entire body of organised education processes that enrich knowledge of adults, improve their technical skills or turn adults in a new direction and bring about changes in their attitudes or behaviour and participation in balanced and independent social, economic and cultural development (McGivney and Murray, 1991: 8). Indeed adult education can help to enrich knowledge, skills and attitude of participants.

4.4.2.1.1 Adult education helps to enhance livelihood of farmers

It has been discussed that extension education is the type of education designed to enhance the livelihoods of farmers. As Bembridge (1991: 25) says, it assist farmers in adopting an attitude conducive to the acceptance of technological change. Through

effective and dynamic extension education programs, new knowledge can be transmitted and acquired by farmers. The primary role of extension is education, rather than a direct personal, regulatory or in any sense political service to farmers. The ultimate aim is to assist farmers in problem-solving, looking at alternatives and knowing sources at alternatives and knowing sources of information aimed at making individuals self-reliant.

It also focuses on dissemination of research results from research institutions to the farmers and the communication transfer of farmers' problems back to the research organizations (Bembridge 1991: 25).

In a way the program should help farmers to gain managerial skills to operate in a commercial economy through the provision of training and guidance in problem-solving and decision-making. In such an economy, the prices of inputs and products, as well as other factors of production, have to guide farmers in their decisions on farm operations rather than the physical quantities of production. For farmers who are largely farming in a subsistence economy, this is a major change and one which has to be made if agriculture in developing countries is to be made increasingly productive. Extension education is an important process as regards helping farmers to develop proficiency in this type of farm management (Bembridge, 1991: 25).

It is of paramount importance that these functions are educational. They are strongly linked with the very purposes of adult education (NEPI, 1993: 5):

- society can, and should, be improved;
- learning should continue throughout life;
- adults can learn and should be treated with dignity and respect;
- all adults can learn and should have access to the means of learning the things they need in order to function in society;
- adults have as much right to education as children (in particular those adults deprived of education as children); and

- adults should be educated in a different way from children, not because their cognitive processes are dissimilar, but because their education, life context, and background of experience is different.

And thus, extension package is one form of adult education that is designed to help subsistence farmers so that they enhance their productivity. But as it has been reported by respondents, the majority of them are not aware of this view. Ignorance of the fact that extension education is one form of adult education might have its own negative impact. The rural community might not be able to see the potential contribution of adult basic education which would help as one of the motivating factors to join literacy classes. Farmers feel helplessness because on one hand they are excluded from FTC for they are illiterate: on the other hand they are not motivated to attend literacy classes.

Among other things, education may help to improve productivity of the learners. Research undertaken on agricultural productivity in some countries by World Bank (in UNESCO, 2005: 2) has revealed that a short period of intensive education and training given to adult farmers has raised their farm output by over 24 per cent compared to their output before they have had the training. As has been discussed above, the type of training varied with their literacy ability. On the other hand, no attempt is made to show the possible link between extension education and adult basic education. In addition to this, there is no explicitly stated policy and national movement to promote literacy program in Ethiopia (Mercer, et al 1999: 10).

4.4.2.1.2 Adult education can help to enhance meaningful participation

Adult education can help to contribute to the development of truly participatory society so that participants will be able to discuss their problems (Walters, 1989: 85; Nyerere, 1988: 15). It can, therefore, help learners to play their own role in the society rather than become role players performing roles prescribed by others. As has been discussed, farmers are categorized into two groups - followers and leaders. Follower farmers do not have the opportunity to fully participate in the program from the beginning for most of them are illiterate. Indeed there is a huge gap between literate and illiterate farmers with

the introduction of the Agricultural Led Industrialization Policy in the country. Had there been any kind of promotion to show the relevance of adult education to bridge the gap, the rural community would benefit from it. I say so because their knowledge about what adult education is, is mired by lack of awareness about the program.

I say so because of the fact that adult education is viewed as of secondary importance. This is exhibited by rural community's lack of willingness to participate in the literacy program.

To wrap up, if illiterate farmers get educational opportunities they will benefit in many ways based on the condition that the lessons are problem centered and help to develop their system of thinking. Education does have its own contribution to avoid harmful traditional practices, instigate independent thinking, to ensure women's empowerment, to initiate greater self reliance, to improve ones own productivity and the like.

4.5 The actual and potential role of literacy in an agricultural extension program

This heading is discussed under the following sub-headings; the headings are:

- Impacts of illiteracy on farmers livelihood from both trainees and trainers perspectives;
- Correlation between literacy and productivity;

4.5.1 Impacts of illiteracy on farmers livelihood from both trainees and trainers perspectives

To have a better understanding of the impact of illiteracy on the livelihood of Ethiopian farmers, it is necessary to understand what the new system of farming can do for the farmers. The information in the table below makes a comparison of farmers' productivity in two different ways of farming on different kinds of crops from 1995 to 2001 based on the findings of Mohammad (2005: 17).

Year	Maize		Wheat		Sorghum		Teff		Barley	
	Imp.	Conv.	Imp.	Conv.	Imp.	Conv.	Imp.	Conv.	Imp.	Conv.
1995	3.7	1.0	2.9	0.9	2.7	0.8	1.3	1.0	-	0.8
1996	5.4	1.7	2.8	1.2	4.5	1.4	1.5	0.8	-	1.1
1997	3.7	1.7	3.5	1.3	1.9	1.0	1.7	0.9	1.7	1.1
1998	5.2	1.6	2.5	1.4	3.0	1.1	1.3	0.7	2.1	1.1
1999	5.8	1.8	3.0	1.2	1.9	1.1	1.4	0.8	2.7	1.5
2000	4.1	1.7	2.6	1.2	2.1	1.0	1.7	0.8	1.9	1.0
2001	3.7	1.1	2.4	1.1	2.1	0.8	1.3	0.6	1.7	0.9

Table 10. *Ethiopian crop yields, improved (imp.) compared with conventional (conv.) practices, 1995-2001 (t/ha) (source Mohammad, 2005: 17)*

As can be seen in the above table the productivity of the farmers increased significantly in the new system of farming. Maize production increased on average three times, wheat three times, sorghum three times, teff two times and barley two times. More production will result in better livelihoods.

To have the overall picture of beneficiary of the program it is necessary to look at table 11 (Mohammad, 2005: 17).

Year	Food crops	High economic value crops	Livestock	Post-harvest technology	Natural resources	Total
1995	32	-	-	-	-	32
1996	350	-	-	-	-	350
1997	584	23	22	0.1	9	638
1998	2,122	275	45	0.2	544	2,987
1999	2,804	390	67	1.0	546	3,808
2000	2,987	387	77	1.2	342	3,794
2001	2,616	441	89	1.7	-	-

Table 11:- *Number of farmers (000) participating in national extension programs, Ethiopia, 1995-2001 (source Mohammad, 2005: 17)*

As has been depicted in the above table, in 2001 2,616,000 farmers in food crops, 441,000 in high economic value and 89,000 in livestock were participants of the package

program all over the country. In total about 3,146,000 were participants of the package program in a country where more than 12,000,000 adults are engaged in farm and farm related activity (Mohammad, 2005: 13). Moreover, DAs to farmers' ratio is 1:800 (Mohammad, 2005: 13). This figure clearly shows that the majority of farmers are not the beneficiaries of the program.

Participants in the focus group discussion said that illiterate farmers are not allowed to participate in the special training. On top of that, they cannot have any kind of leadership role in either the Farmers Union or the Kebele for the same reason. This in turn prevents them from being active participants in any valuable decision either in the farmer's union or the Kebele.

In the same way, DAs confirmed that illiterate farmers cannot take part in the special training carried out at the FTC as discussed above. They cannot be considered for leader farmers' position because of their exclusion from the special training. DAs have also witnessed that illiterate farmers tend to be resistant to change no matter to what extent the point under discussion is relevant: they tend to refer to everything from their traditional practice perspective. Good numbers of them are poor and sometimes cannot afford to buy the necessary resources.

4.5.1.1 Comments on the impact of illiteracy on the livelihood of farmers based on the respondents replies

4.5.1.1.1 Resistance to change

Illiterate farmers seem resistant to change. As DAs discuss, for example; when the issue of gender, female circumcision, their religious practices and what have you are raised they tend to defend their practices without taking into consideration the worthiness of the issues under discussion. One of the crucial impacts of illiteracy is that illiterate farmers are resistant to new concepts and ideas that challenge their traditions and beliefs, and are superstitious. When DAs discussed different issues with them, they tended to resist what extension package workers were saying only from the point of view of their practices.

They didn't want either to question or to be questioned about their practice from its practical advantage. They prefer to stick to their practice only because they are used to it. They prefer to judge things from the point of views of their practices rather than based on its merit. Enlightened farmers, however, are not like this. The researcher believes that the difference comes because of education which helps to develop the habits of willingness to deal with concepts and ideas rationally.

4.5.1.1.2 Unwillingness to take risks

As development workers confirmed, there is a significant difference between literate and illiterate farmers in the reaction they had towards the training. Literate farmers are usually positive about the training: they are willing to change into practice what they have learned as compared with illiterate farmers. Illiterate farmers show interest only after they confirmed the effectiveness of the new ways of farming. It seems that literacy contributes to develop the habits of striving to try something new for betterment.

4.5.1.1.3 Exclusion of illiterate farmers

The information obtained from the respondents shows the other negative impact of illiteracy is that only literate farmers are eligible to take leadership positions in local administrative organs at different echelons both in farmers unions and Kebele. This is not without a reason. The leaders have to liaise between the government and the local community. In addition they have to document and report what is done and how they have done it to the concerned party. From this it is possible to infer that illiteracy does have an adverse impact on the participation of the farmers. After all, illiterate farmers are obliged to be passive recipients. They have to accept the decisions made by either the government and/or few literate farmers. While I conducted the focus group discussion I observed incidents which substantiate what my interviewees said. That is literate farmers were found to take control of the floor while illiterate farmers were afraid to express their ideas.

As discussed in the background section, about 59% of the total population is illiterate. That might help to show that literacy appears as the one of the main constraints towards

the move to decentralization. Regarding the efforts to deepen and strengthen decentralization and to shift the decision making process closer to the grass roots population, the literacy level of the farmers has a negative impact. It is evident by the fact that limited numbers of farmers are active participants in the production area, social life, and political life of the whole community. In most cases those who serve as agent farmers work as peace and reconciliation committee members and local administrators. Thus, one can see that the majority of the farmers are passive participants which is a paradox to the basic tenet of decentralization

4.5.1.1.4 Widening the gap between literate and illiterate farmers

As it has been seen from the above table, the productivity of the new system of farming system has increased significantly. That certainly paves the way to better livelihoods. Though, the government tries to curb the impact of illiteracy by encouraging team work; without question there is a gap between literate and illiterate farmers. Of course this gap is widening instead of narrowing.

In addition, the former ones appear as leaders while the latter ones appear as follower farmers. This is partly because of the fact that leader farmers get the opportunity to participate in the special training while the others do not. That does have its impact on their readiness to engage in the new system of farming. Those who participate in the new system of farming fully will benefit out of the program both economically and experientially.

Economically the farmers are divided into those who support their own living and those who cannot support their own living. This in turn pushes some of the farmers to lose their farm lands. According to the law of the country land is in communal ownership. It cannot be sold. Farmers can only rent their plots of land based on contractual agreement. Based on the information I got from DA 'D' (2004) and the experience I had, I came to know that some of them lose their only possession in the name of rent for insignificant amounts of money. Most of them are illiterate farmers who could not afford to buy seeds and

fertilizers. Even though it needs further research, I think this phenomenon might have its own problem in the long term for they will be jobless unskilled citizens.

4.5.2 Correlation between literacy and productivity

When the question of the correlation between literacy and productivity arose, both the interviewee and focus group discussion participants came up with different kinds of replies. Some of them replied positively; some others tried to identify different contributing factors in addition to literacy such as personal commitment, family backgrounds and the size of farm land, economy and other related factors, while others replied negatively. As has been seen they can be categorized into three parts. For the sake of convenience I coded focus group discussion participants as Group A, Group B and Group C based on their replies. Group A said that in general educated farmers do have a better understanding and have the opportunity to participate in the new system of farming. They usually have a better livelihood. Group B tried to identify other contributing factors mentioned above. Group C negated the contribution of literacy to production. They sighted some illiterate farmers as an example to support their arguments whose did well in their farming activity. While group A and group B tried justify the point raised by group C by identifying some possible contributing factors as mentioned above the group 'C' took the fact as general truth. They said "what matters is not whether we become literate or not; rather it is the matter of personal commitment to improve ones own ways of living".

Different points that can be seen indirectly come forwards into the table. Points like eligibility for participation in different kinds of activity like package program, decision making role in the wards and farmers union are some of the major themes that helped our discussion. All the groups have witnessed that literate farmers are the key participants in such kinds of economic and political activities. Indeed the participants came up with the consensus that literacy does have its own role to enhance productivity of farmers as other factors like personal commitment and availability of resources do have impacts.

4.5.2.1 Comments on correlation between literacy and productivity

Though some of the participants in the group discussion tried to insist on denying the advantage of literacy to improve the productivity of the rural community, citing some successful illiterate farmers within the community, the majority of the participants did not agree with the idea that literacy does not make a contribution to improving productivity. After all it has been seen that illiterate farmers are disadvantaged because of the fact that they are excluded from different political and economic affairs. In addition it is becoming evident that good numbers of them are not competent as discussed above. In addition some of the farmers have lost their farm land in the form of rent because of incompetence. This finding is supported by writers like Gillette (1983) in Lyster (1992: 13) who says that illiterates are not only unable to read and write but in most cases they are very poor, hungry, vulnerable to illness, and uncertain that even his/her present miserable circumstances will not decline to the point where life itself becomes the issue. Indeed the correlation between illiteracy, poverty and underdevelopment is clear.

“The fact that illiteracy correlates very highly with poverty does not mean that illiteracy causes poverty. Illiteracy is a feature of poverty, not its cause. People are illiterate because of poverty; they are not poor because they are illiterate (Lyster 1992: 16).” This is especially true in most developing countries. Poor families can neither send their children to school nor did they go themselves. This is because of the fact that either they cannot afford the school fees or they want to use their time and their children’s labor to satisfy their immediate needs rather than to prepare themselves and their kids for a better tomorrow.

The researcher believes that Group C’s response has something to do with the experience the country has gone through. As has been discussed briefly in chapter one, in Ethiopia a literacy campaign was conducted for more than decade. The program had purely a literacy focus without an attempt to tackle the existing problems among the community. That brought little impact on the livelihood of the community (Mercer, et al 1999: 11). Theorists in the area advise the need to link adult basic education and livelihood to make the literacy program effective. Nyerere (1988: 11) says that adult education must help to

enlarge human understanding, activate them, and help them to make their own decisions and to implement those decisions for themselves. Otherwise it will result in the total rejection of the program, as has been the case with some of my respondents.

As the majority (Group A and Group B) of the respondents say, farmers who are functionally literate tend to be better performers. As discussed above, literate farmers are willing to take risks, they are educable - they can understand the lesson very easily as compared to their illiterate partners and are less superstitious as discussed by DAs. As a result literates are better performers in their agricultural activity. A research study conducted by an organization working in a development program confirms that the effectiveness of training of adults is largely dependent of their educational background. To be more specific, the competency of adults in acquiring new knowledge is dependent of their literacy level. The International Labour Organization (ILO) reports that “functional literacy should be included ... to increase the impact of training in new skills and technologies (Sandhaas, 2005: 12)”.

Thus, literacy can help to uplift a family's ways of living in general, that is, the way they think, their perception about education, relationships they have and their productivity. This does not, however, mean that literacy will ensure better living. It is concerned with human capability for the use of decoding and reproducing written or printed materials. As Graff (1988) argues, writing and reading are mechanical techniques. Neither writing nor reading is a change agent in itself. Their impacts are determined by the manner in which human beings exploit them. This fits exactly with the view of group of respondents who tried to find some other related factors in addition to literacy that contribute to determine productivity of farmers.

What literacy can mean for both individual and society is betterment of people's lives: enhanced self esteem, ability to read instructions on medications and civic documents, ability to learn new things which will help them to expand their knowledge, ability to cope with the majority, etc. Adult basic education (literacy) provides people with the option of becoming members of a self-confident and informed populace that can

understand issues, represent themselves, take responsibility for self-improvement and family health, and better participate in civic affairs (UNESCO, 2000: 2).

Adult basic education is fundamental to all forms of personal learning and intellectual growth. In today's global society, a literate population is essential for the social and economic development of a nation. To improve the quality of life for its people, a country needs to maximize the potential of its human, social, and material resources (Greaney, 1996: 5). The human resources of Ethiopia are not developed as required. This can be seen from the real situation of the country. As discussed in chapter one, 80% of the population live in a rural community where the majority of them are engaged in farm and farm related activity. But the country is still striving to ensure the food security of its citizens. In line with this, Quinines (1999: 1) says that Sub-Saharan Africa has a larger share of its population in rural areas than any other world region, and most of its rural population is engaged in agriculture. But poverty, food insecurity, and degradation of the natural resource base continue unabated despite Sub-Saharan Africa's large farming population. Famines that cause catastrophic losses of human lives are not uncommon. This shows that the level of human resource development of farmers in the continent is inadequate. The researcher firmly believes that extension education is one of the key areas of intervention to develop the human resources of the country. To make the training more effective and more responsive it is wise to accompany it with literacy program for the majority of the farmers are illiterate.

4.6 Engagement of extension package in political affairs

To build a self reliant and democratic society, political consciousness of the larger community, among other factors, is indisputable. In a country like Ethiopia where about 80% of the community is rural, it is impossible to ignore the contribution of the rural community to bringing peace and harmony to the country. This is heavily dependent on their understanding of individual rights and obligations. DAs are one of the few stakeholders who are working with the farmers to uplift their livelihood.

Of the three DAs two of them (DA 'A' and 'B') indicated that they are not involved in any kind of political affairs. They are not involved in political affairs because they did not want to lose their credibility from both the farmers and the government side. DA 'B' (2006) said that "as the community is a group of individuals with different interests I prefer to respect their differences and not to talk about it." For them to take part in political affairs means either to go for or against the ruling party's ideology. Though the third one had a similar understanding about political intervention, she replied positively. DA 'C' revealed her involvement in political activity. She tried to agitate the target group regarding why they should support the ruling party by stating some of the benefits they acquired and some of the possible advantages they might lose otherwise. Thus it is possible to say that political engagement among the three DAs was not consistent.

4.6.1 Comment on DAs engagements in political affairs

Knowles (1950 in Smith, 2002: 6) asserts that adults should understand their society and should be skilful in directing social change. This is an ability that could be acquired by adult informal education.

In a democratic society, people participate in making decisions that affect the entire social order. It is imperative, therefore, that every factory worker, every salesman, every politician, every housewife, every farmer, and the like know enough about government, economics, international affairs and other aspects of the social order to be able to take part in them intelligently (Knowles, 1950 in Smith, 2002: 6).

As discussed above, DAs are one of the few stakeholders engaged in education of farmers. Bembridge (1991: 25) argues that the nature of agricultural extension is educational but it has characteristics that make it quite different from formal education - not compulsory, voluntary, more problem-oriented. It is education for action that should not be considered as an academic exercise but rather education for practical usage.

The issue of meaningful participation of people in decision making cannot be addressed by the primary objectives of DAs work which is to increase the productivity of the farmers. As the real situation of Ethiopia is discussed in the preceding and this chapter, there is a need to make the lessons more responsive to the rural community's need. In the Ethiopian situation a purely professional approach may not help successfully to bring development. Thus, it would be good if all stakeholders follow a holistic approach including DAs to bring development in the rural community.

“The need for change cannot be packaged and sold; it is reached, rather, by means of a totality of reflection and action” (Freire, 1972: 42). Meaningful participation begins with understanding of the real situation. Indeed farmers have the right to have better understandings about their country and the world to make a difference in their locality.

As it is discussed in one of the later sections, farmers' participation is based on their perceived merits. Their educational background appears to be central to take part in different activities among the community.

Furthermore, as DAs have replied it is possible to infer that their political involvement is vague and unsatisfactory. Political involvement has nothing to do with indoctrination. It is more than that: it is about helping individuals in the community to make informed decisions and be self reliant.

4.7 Summary of the Chapter

In this chapter the findings of the study were presented and discussed under the key headings regarding the extension package program from an adult education perspective. These are summarized as follows.

The program focused on enhancing the productivity of subsistence farmers. The duty and responsibilities of DAs are designed in line with the stated objectives. They work to ensure the better livelihood of subsistence farmers so that they farmers' households will be changed from weak to strong.

The program is found to be classified into two as special training and general training. Special training is the type of training that deals with the introduction of a new system of farming. The participants in the program are only functionally literate farmers. The general type of training, on the other hand, deals with providing some basic information to the farm community and includes some supervisory work.

The learning approach of farmers is found to range from active learners to reluctant learners. Accordingly, active learners are learners who can understand the lesson easily, are willing to take risks and are enthusiastic to learn new things. The second group comprises learners who do not want to take risks but want to adopt new things with proven merits. The third groups are farmers who are not ready to learn new things: they would rather prefer to stick their own practice.

The other interesting finding was that not all farmers are beneficiaries of the new participatory demonstration and training extension system. Their participation is inhibited by their illiteracy. To curb the situation government tried to promote the culture of working together in a cluster. But it would not be a lasting solution. This is because of the fact that there is significant difference between the productivity in the new system of farming and the conventional one. Those who are using the conventional farming system turn out to be losers.

Illiterate farmers are found to be excluded from participating not only in the extension program but also from other related activities. They are not eligible for leadership positions either in the Kebele or farmer's union. That is exactly opposite to the basic principle of decentralization for the majority of the people are not active participants in making decision.

The political participation of DAs was found to be not clear and not satisfactory. On the other hand, DAs are one of the few sources of information to the majority of the rural community.

CHAPTER FIVE: - SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The summary, conclusions and recommendation of this study are presented in this chapter based on the findings. The main findings of this study as presented in chapter four have been examined and discussed under the research questions this study set out to answer. Conclusions and recommendation were then drawn out of the discussions.

The research questions the study set out to answer are stated in chapter one. The conclusions based on the findings reported and discussed in chapter four under each of the research questions are presented below.

5.2 Summary

5.2.1 The learning approaches and practices evident in the program

5.2.1.1 Objectives

The extension package program focuses mainly on assisting subsistence farmers to improve their productivity through disseminating research-generated information and technologies. The purpose of the extension package training is to bring sustainable development to the country. The government of Ethiopia designed a specific package approach known as the ‘participatory demonstration and training extension system’ (PADETES) to bring development to the country. The drive of the program is to increase food production in the country through intensive cultivation, development of small scale irrigation, conservation of natural resources and environment, agricultural research and extension works as well as marketing and price policy. The new system of extension follows a package approach for the development of the agricultural sector. In this approach all essential components, such as information on agricultural technology,

provision of inputs and credit, and communication methods are provided to farmers as a complete set. The transfer of technology is done through demonstration on a realistic scale for the various agricultural development activities and adopted in a cluster approach to transfer the knowledge through diffusion from farmer to farmer by means of extension and organizing field days.

DAs help farmers to enrich their experience via introducing modern ways of farming. They persuade farmers to use modern technology, selected seeds, pesticide and crop rotation. In addition, to decrease their dependency on rainfall, they introduce and encourage the culture of using small-scale irrigation.

In fact they offer invaluable support to subsistence farmers for they are one of the few sources of information to the majority of the farmers. This is so because of the fact that they were the only government agents who were working closely with subsistence farmers until recently.

5.2.1.2 The Duties and Responsibilities of DAs

To enhance the productivity of farmers, DAs serve as the mediator between farmers, agricultural research institutions and agricultural experts at the higher levels. They act as leaders, co-workers, counselors and supervisors among farmers. They work as the co-workers while they are demonstrating practically what they taught them theoretically in the field. They serve as counselors for the farmers; they assist farmers in combating their problems whenever they face difficulties that might otherwise negatively affect their productivity. They visit to monitor how things are going on the farms and offer farmers timely feedback; they do supervisory work. On the other hand, DAs provide feedback about the suitability of different agricultural inputs to research institutions and agricultural experts at higher levels.

To encourage farmers to engage in farmers' extension, DAs organize farmers into groups so that they will get an opportunity to share experience and learn from one another.

DAs are engaged in different activities. To mention some of them:

- helping farmers to identify types of seeds that have a better price in the market which can be produced in their localities,
- helping farmers to get high milk and meat yielding cattle,
- raising awareness about conservation of natural resources,
- promoting utilization of selected seeds, fertilizers and pesticide,
- introduction and reinforcement of small scale irrigation

DAs were trained to serve in specified areas of agriculture such as animal husbandry, horticulture or forestation but all of them work as generalists. They intervene in all areas of farm and farm related activities. This is because of the fact that farmers are small land holders, they are engaged in all areas of farm and farm related activities to make living possible. That is the main reason why DAs have to work as general agricultural experts within the rural community.

Under normal circumstance one extension package worker is assigned to serve from 210 to 230 farmers/households. As far as the service is concerned it is of two types, special and general extension services. In the special extension package program, relatively small numbers of farmers take part. In this package program development agents are required to offer special training so that the participants will adopt the new ways of farming. In the general package program, all farmers in a particular area take part and development agents are required to give close supervision and assistance whenever the need arises.

5.2.1.3 Special training and general training

Special training is the type of training which deals mainly with the introduction of new technology and methods of farming. It is offered to relatively few farmers. The participants in the training are considered as model farmers who are required to impart the new system of farming to follower farmers. The training is offered at a farmer training center. The center is organized like school where a series of teaching-learning processes take place. Trainers offer training in line with their profession.

Development agents offer thorough training to the leader farmers and work with them in the field to prove the effectiveness of the new methods of farming and to make sure that all the inputs are added accordingly to achieve the desired results. While doing a kind of demonstration on the model farmers' farm they try to train follower farmers in collaboration with leader farmers.

General training deals with routine activities and is usually accompanied by close supervision and proper guidance. It consists of providing information concerning when to plough, sow and harvest based on the expert information about the current fiscal year and weather conditions. DAs visit the farm of each household that takes part in the package program to observe how farmers are doing and to discuss the problems with a view to finding possible solutions.

The introduction of two types of program helps to address a number of problems. It helps to combat the shortage of development agents. It is also helpful to bridge the problem of farmers' learning ability. Some of the farmers tend to be fast learners and are willing to change what they have learnt into practice, as compared to others. For that matter only functionally literate farmers are eligible to take part in special training.

My study indicated that leader farmers are risk takers. They can afford to buy the necessary inputs and are educable as compared to others because of their educational background. Illiterate farmers, on the other hand, are not willing to take risks, a good number of them cannot afford to buy the necessary inputs, it requires a lot of energy to make them understand it and they are heavily dependent on the development agents' assistance.

Among a number of factors that affect farmers' learning ability is their exposure to basic education. Usually literate farmers are fast learners and are willing to adopt the new methods of farming and farm related activities as compared to illiterate farmers. To solve the learning problem that is evident among the farmers', the classification of farmers as model and follower farmers appears reasonable.

However, it has its own problems in that it widens the gaps between farmers instead of narrowing it. This is because of the fact that the training is found to benefit model farmers more. Model farmers are usually progressive farmers within the community. One of the factors that affect the success of a program is the degree of participation of the stakeholders. Model farmers get the opportunity to participate in the training in deciding the objective, content, and the methods as compared to follower farmers. Follower farmers are considered as less knowledgeable and have to take the direction and advice from either DAs or model farmers. That might threaten the self reliance of the participants and shrink the success of the program.

5.2.1.4 Methodology employed in the special and general training

In accordance with the types of training, the methods employed to deliver the training to farmers were also found to be different. Special training is the type of training that is offered at the FTC. This training is organized in a similar fashion to that of non-formal adult education classes. Instructors use blackboards and teaching books. Model farmers get intensive training both theoretically and practically for about four months. Lecture, discussion and demonstration are the major methods of teaching-learning used at the FTC.

In general training, the training is delivered either under the shade of the trees or in a farmers hall and/or in the field. It is more participatory; farmers are the main actors in this type of training. Development agents are there to supervise, to assist and to provide some valuable feedback based on their observation. It is more practical. Demonstration and discussion among farmers themselves and with DAs are the key methodologies applied. Though the training is participatory the trainers didn't use any kind of teaching aids.

My study found that model farmers are required to assist and work together with follower farmers. Government in general and DAs in particular were taking advantage of the communal way of life of the rural community.

5.2.2 Farmers' learning ability as viewed by DAs;

My study, based on an admittedly small sample, suggested that farmers can be fairly categorized into three groups as far as their learning ability is concerned. There are active learners who are also known as leader farmers. The second category is follower farmers who are cautious learners. The third group is reluctant farmers who are not willing to adopt the new system of farming. Active learners follow attentively the training delivered by extension package workers. They exert maximum effort to change into practice the new methods of farming and the newly introduced agricultural inputs. Cautious learners on the other hand want to minimize risk. They want to make sure that the new method of production is profitable. In most cases they are followers of model farmers. They observe carefully the advantages and disadvantages of the innovative agricultural practice and show willingness after they are convinced that it is indeed profitable. In terms of age they are young illiterate farmers and middle age adults. The third groups of farmers are farmers are reluctant farmers who are not willing to adopt the new method of farming. They are illiterate, resistant to change, most of the time they are elderly and also economically they are poorer in the community. Some of them have difficulty in fully understanding the new techniques and changing it into practice.

5.2.3 Importance of adult education from the farmers' and DAs' perspectives

The identification of the importance of adult education is founded on an understanding of what adult education is. My study found that the respondents had different levels of understanding about adult education. Some of them tended to restrict the role of adult education to literacy activities; while others appeared to have a broader understanding of it, as the type of education which is designed to help adult learners at all levels to improve their livelihoods.

The extension package program is the type of education designed to enhance the livelihoods of farmers. The ultimate aim is to assist farmers in problem-solving, looking at alternatives and knowing sources of information. Thus, it is the type adult education that deals with the productivity of the farmers. However, not all DAs seem to have the same understanding as far as adult education is concerned and who adult educators are. Of the admittedly small sample of three DAs interviewed, two of them believed that they were adult educators for they were working with adults. The third one did not believe that he was an adult educator even though he was engaged in the training of adults. He thought that adult education was restricted to literacy activities.

This latter view and attitude was shared by the majority of farmers in the study. They viewed adult education as a literacy activity that has little impact on the efforts towards development. This is witnessed by their lack of willingness to participate in the program and from the reaction of some of the farmers during focus group discussion sessions.

5.2.4 Impacts of illiteracy on farmers livelihood from both trainees' and trainers' perspectives

My study suggested that the new extension package system makes a direct link between literacy and livelihood in that only literate farmers are found to be direct beneficiaries of the program. Mohammad (2005) shows that of about 12,000,000 farmers in Ethiopia only 2,146,000 farmers were participants in the new system of farming. As both the interviewees and focus group discussion participants indicated, only literate farmers are allowed to take part in the special training program. On top of that, they cannot have any kind of leadership role in either Farmers Unions or Kebele for the same reason. This in turn prevents them from being active participants in any valuable decision either in farmers' unions or Kebele.

In addition, my study suggested that illiterate farmers are relatively resistant to change as compared to literate farmers. They tend to view everything from their traditional practice

perspective. Good numbers of them are poor and sometimes cannot afford to buy the necessary agricultural inputs.

5.2.5 Correlation between literacy and productivity

Though it is not always possible to say that illiteracy causes poverty and not easy to see the direct correlation between illiteracy and poverty, the extension package in this study designed to bring sustainable development in the rural community uses literacy ability as one of the criteria to determine beneficiaries of the program. Having said so, even if the majority of the farmers are living with the problem of illiteracy, they are found to have different degrees of awareness about the impact of illiteracy on productivity. Some of them said that literacy helps them to be more productive while others could not see the link between literacy and productivity until different concrete examples came to the table; points like eligibility for participation into different kinds of activity like package program, decision making role in the Kebele and farmers union and the like.

5.2.6 Farmers' access to basic information

Rural communities in Ethiopia are mainly oral societies. To access the basic information about the world, their country and their region, they depend on the radio. The EFA Global Monitoring Report (2006) revealed that only 21 percent of Ethiopians use radio to get information. In Ethiopia there are two state owned radio stations to serve the people in the region. Time allotment of each broadcast in the target language is two hours per day, one hour in the morning and one hour in the evening. The target group of the media is the whole community (children, youth, adult, urban and rural): it is not particular to farmers. Farming and farm related activity are not primary concerns of the program. In fact the study revealed that Ethiopia is in a desperate situation and it is a country that is unable to make accessible the basic information to its citizens. The rural community in particular, where my research focused, is in a critical condition as far as access to information is concerned. Rural inhabitants hardly get basic information about their region, country and the world at large.

My study indicated that DAs are one of the few sources of information for the majority of the farmers. As both the interviewees and participants of focus group discussion witnessed their major sources of information for the farmers are DAs, local administrative organs and through association with district representatives and farmers' unions.

5.2.7 Engagement of extension package in political affairs

My study indicated that the political engagement of DAs is not clear and satisfactory. Of the three interview participants, two of them indicated their abstinence from any kinds of political intervention, whereas the third one did have some sort of participation in carrying out indoctrination of the farmers with the ruling party's ideology. In fact they, the participants, do not have clear understanding of what political intervention means and how it could possibly help to empower the rural community.

5.3 Conclusions

The nature of agricultural extension is educational but it has characteristics that make it quite different from formal education. It is not compulsory but essentially voluntary; it is more problem-oriented. It is education for action. The emphasis is on learning rather than on teaching. It involves working with farmers and their families who have different levels of education and living, different value systems and a wide range of interests. It is concerned mainly with improving not only the economic conditions of these farmers and homes but also the social and cultural lives of the people. The main actors in agricultural extension programs at the grass root are farmers and DAs. DAs are there to facilitate the learning process of farmers.

As has been discussed in the preceding chapters, farmers are small land holders and they are engaged in different kinds of farm- and farm-related activities. DAs have to have the ability and willingness to satisfy the need of the farmers. That means they have to have all round knowledge and skills. But my study found that they were trained in specified

areas of agriculture such as animal husbandry, horticulture or natural conservation. This shows that there is a gap between the needs of the farmers and the type of training. That is, farmers need agricultural extension workers who are knowledgeable and skillful in all areas of farm and farm related activities. But DAs are trained to serve in the specific areas of farm activities which might create a barrier of effective communication.

Both the special and general training are basically designed to serve the same purpose: to enhance the productivity of the farmers. The difference is that the former deals with the introduction of new system of farming, whereas the latter deals with diffusion of the introduced system of farming. The other difference concerns the participants. In the former type of training farmers are eligible only if they meet certain requirements. Some of the requirements were: their willingness to adopt the new system of farming; the willingness to share experiences; and their ability to read and write with understanding. Those who take the training are considered as a leader farmers. Those who cannot fulfill the requirements are not allowed to participate in the special training. They can only participate in the second type of training, which is known as general training, regardless of their willingness to take risks and to share experience. The participants in the second types of program are known as follower farmers.

Leader farmers are required to share experience with follower farmers so that follower farmers can adopt the new system of farming. DAs offer thorough training to the leader farmers and work with them in the field to prove the effectiveness of the new system of farming and to make sure that all the inputs are added accordingly to achieve the desired results.

In the general training the emphasis is on supervision and proper guidance. DAs visit each household's farm who takes part in the package program, observe how farmers are doing it and discuss the problems to find out the possible solutions.

The introduction of two types of program helps to come up with the number of solutions to problems. It helps to combat the shortage of development agents. It is also helpful to

bridge the problem of farmers' learning ability. But it has also its own limitation in that it is designed to meet the needs and interests of model farmers. This is so because the main concern of the government is to increase the productivity of the farmers. That paves the way for the neglect of the illiterate and poor farmers. I said so because the very purpose of the general training is to help the follower farmers to copy the leader farmers. That might not be according to their needs and interests. They want to be self reliant; they want to identify their own needs and interests; they want to set their own objective and the like. They are not given such an opportunity.

Indeed the approach by itself does have its own negative impact on the willingness and commitment of the farmers to adopt the new system of farming in that the training is biased in favor of the leader farmers. The other limitation of the program is that it widens the gap between farmers. This happens because of the following reasons. The first one is that follower farmers do not always have a commitment to adopt the new system of farming. The second possible reason is that no one can make sure to what extent the leader farmers are willing and available to help the follower farmers.

According to DAs observation, farmers are categorized into three parts as far as their learning ability is concerned. That is fast active, cautious and reluctant learners. It is natural that people do have different learning abilities. But it is of paramount importance to make sure that the approach does not impede the potential of some of the participants.

Though illiterate farmers are living under tough conditions, where their failure to read and write appears as a key challenge, they seem not to recognize the role of adult basic education for a better livelihood. This has something to do with their narrow understanding of what literacy can do. They did not understand the added advantage of the ability to read and write and other possible advantages that might be acquired with literacy: the opportunity to become self reliant; changes in attitude; enhanced potential to actively participate in any kind of development activity and empowerment.

It is worth noting that illiteracy does have its own impacts. My study indicates that illiterate farmers are resistant to new concepts and ideas that challenge their tradition and beliefs and are superstitious. They did not want either to question or to be questioned about their practice from its practical advantage perspective. They prefer to stick to their practice only because they are used to it. They prefer to judge things from the point of views of their practices rather than based on its merit. In most cases they are not risk takers. Illiterate farmers will show interest only after they have confirmed the effectiveness of the new ways of farming. The other negative impact of illiteracy is that, illiterate farmers are excluded from meaningful participation in any kind of development activity. They cannot participate in any kind of managerial position: be it in farmers' unions and/or kebele. They have to take the decisions made by either the government and/or a few literate farmers. Illiteracy appears as one of the factors that widens the gap between farmers. It is found that the new system of farming brought significant change in the productivity of the farmers (Mohammad 2005:17). But only literate farmers are allowed to take part. This implies that farmers (illiterate farmers) who use conventional methods of farming are losers as compared to the farmers who use the new system of farming.

The other factor that would have its own impact on the overall well-being of the society is the access to basic information. We are living in a world where parts of the world enjoy the benefit of information technology whereas others are denied access to basic information. Making informed decisions is by and large a function of having access to basic information Ethiopia is one of the countries that cannot afford to ensure access to basic information. DAs are one of the few sources of information to the rural community in Ethiopia and particularly in the research area. Rural farmers lack information about social, political and economic affairs that do have impact on their livelihood. Indeed, I believe that unless the effort of DAs is supported by securing access to basic information, it is hardly possible to achieve the desired results in this highly competitive world of ours.

The other important issue of concern that came out of the research is that in the rural community there is no well organized institution that helps to enrich the understanding of

the self and society. Ideally adults should understand their society and should be skilful in directing social change. This is by and large the function of political consciousness and full knowledge about their environment. DAs are one of the few agents who intervene in the livelihood of the rural community. But their intervention in empowering the rural community is not satisfactory as discussed by respondents.

5.4 Recommendations

From the findings of the study, I have made the following tentative recommendations, which could improve the agricultural extension program. Further research is required to test if these recommendations are applicable to the wider program.

1. It was noted that DAs are trained in particular type of profession. They are trained to serve subsistence farmers who are engaged in different farm and farm related activities. This implies that there is a gap between the training need of the DAs and the actual training. Thus, it is necessary to gear the training accordingly so that they can effectively work to the fulfilment of the desired result by offering the training that will help them to become professional general agricultural extensionists.
2. Even if the farmers' training is assumed to be designed to bring sustainable development to the country, it does not take into account the capability of the farmers. This is because of the fact that the majority of the farmers are not eligible for the special training for they are illiterate. Therefore, there is a need to diversify the type of training in accordance with the needs and interests of the farmers so that the majority of the farmers will benefit from it.
3. It was found that the respondents do not hold vivid ideas about the link between adult literacy and extension package even if they are living with the problem of illiteracy. It seems they have a feeling of helplessness. All concerned parties, therefore, have to play their parts to curb the situation so that the target group will be able to see the relation between literacy and better livelihood.
4. Not all DAs might know clearly the difference between indoctrination and political awareness. As some of them said, society is a group of individuals with

different views. And it is necessary to respect that. As the development agents' they have to be well rounded and be able to act accordingly; otherwise it might have its own negative impact on the rapport between farmers and themselves.

5. Overwhelmingly the majority of Ethiopians live as part of rural communities; their contribution to the peace and harmony of the country cannot be ignored. Their contribution is the function of knowledge about the world, their country and their locality. It means that they have to be informed and self reliant citizens. But, as it is reported in the preceding chapters they are deprived of the access to basic information. Thus, government need to work in the production and distribution of more newspapers and easy readers in regional languages for adults in rural areas.

5.5 Suggestions for Further Research

It is reported that some of the farmers lost their plots of land for very small amount of money in the name of rent. Most of them are illiterate farmers. There is a need to investigate if the type of training has something to do with situation.

References

- Alber, D. (2005). Human Capital in Developing Countries. Retrieved 04/05/05, from <http://66.218.71.225/search/cache?p=why+adult+education+developing+countriest%Bl>.
- Albrecht, H. (1990). *Rural Development Series: Agricultural Extension – Volume 2: Examples and Background Material*. Deutsche Gesellschaft für Technische Zusammenarbeit
- Axinn, G.H. (1997) *Challenges to agricultural extension in the twenty-first century in farmer-led extension*. Exeter: SRP.
- Baatjes, I. & Mathe, K. (2004). *Adult basic education and social changes in South Africa, 1994 to 2003*. In: Chisholm, L. (Ed) *Changing Class. Education and Social Change in Post-Apartheid South Africa*. Cape Town: HSRC.
- Befekadu D., and Berhanu N. (1999/2000). *Annual Report on the Ethiopian Economy*, Vol. 1, Addis Ababa.
- Bell, J. (1993). *Doing your Research Project: A guide for first-time researchers in education and social science*. Buckingham, Philadelphia: Open University Press.
- Bembridge, T.J. (1991). *The Practice of Agricultural Extension: A Training Manual*. Pretoria: Development Bank of South Africa.
- Brown, L. (undated). Collecting Data through Observation: Observational field research. Retrieved: 2 Mar, 2006, from <http://www.socialresearchmethods.net/tutorial/Brown/laurpatp.htm>.
- DA, A. (2006). Interview held on 16-5-2006: facilitated by KS. Guta. Awaro Ward

- DA, B. (2006). Interview held on 18-5-2006: facilitated by KS. Guta. Gosu Ward
- DA, C. (2006). Interview held on 20-6-2006: facilitated by KS. Guta. Oddo-liban ward
- DA, D. (2006) Unstructured Interview held in 2004: facilitated by KS. Guta. Bushoftu
- Literacy trust (undated). Definition of literacy. Retrieved 2 May, 2006, from
www.literacytrust.org.uk
- Dhanarajan, G. (2001). Combating Poverty through Adult Education. Retrieved 2 March 2006. www.col.org/colweb/site/pid/3671
- ETEC (2005) *Adult education and development*; symposium on literacy education and development, 10-13 Oct , 2005, Goethe-Institute, Gebrekristos Desta Centre, Addis Ababa
- Ethiopian Embassy. (1998). Ethiopian Agriculture; the base for overall development. Retrieved 19 Jun, 2006, from
<http://www.ethioembassy.org.uk/fact%20file/az/agriculture.htm>.
- Farmers' Focus Group. (2006). Farmers focus group discussion held on 28-5-2006. facilitated by KS. Guta: Awaro ward.
- Freire, P. (1972). *Pedagogy of the Oppressed*. Harmondsworth: Penguin.
- Gibbs, A. (1997) Social Research UPDATE. Retrieved 2 Jun, 2006, from
<http://www.soc.surrey.ac.uk/sru/SRU19.html>.
- Coillham, B. (2000). *Case Study research Methods*. London: Continuum.
- Graff, H. (1988). *Legacies of Literacy*. In Kintgen, E.R., Kroll, B.M. and Rose, M (Eds).

Perspectives on Literacy. Carbondale. Southern Illinois University Press.

Greaney, V. (Ed) (1996). *Promoting Reading in Developing Countries: Problems and Issues*. Newark, DE: International Reading Association.

Harris, T.L. & Hodges, R.E (Eds.) (1995). *The literacy dictionary. The vocabulary of reading and writing*. Newark, DE: International Reading Association.

Jarvis, P. (1995). *Adult and Continuing Education: Theory and practice*. London: Routledge.

Kurtis, A.(2003). *Population and Resource Base of Ethiopia*. Addis Ababa: Artistic Printing Enterprise.

Lepotho, H. (1995). Educating Women for Empowerment in Lesotho. *Convergence*. 28:3. pp5-13

Lyster, E. (1992). Current approach to first language methodology. In: Hutton, B. (Ed.) *Adult basic education in South Africa*. Cape Town: Oxford University Press.

Lyster, E. (1992). An overview of the debates. In: Hutton, B. (Ed.) *Adult basic education in South Africa*. Cape Town: Oxford University Press.

Malik, R.S. (2001). The Changing Agricultural Spectrum and the Needed Paradigm Shift and Modalities of Extension System and its Restructuring to Meet the Challenges of the 21st Century. SEMINAR SERIES No. 1. Seminar papers presented on 19-20 November 2001. Alemaya University.

McGivney, V and Murray, F. (1991). *Adult Education in Development: methods and approaches from changing*. Leicester: NIACE.

- Mercer, M, Shibeshi, A., Teferra, T., & Workineh, T. (1999). Studies of Education in Ethiopia: an inventory and overview of education sector in Ethiopia 1994-1997. Retrieved 25.4. 2005 from http://www.fao.org/Gender/static/CaseSt/Eti/eti_e.htm.
- Merera, G. (2003). *ETHIOPIA: Competing ethnic nationalism and the quest for democracy, 1960-2000..* Addis Ababa: Chamber Printing House
- MOFED. (2002). Ethiopia: Sustainable Development and Poverty Reduction Program. Retrieved 14 Aug, 2005, from <http://www.imf.org/External/NP/prsp/2002/eth/01/073102.pdf>.
- Mohammad, E. (2005). *Extension Experiences in Ethiopia*. Paper presented at the IPMS workshop on introduction to research and development for innovative extension system, May 23-25, 2005, EARD
- Mohammad, H. (2001). *The Need for Holistic Extension Approach: Theoretical Concept*. Seminar paper, 19-20 November 2001, Alamaya University, Alamaya.
- Mulenga, D.(2001). Mwalimu Julius Nyerere: a critical review of his contribution to adult education and postcolonialism. *International Journal of Lifelong Education* 20:6 pp446-470
- Negussie, F. and Yousuf, J. (2001). *Evaluation of the Current National Extension Strategies towards Sustainable Rural Development*. Seminar paper, 19-20 November 2001, Alamaya University, Alamaya.
- NEPI. (1993). *Adult Education*. Cape Town: Oxford University Press / NECC
- Nyerere, J. (1988). Adult Education and Development. *Adult Education and Development*,. 30 March, Pp53-64

- Oakley, P. and Garforth, C. (1985). *Guide to Extension Training*. Rome: FAO.
- OXFAM, (undated) Education Status of the poorest communities. Retrieved 28 July, 2005, from <http://www.oxfam.org>
- Percy, R. (1997). Lessons from Ethiopia. Retrieved 23 Jan, 2006, from <http://www.fao.org/Gender/Static/CaseSt/Eti/eti-e.htm>.
- Perraton, H., Jamison, D.T., Jenkins, J., Orivel, F., Wolf, L © (1983). *Basic Education and Agricultural Extension Costs, Effects and Alternatives*. Washington, D.C.: World Bank.
- Pickering, A. and Clement, S. (2001). *TayRen Research Methodology Collection: Focus Groups*. Retrieved 23 Jan, 2006, from www.dundee.ac.uk/generalpractice/tayren
- Ramirez, E. (undated). Reading, Information, and Information Culture. Retrieved 5 June, 2005, from www.nclis.gov/libinter/infolicton&meet/papers/remairezfullfullpapers.pdf.
- Rogers, A. (1992). *Adults Learning for Development*. London: Villiers House.
- Sandhaas, B. (2005). *Literacy and Development*; symposium on literacy education and development, Oct 10-13, 2005, Goethe-Institute, Gebrekristos Desta Centre, Addis Ababa.
- Seevers, B., Graham, D., Gamon, J., Conklin, N. © (1997). *Education Through Cooperative Extension*. New York: Delmar Publisher.
- Sen, G. (1997). Empowerment as an Approach to Poverty. *Working Paper Series* No.97.07

- Smith, K. (2002). Self-direction and andragogy. Informal Adult Education.
Retrieved 21 June, 2005 <http://www.infed.org/thinkers/et-knowl.htm>.
- Tafesse, B. (2003). *The Role of Agriculture Growth and Poverty Reduction in Ethiopia*.
Rome: FAO
- Walford, G. (2001). *Doing Qualitative Educational Research: A Personal Guide to the Research Process*. London and New York: Continuum.
- UNESCO. (2001). Facts About Illiteracy: International Literacy Day, September 7, 2001.
retrieved 15 April, 2005, from <http://www.sil.org/literacy/litFacts.htm>
- UNESCO. (2002). Functional literacy. UNESCO Institute for Statistics.
Retrieved 9 Dec, 2006, from <http://www.uis.unesco.org>.
- UNESCO. (2004). The role of civil society. Information kit on Education for All.
Retrieved 6 May, 2006, from
http://www.unesco.org/education/ef/ed_for_all/background_kit_civil.shtml.
- UNESCO (2005). Educating rural people: a low priority. Education Today newsletter.
Retrieved 26 Oct, 2006, from <http://portal.unesco.org/education/en/ev.php>.
- UNESCO (2006). *EFA Global Monitoring Report: Literacy for Life*. Paris: UNESCO.
- Walters, S. (1989). Education for Democratic Participation. Bellville,
UWC Printing Department
- Youngman, F. (2000). *The political economy of adult education and development*.
London: Niace and Zed Books.
Appendices

Appendix 1

Interview schedule for extension package workers

Name of the extension package work _____

1. Can you tell me briefly about your duties and responsibilities as extension package workers?
2. How are you contributing to the livelihood of the community?
3. How can you describe the farmers in relation to the teaching learning process? Are they willing to adopt the new skills and knowledge? What are some the factors that affect their willingness to adopt the new skill and knowledge?
4. What kind of teaching aids are you using?
5. Do you use the written materials in the teaching learning process?
6. If your answer is no for the above question, tell me some of the possible reasons.
7. Does the training (teaching learning) process takes place occasionally or at a constant time interval? What is the main focus of your discussion? Do you think that the training they are getting from you is sufficient? Do you mind elaborating, please?
8. Have you ever considered yourself as an adult educator?
9. What do you understand about adult education? Who is an adult educator?

10. From your daily interaction with farmers you know that the majority of the farmers are illiterate. Did it create any problem in the teaching learning process (in the training program)? If your answer is yes, tell me how?
11. Would a literacy program help the livelihood of the community? How?
12. Did you experience ethnic conflict among the farmers? If so, how are you trying to solve that when it happens?
13. How are you helping the farmers so that they will be self-reliant economically, socially and politically?
14. One of the objectives of the government is to deepen and strengthen decentralization to shift decision making process closer to the grass roots population. Did the literacy level of the farmers have any impacts on the farmers? Please explain.

Appendix 2

Focus Group Discussion schedule with the farmers

1. How do you describe the contribution of extension package workers to your productivity?
2. Did the training (extension package training) make any difference in your productivity?
3. Is there any way of getting information about the extension package other than from extension package workers?
4. What kind of techniques are they using most frequently to offer training?
5. Can you tell me from your experience the educational background of the relatively efficient farmers?
6. Those of you who are illiterate; do you think that your illiteracy has something to do with your production capacity?
7. Did your illiteracy bring any negative impact not to cope with the new training?
8. Do you have farmers Service Cooperatives in your district? Who are the administrators of your cooperatives? What is the criterion for selection? Do you think that this criterion for selection has something to do with their literacy level?
9. What do you understand by adult and non-formal education?

10. Do you think that adult and non-formal education is important activity that should be carried out? Why?

11. If at all you want to get some kinds of education; what do you want to learn at most?

Appendix 3

Observation check list

1. Training methods and techniques being used by the trainers
2. Trainer-trainees interaction
3. Learners (farmers) participation and involvement
4. Types of teaching aids being used in the training
5. Followers-leaders farmers interaction
6. Farmers sources of information

Appendix 4

Consent forms

UNIVESITY OF KWAZULU NATAL

Masters in Adult Education

Consent Form

I Mr/Mrs/Ms _____ hereby consent to be interviewed by Mr. K.S. Guta for purposes of his research towards a Masters of Education in Adult Education. I trust that the information that is received will be confidential and that the anonymity will be maintained.

Signed at: _____

Date: _____

Signature of participant: _____

Signature and address of researcher: _____

Tel. No. : 251-114-332603

Cell. No. : +27-078-1974812 ; 251-911-905891

e-mail ksoressa@yahoo.com

Postal address (in the case of students

and external applicants) :K.S. Guta

P.O.Box: 1234
Debre Ziet
Ethiopia

UNIVERSITY OF KWAZULU NATAL

Masters in Adult Education

Consent Form

I Mr/Mrs/Ms _____ hereby consent to be participant of focus group discussion facilitated by Mr. K.S. Guta for purposes of his research towards a Masters of Education in Adult Education. I trust that the information that is received will be confidential and that the anonymity will be maintained.

Signed at: _____

Date: _____

Signature of participant: _____

Signature and address of researcher: _____

Tel. No. : 251-114-332603
Cell. No. : +27-078-1974812 ; 251-911-905891
e-mail : ksoressa@yahoo.com
Postal address (in the case of students
and external applicants) :K.S. Guta

P.O.Box: 1234
Debre Ziet
Ethiopia

Date: March/2006

Ambo District Agricultural Bureau

Ambo

Subject: **Request for cooperation**

Dear Sir/Madam,

I K.S. Guta, student of University of Kwazulu Natal, working research intitled 'Investigating an Agricultural Extension Program from Adult Education Perspective in Ethiopia, Oromia: an exploratory study' as the partial fulfillment of masters of education in adult education.

To do so, I have to collect data from Oddo-Liban, Gosu and Awaro wards development agents and farmers via interview with development agents, focus group discussion with farmers and observation.

Can I get your permission and cooperation to do so please?

I appreciate your legal support in advance.

Thank you!

K.S. Guta