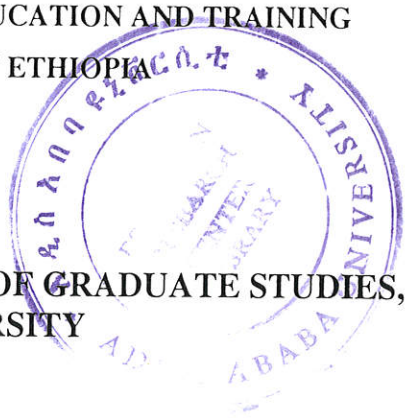
ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

A COMPARATIVE STUDY OF TRAINING FACILITIES OF NON-GOVERNMENT AND GOVERNMENT TECHNICAL VOCATIONAL EDUCATION AND TRAINING COLLEGES OF AGRICULTURE IN ETHIOPIA



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ACRONYMS

The following acronyms are used in the study:

AAU	Addis Ababa University
AAU	Alemaya University of Agriculture
ADLI	Agricultural Development-Led Industrialization
ANOVA	Analysis of Variance
ATTC	Agro Technical Training College
ESDP	Education Sector Development Program
ETP	Education and Training Policy
FAO	Food and Agriculture Organization
GDP	Gross Domestic product
IER	Institute of Educational Research
ILO	International Labour Organization
MFM	Menschen fur Menschen
MoA	Ministry of Agriculture
MoE	Ministry of Education
NGO	Non-governmental Organization
SDC	Skill Development Centers
SNNP	Southern Nations Nationalities People
TGE	Transitional Government of Ethiopia
TVET	Technical Vocational Education and Training
UNESCO	United Nations Educational Scientific and Cultural Organization

Abstract

This thesis was based on the findings of the research study entitled "Training Facilities of Non government and Government Technical Vocational Education and Training Colleges of Agriculture." The major purpose of the Study was to investigate as to how both types of training colleges possess and utilize training facilities for the proper functioning of the training programs.

Accordingly, an attempt was made to carefully examine the objectives that TVET colleges want to achieve, the extent of the adequacy of training facilities and effectiveness in utilizing the existing facilities and significant similarities and differences between the NGO and Government training colleges.

Since most of these studies were focused on the adequacy of training facilities of government colleges, the researcher preferred to undertake a comparative study of NGO and Government Agriculture TVET Colleges in Ethiopia. By doing so, points of the investigations regarding the adequacy and availability of training facilities are of helpful to determine lessons that can be drawn and shared from the findings.

This comparative method of study was used to identify the differences and similarities between two (2) NGO training colleges and four (4) government Agriculture TVET colleges. These sample training colleges were from Harari, Oromia and SNNP regional states on the basis of purposive sampling. The findings indicated that almost both types of colleges had similar major objectives to train the students in their respective colleges.

NGO training colleges had better training facilities in terms of quality and quantity in relation to the number of students enrolled in their colleges as compared to that of government Agriculture TVET colleges. However, among the other problems, in both types of colleges, there were no adequate farmlands to demonstrate practical teaching.

Besides, both types of colleges lacked relevant and adequate teaching materials as well as up-to-dated reference books in their respective libraries.

Therefore, it is recommended that Government Agriculture TVET Colleges either have to fulfill the required amount of training facilities that cope up with the number of trainees enrolled or admit only students that the colleges in general and the training facilities in particular can accommodate before launching the training programs as that of good lessons observed in NGO training colleges.

CHAPTER ONE

THE PROBLEM AND ITS APPROACH

This chapter deals with the background, statement of the problem, significance of the study, delimitation, limitation of the study, research design and methodology, definition of terms, and organization of the study.

1.1. Background to the Problem

The Government of Federal Democratic Republic of Ethiopia introduced the new Education and Training Policy (ETP) and Education Sector Strategy in 1994 that made technical and vocational education development as one of the priority areas in the education system. The policy and strategy stipulate the provision of middle level technical and vocational training in areas of different sectors to students that have completed the general education (Grade 10). The policy also emphasizes the need to expand technical and vocational training facilities, development of relevant curriculum, raising the standards of trainers, etc.

To this end, as indicated in the Education and Training Policy of 1994, objectives of Middle Level Technical Vocational Training Program will be to:

- develop self-reliance in solving personal and societal problems;
- develop a reasonable skills in the use of tools, machines, and equipment and their maintenance as well;
- enrich trainees' knowledge and practical skill through group work;
- develop positive attitudes for safety and manual works;
- develop awareness for optimum utilization of production inputs, and
- enable to work as an employee in any of the specific specialization (ETP, 1994:16).

Having these policy objectives as a framework, one of the strategies in realizing the new education and training policy in the area of TVET is developing relevant curriculum which suits training needs of diversified areas meeting economy's demand for middle level skilled workforce, preparation of training materials and their implementation. And in designing the curricula more emphasis was given to develop practical skills than theoretical knowledge so as to make trainee's confident, and productive citizens having the readiness for either self or wage employment.

Since about ninety percent of Ethiopia's population is engaged in farming, the country's economy is based on agriculture. It has been stated on many occasions that agriculture is the base of the life of our people and the back-bone of our economy. Accordingly, it is clear that a well-trained and qualified manpower is needed to have this branch of economy developed. This has always been the foremost concern of agricultural training institutions. That is why, nowadays the Government of Ethiopia has given due attention to the agricultural sector of the country.

According to MoA, 2000, it is due to this fact that the Government of Ethiopia has given more heed to the Agricultural colleges in the country, because the extension of scientific lessons to the farmers will undoubtedly strengthen their know-how, will benefit Ethiopian farmers with modern farm implements, and thus help them increase agricultural outputs.

Based on this fact, the rapid technological change and information explosion has brought about technical and vocational education and training to be a developmental issue in increasing skillful citizens and productive contributors to the economic progress of a country.

It is with this intent that the Ethiopian Government has recently diversified skill training areas and increased the number of training institutions mainly of agricultural sector for the purpose of producing junior and middle level manpower in the fields of agriculture the country requires (MOE, 2003:76).

No matter how far the objectives of any training program of TVET are attractive, its success will greatly depend upon the quality and quantity of the resource it has and its commitment. Furthermore, technical-vocational education and training requires not only planning, organizing and provision of services but also a very considerable amount of resource facilities which enable the training program to realize its intended goals and objectives. Regard this point (UNESCO, 2000) suggests:

> *How well a technical-vocational program accomplishes its aims, it depends in a large part on the availability of resources, the suitability of its building and the extent to which its materials and equipment are kept up to date.*

In order to improve the standard of living of people and to make Ethiopia at least self-sufficient in food, the country requires well-trained personnel especially in agricultural sector which has mainly remained as the backbone of country's economy.

To this effect, both government and non-government Agro-technical training colleges play a vital role in producing these required and timely important agricultural personnel for the country where about 85 percent of population lives in rural areas and the agricultural sector is subsistence in nature and uses traditional tools and equipment.

In spite of its considerable benefits, the provision of technical-vocational education and training is more expensive than the provision of general academic education. Moreover, (ILO, 1999:1; Yekunoamlack, 2000:3) state some problems that are associated with resources allocated for a particular vocational-technical education and training that there are many ways in which resources intended for training may fail to result in a program being established: the funds may be misspent, or may be spent on initial planning and administrative costs without hiring the instructors who are the heart of the program, or a program may start but fail to attract any students or trainees.

Thus, any vocational-technical education and training program must be well designed, equipped, furnished and organized in a way that it can attract trainees or students. This

idea notifies that, training in vocational-technical field is essential for economic development of any country. Because of this cognizant fact, countries invest some amount of their resources on training future technical experts of various levels (Habte, 1993).

Moreover, quality of training and the effectiveness of instruction given in the agro-technical training colleges are largely determined by efficient utilization of all training facilities and improved methods of teaching. Undoubtedly, this can help to develop the skill and knowledge of trainees and make the training program more lively and meaningful.

Nevertheless, effective and efficient training is not likely to be an easy task in most third world countries like Ethiopia. This is due to the fact that these developing countries do not have all the necessary materials, financial and manpower requirement sufficiently at their disposal and even they are not in a good position to utilize the existing resources more wisely and in a proper way.

Consequently, some of the findings and reports indicate that most of agro-technical training programs are not capable to attain their initial objectives and the expected contributions to the development of the country and fail to meet the demand of the changing labour market as well.

1.2. Statement of the Problem

In essence the Ethiopian development strategy is planned to resolve around productivity improvement of small holder agriculture and industrialization based on utilization of domestic raw materials with labour intensive. This strategy is known as Agriculture Development Led Industrialization (ADLI), framed into the Ethiopian context. By and large, the strategy of ADLI in Ethiopia focused primarily on agricultural development (MoA, 2000:73).

To realize the aforementioned strategy, training and research that address the local problems and promote development of adaptive and optimize technologies are essential prerequisite of any development endeavor. By doing so, periodical review and development of curriculum of training institution that accompanied by necessary and adequate facilities such as furniture, machinery/technology, books, laboratories, libraries, classrooms, etc. would play a vital role in attempts to promote active learning, critical thinking and development of efficient and relevant curriculum that would contribute to the improvement of the livelihood of the target community in various ways. This entails the need for trained manpower that will contribute to the development of agricultural sectors that operating in the country in general and to foster the social and economic development activities in particular.

The general strategy for development relies on appropriately trained individuals particularly at intermediate level. In view of this fact, agro-technical training colleges (at diploma level of 10+3 program) produce agricultural technicians who are to meet the above demand and who are capable of helping the village's farmer.

On this account, agro-technical colleges and many of agricultural research institutions are the pace setters in producing skilled agricultural personnel for the overall agricultural development.

The above objectives can be realized if and only if these agricultural institutions are equipped with necessary facilities that enable the training program to meet its intended goals and objectives. This is because that recently, by giving due attention to the agricultural sector, the country follows rural centered economy policy and it is obvious that some of 85% of the Ethiopian population is engaged in the agricultural sector. To this effect, the researcher believes that the extent to which Agro-technical training in government and non-government colleges can be adversely affected by the extent of training facilities that they have at their disposal.

Therefore, the prime objective of this study was to investigate the impact of availability and utilization of training facilities in agro-technical colleges of Government and NGO in Ethiopia, which the researcher believes was a problem worth studying. Education and Training Policy, ETP (1994) has also confirmed among other things, inadequate facilities contribute to the low quality of education and training provided.

Accordingly, to meet the objective of the study, the following basic questions were addressed as a guide for treating the problem.

1. What are the objectives that TVET colleges want to achieve?
2. Are there adequate training facilities and effective utilization of the existing ones in the colleges?
3. What are the significant similarities and differences between the government and non-government agro-technical vocational training colleges?
4. What measures have been taken to improve and strengthen training facilities in the colleges?

1.3. Significance of the Study

The extent to which agro-technical training colleges of government and NGO possess and utilize resource facilities in producing adequately trained agricultural personnel was the central idea of this research. Since most of these studies were focused on the adequacy of governments' training facilities, thus the researcher preferred to undertake a comparative study of NGO and Government Agriculture TVET colleges in Ethiopia. By doing so, the investigation regarding the adequacy and availability of training facilities of both types of colleges can be identified and thereby they may share some of their experiences.

Any training program whether small or big has a purpose to achieve its objective and to continue its existence. However, it requires adequate resource facilities. Based on this, this study will have the following contributions.

1. It will give some insights about the current status of agro-technical training colleges in terms of the availability and utilization of resource facilities to achieve their desired end results for those officials and thereby to determine lessons that can drawn and shared from the findings.
2. It may also serve as starting point for other researchers to deal with similar issues in depth by enriching the existing literature.
3. It helps to examine the efficiency of agro-technical vocational training programs in government and non-government training colleges and to scan the strengths and weaknesses of management in the provision of training programs as well.

1.4. Delimitation of the Study

There are twenty-eight government agriculture Technical Vocational and Training colleges in Ethiopia, i.e. at federal as well as at regional levels being used as the training centers to provide the required and trained agricultural personnel the country requires.

In order to have a complete picture of problems encountered in the availability and utilization of training resource facilities, which assist the provision of agricultural training programs, it should have included all those agricultural TVET colleges that found in the country. However, if it was not totally impossible, it would have been difficult to cover all these colleges because of some constraints the researcher could face.

Therefore, to make it more manageable, this study were delimited only to six government and NGO agricultural colleges that are found in three regions.

In Oromia National Regional State, there are six government agricultural TVET colleges. Out of these, 3(50%) i.e., Chiro, Holeta and Kombolcha were selected for this study. Whereas, SNNP Regional State has only three agricultural TVET colleges of which 1(33.33%) that is, Dilla was selected as a sample of this study.

In Ethiopia there are only two non government colleges i.e., Ethiopian Adventist College and Menschen Fur Menschen Agro Technical Training College that provide trained agricultural personnel for the country through providing of the agricultural courses for the trainees. Accordingly, one is found in the Harari National Regional State and the other is in Oromia National Regional State. Thus, the researcher realizes that they are the only two NGO colleges, i.e., both of the NGO colleges 2(100%) were taken as samples of the study.

It is obvious that agricultural training programs are being conducted both in short term and long-term bases. Since a long-term program is offered for three year training of diversified courses in these training colleges and thus, they were chosen to be studied.

Accordingly, the sample agricultural TVET colleges under the study were:

I. Government Colleges

1. Chiro Agricultural Technical Vocational Education and Training College
2. Dilla Agricultural Technical Vocational Education and Training College
3. Holota Agricultural Technical Vocational Education and Training College
4. Kombolcha Agricultural Technical Vocational Education and Training College

II. Non- government Colleges

1. Ethiopian Adventist College (Kuyera)
2. Menschen Fur Menschen Agro-Technical Training College

1.5. Limitation of the Study

Any research requires adequate time, finance and materials to undertake it effectively. However, the researcher pursued his post-graduate studies in the distance program, he has been constrained by lack of sufficient time. This shortage of sufficient time has remained a major drawback to the effectively conducting the process of investigation as detailed as it was originally planned.

1.6. Research Design and Methodology

The method used to conduct this research was comparative study. Comparative study was selected due to the nature of the research that it attempts to reveal the existing strengths and weakness in obtaining and utilizing training resource facilities in both government and non-government agro-technical and vocational training colleges and thereby it tried to make the necessary adjustment in line with the prevailing problem.

The following population and sampling techniques, variables, data collection tools and procedures as well as data analysis were applied during the course of the study.

1.6.1. Population and Sampling Techniques.

The Harari, the Oromia and SNNP Regional State were the three regions the researcher had chosen as sample areas of this study. These three regions of the study were selected based on the purposive sampling technique.

In Oromia, there are six government agricultural TVET colleges. Out of these, 3(50%) were selected for the study. Whereas, SNNP has only three agricultural TVET colleges, of which 1(33.33%) was selected as a sample of this study.

Until very recently, there are only two NGO colleges providing agricultural training programs in the country. One is found in Harari and the other is found in Oromia.

Consequently, because of their limited number, both of the colleges 2(100%) were taken as samples of the study.

In order to ascertain representation, out of the total 2940 students. 588(20%) and from among 292 teachers, 146(50%) of the existing total number of teacher respondents in the sample areas were included in the study. The other group of respondents consisted of officials who were in the higher position at federal level so as to provide the researcher with additionally the required information. However, the research employed purposive sampling technique for trainees and availability sampling were used for teachers since their number was relatively low in both types of colleges.

Table I. Colleges by Sponsorship, by Region and by Zone

No	Government			No	Non- Government		
	College	Region	Zone		College	Region	Zone
				1	Ethiopia Adventist College (Kuyara)	Oromia	East Shewa
1	Chiro Agriculture TVET College	Oromia	West Hararghe				
2	Dilla Agriculture TVET College	SNNP	Gedeo				
3	Holeta Agriculture TVET College	Oromia	West Shewa	2	Menschen Fur Menschen Agro-technical training college	Harari	Harar (Kebele 19)
4	Kombolcha Agriculture TVET College	Oromia	East Hararghe				

1.6.2 Data Collection Instruments and Procedures

The data for this study were obtained from both primary and secondary sources. In secondary date, relevant books and journals which indicate the practice of vocational-technical training were consulted to support the findings of the study. Furthermore, through reports and documents in country experience of government and NGO vocational technical training were reviewed.

As data collection tools, closed and open-end questionnaires were prepared in English language which latter were translated into Amharic language for the convenience of the student respondents to understand. Closed and open end questions were chosen for the main reason that they are tools proved effective for gathering a variety of opinions from large population within a short period of time.

The data gathering instruments were pilot tested in order to make essential corrections and maintain the validity of instruments before the final study was conducted. When distributing the questionnaire, the time convenient for the respondents were arranged so as to maximize the rate of return.

1.6.3 Analysis of Data

In analyzing the data, relevant methods of analysis were used to analyze the data gathered. Accordingly, respondents were categorized and frequencies were tallied. As a result, the basic statistical techniques that were used to analyze the study are shown hereunder.

1. Percentage and frequency counts were used to analyze various characteristics of the sample population. This statistical tool helps to determine the relative standing characteristics such as sex, age, academic qualification and work experience.

2. Chi-square was also computed in order to test whether or not the responses of the two groups for each option have significant differences.

3. One-way ANOVA was employed to determine the significant differences between and among the teachers and students based upon their views concerning the availability and adequacy of training facilities in their colleges.

1.7. Definition of Terms

In order to avoid ambiguity and to have clarity and consistency in the study, the following terms are given with operational definition as shown as follows;

1. **Facilities:** articles such as furniture, machinery and books that are used without being consumed (Good, 1973:215).
2. **Program:** a selection of one or more courses or a combination of courses, usually chosen form a syllabus with an expressed or implied aim (MOE, 2002:107).
3. **Technical Training:** training which involves the development of specific skills that are needed to perform a particular job or series of jobs (Harrison, 1962: 23).
4. **Vocational Training:** activities which aim to provide the knowledge, skills and attitudes required for effective and efficient performance within an occupation or group of occupations (ILO, 1986: 100).

1.8. Organization of the Study

This study comprises four chapters. The first chapter, the introductory part, includes background of the study, statement of the problem, significance, delimitation and limitation of study, research methodology and procedures as well as definition of key terms. The second chapter deals with the review of related literature. The third chapter is presentation and analysis of the findings. Finally summary, conclusions and recommendations are presented.

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

2.1. Development of Vocational Education

Vocational education in its informal form came into being when man began to live together and started to produce for his basic needs. The primitive people probably used the digging stick, stones, axes and fire to clear the vegetation for hunting and gathering their food supply. Knowledge continued to be passed from father to son verbally and was meager in quality. During this period, the process of learning was spontaneous imitations of skills Yekunoamlak (2002:222).

Abramson et al. (1979) have also added that as time passed people gradually learned to use fire to cook and melt metals to produce tools. Consequently, these necessitated division of labour which was non-existent in their earlier times. Some people worked as smiths, other carpenters or weavers. The new social development brought different craftsmen to form social groups and out of these social groups the guilds of middle age evolved.

Gradually, the development of power machinery and the increased demands for goods led to greater demand for mass production than apprenticeship. Hence, industrial revolution was the main reason for the decline of middle age apprenticeship and emergence of formal schools and modern apprenticeship (Abramson, et al, 1979:19).

As time gone, in our changing world, the demand for technical vocational education is becoming very high. Ronald (1996), points out that societies need technical vocational education for various reasons. Developed societies need this type of education to match their changing industrial, agricultural and commercial concerns. That is, they need

2.1.1. Agricultural Education and Training Policies in Africa

The mainspring of economic growth and transformation in most countries has linked with technological change in Agriculture. In Africa, where 77 percent of the population reside in rural areas, agriculture is a prime mover of the economy because most of the population earn their livelihood from it. The share of Gross Domestic Product (GDP) in the majority of African countries is between 30 and 60 percent (the World Bank, 1991). Thus, agricultural output is the single most important determining factor of overall economic growth. In the 1960s, agricultural production grew in volume by 2.3 percent per year or approximately at the same rate as population growth. In the 1970s, however, population growth fell to about 1.3 percent per year while population grew by about 2.7 percent. The greatest challenge to the African continent in the 1980s had been that of generating adequate food production to sustain the increasing population. Faster economic growth at time required accelerated development of human resources, and the building of institutions mainly agricultural institutions which would directly and indirectly deal with agriculture. Therefore, it will be of continuing importance to keep technological changes in agriculture relevant and appropriate if the mistakes of a false start are again to be avoided (FAO/ILO, 1983:59).

Again, a join publication of FAO, ILO, and UNESCO (1982), has given emphasis on the importance of education in changing the rural environment having been realized, the greatest strides have consequently been made in the development of human resources. Since 1960, total school enrollment has also grown faster in Africa than in any other developing region. For example, the student population increased from 36 to63 percent at the primary level, from 3 to 13 percent at secondary level and from virtually zero to 1 percent at university level.

Concerning Agricultural and educational policies, in the Kenya Development Plan 1979-83, which emphasized on rural development for the alleviation of poverty, certain projections have been made regarding the state of high- level agricultural manpower

Concerning Agricultural and educational policies, in the Kenya Development Plan 1979-83, which emphasized on rural development for the alleviation of poverty, certain projections have been made regarding the state of high- level agricultural manpower requirements. For instance, agriculture is one of the seriously affected professions with a deficit of 578 graduates. Accordingly, in the country, the need to train professional agriculture manpower has been justified on the basis that demand for such graduates would rise to 1,687 in 1983 and to 2,699 in 1988 (Republic of Kenya in UNESCO, 1993).

In the United Republic of Tanzania, as part of the country's commitment to the improvement of the welfare of the rural poor, a policy emphasizing "education for self-reliance" was declared in 1967. This policy expected agriculture to play a vital role in rural transformation.

In Botswana, the official government policy is to promote the teaching of agriculture through the school system. Consequently, there has been a major expansion at the secondary, intermediate and University levels. Teaching agriculture at the secondary and occasionally at the primary level has become accepted by educationalist.

In Botswana, Kenya, and the United of Tanzania, the objectives for adopting such policies provide sufficient rationale for teaching agricultural institution as a potentially valuable part of rural education whether the pupils will go into farming or not. According to World Bank (1991), some general objectives of the teaching of agriculture mainly at secondary-level are summarized as follows:

- improve the skills of students who plan to farm, and attract students into applied science as well as agriculturally related professions;
- counteract elitist tendencies inherent in educating young people who will have to return to a largely underdeveloped rural society, and reward initiative and responsibility within a school context;

- compensate for the absence of modern small-scale technology in the existing school syllabus and strengthen academic science teaching with applied emphasis;
- build up a minimum scientific vocabulary, establishing a framework for thinking about the rural world and creating an appreciation of development needs;
- encourage self-sufficiency in food production in expensive boarding institutions and spread benefits derived from the preparation of up-to-date teaching materials.

ILO (1993:30), has added on its part that teaching agriculture at primary-school level in most African countries is gaining an increasing acceptance. At this stage, the exposure of students to agriculture must be based on observation and simple field practice aimed at strengthening other subjects.

In East Africa, however, during the colonial era, agricultural education sometimes had a negative impact, partly because there was no agreement as to whether it was technical, scientific or professional subject. In addition to this negative impact, a status controversy also existed, following the colonial experience, since agricultural work was viewed as having a low status by the developing African elite. They went through the educational system with the expectation that this would lead them from agricultural labour to white-collar jobs. Rural fathers hoped that education would make their children join the colonial administrators in towns. These elites, who are also the ones responsible for public policies, have therefore not been committed to generating effective agricultural syllabuses. They have paid lip-services to the need for orienting educational system to agriculture but have not been practically involved in allowing their own children to join direct agricultural employment (UNESCO: 2000).

Middle-level agricultural manpower is extremely important in Africa. Although it is difficult to define this category, it is generally accepted that entrants should be those

agricultural technicians can only be judged by its occupational functions. This trained agricultural technician usually provides a link between the decision makers and the field operators. In the past, the great majority were primary-school leavers. Consequently, a number of them find it difficult to cope with the transmission of modern technology in agriculture.

However, Mcnamara (1983:6), has strongly declared that the key importance of agriculture in sub Saharan Africa must not be underestimated. It is quit a labor-intensive sector in which most of these countries can enjoy a comparative advantage, particularly relative to industry. Thus, a vigorous growth in agricultural production and exports is an absolutely essential condition for the creation of significant employment and earning opportunities for the rural poor.

2.1.2. Historical Background of Vocational Education in Ethiopia

The modern system of education especially technical and vocational education in our country did not come into being without passing through various challenges and obstacles. Prior to the 20th century, the education system of the country was predominantly religious and was intended to serve the manpower need of the church and the state. Available sources indicate that there was no significant sign of vocational training at that time (Yekunoamlak, 2002:226).

Modern education was introduced during the reign of Menlik II with establishment of Menelik II schools in 1908. According to Girma, et al (1990:10), during the time of Emperor Haileselassie I, school were fairly expanded and there were totally about 30 academic schools in the country from 1925 to 1953. The first vocational school of Addis Ababa was established by MoE in 1941. As stated by MoE (1973:30), the MoE changed the name of the school to "technical school" and the language of instruction became Amharic and English.

changed the name of the school to "technical school" and the language of instruction became Amharic and English.

It was in 1941 that the need for trained manpower felt strongly when many Italian technicians left the country. As a result, in order to compensate the loss, technical and vocational education program began to be emerged parallel to the formal system of education in the early 1950s.

Since the early 1960, many African countries including Ethiopia were convinced that human resource development is a prerequisite for economic development. In the endeavour to implement this movement, Ethiopia modeled the formal schooling on the experience of developed countries hoping that it will contribute to greater economic growth. It was with this aim that vocational training was incorporated in the secondary-school system of Ethiopia (Wanna, 1996:297-298).

In view of this, for example, the previous technical and vocational training schools such as Addis Ababa Technical and Vocational School and Commercial school were further strengthened and others new technical and vocational schools such as Ambo Agricultural school and Jimma Agricultural school were established. Nevertheless, due to little emphasis given to technical and vocational education than academic education, no more progress was observed.

Consequently, with the objective of making the curriculum job-oriented so as to produce middle-level manpower, the concept of comprehensive program was introduced in the secondary-schools of Ethiopia in 1961. The first general secondary school to be converted to comprehensive secondary school was Woizero Sihen School in Dessie. Gradually, more schools were converted to comprehensive secondary schools. The field of studies offered in these comprehensive secondary schools were: Home Economics, Productive Technology, Agriculture and Business (Girma, et al, 1990).

By giving due attention to technical and vocational education, the curriculum of secondary education had been changed to comprehensive type of curriculum. In this type of curriculum may students graduated in various fields of technical and vocational upto 1974. However, many of the graduates were found unemployed, the technical skill of these graduates in this type of curriculum was a failure, employers were not interested in hiring the products of such a system due to inadequacy of the training system in comprehensive schools, the few graduates who employed were found to be incapable of performing their tasks (Habte, 1993).

Reinforcing the aforementioned idea Yekunoamlak (in IER, 2002), has restated that After 1984, the comprehensive secondary school curriculum started to decline because the program was inefficient. According to Wanna (1992:58), some reports related to these comprehensive high schools indicated that the programs commenced without proper study and as a result there was lack of human and material resources mainly shortage of qualified teachers and limited budget as well as facilities such as water, latrines, pedagogical center and likes. As a result of such drawbacks, it produced too many graduates and yet they were unemployed. So, by improving some existing comprehensive school and establishing additional technical schools, the new vocational and technical (10+3) program was introduced.

Very recently, the modular training program is introduced to the system of TVET. This approach consists of 24 training areas (occupations) in about 126 government training centers all over country. In addition, there are about 10 NGO and private TVET centers. The modular training commenced on November, 2001 (IER, 2002:227).

2.1.3. Importance of Agricultural Education

Education in general and Agricultural education in particular is the basis of development and plays a major role in any country. It is obvious that at different levels education is given in various fields. One of the fields of great concern is agriculture. Agriculture was the basis of development for most industrialized countries of the

world. Likewise, agriculture is the motive force of economy in developing Africa, Asian and Latin American countries. To increase agriculture production, however, science and technology are indispensable. As education is the source of science and technology, many developing countries have come to realize the importance of conducting agricultural education at various levels (AUA, 1990:145).

To begin with, most of the developing countries have had inadequate agricultural production for even their own domestic needs. They have been afflicted with simple shortage-not enough food and with the more complex difficulties of poor nutrition arising from poorly distributed production and nutrition - reducing heath conditions. It is evident that in most of the developing countries, agriculture is the largest sector of the economy and on size alone, the best prospect for generating short-run surplus. As ILO (1986) puts it:

> *When agriculture productivity is enhanced by the creation of larger farms (or by improved techniques on existing farms), part of the ensuring crop must be saved. In other words, the peasant who remains on the soil cannot enjoy his enhanced productivity by raising his standard of living and eating up all his larger crop. Instead, the gain in output per cultivator must be siphoned off the farm (PP. 19-20).*

It is quite apparent that the population of the developing world has increased to the extent that the present scale of food production is inadequate to cope with the present demand. To increase food production for the growing population in agriculture sector to acquaint this large sector of population with necessary knowledge and skills, many agricultural colleges were established by developing countries (ILO, 1999). In most cases, the bulk of the population actively engaged in agricultural production in the country is also both old and illiterate. To this effect, agricultural education and training for farmers has become necessary in view of the new techniques being introduced into agriculture for the purpose of increasing food production.

Similarly, as Ethiopia is a part and parcel of developing country, the role of agriculture is highly significant because the country's economy is predominantly based on agriculture. Cognizant of this very fact, the Federal Republic Government of Ethiopia has given due attention to improve this sector of the economy. This could be achieved, among other things, through training capable and competent manpower in the field of agriculture. The upgrading and newly establishment of agricultural technical vocational and training colleges made in various regions by Ethiopian government ought to be seen vis-à-vis this objective.

Therefore, the current policy of the Ethiopian Government to boost food production for the country is a strong indication that much attention is being paid to the agricultural sector. According to the document of MOA (2000), this policy put much emphasis on the transformation of agriculture so as to enable the nation to be self-sufficient in feeding itself and have food reserve for certain periods of time. For a successful realization of this policy, the requirement to train middle-level and professional manpower for agriculture as well as to identify and adapt technologies appropriate to specific needs of the agricultural sector becomes a matter of paramount importance. It is partly in the context of this policy, the need for reviewing and strengthening the existing curriculum became essential.

In this regard, agricultural technical vocational education and training programmes play an important role by providing skilled labour to the rural community that can either be employed in different institutions or create his or her own-job. Emphasizing on this point, UNESCO (2000:75), strongly states the importance of TVET as follows:

> *The aim of TVET is to produce the work qualifications skills demanded in a given social and economic context and to contribute towards the implementation of national policy with regard to employment promotion, poverty reduction, private sector promotion, increased productivity and enhanced competition in both local and global market.*

training is primarily dealt with the efficient learning and training of a large number of job-related skills.

2.2. Objectives of the Training Programs of Institutions

Institutions are essential to sustainable and beneficial economic growth. They create new knowledge, skills, policies thereby mobilize and manage the resources and deliver the services which stimulate and sustain development. Growth and prosperity are unlikely to be maintained if the institutions which guide them are dysfunctional (Ronald, 1996:55).

The underlying assumption of the institution is that progressive and productive farmers are not necessarily born but can be trained in the ways of innovative and risk-taking. It is obvious that in the population of a rural area there are individuals who have characteristics that quality and incline them to become effective agents of change in sphere of agriculture.

In connection to this, FAO/ILO (1982:27), explains that the primary objectives of agricultural colleges are, therefore, to remove some of the handicaps that mark today's village economy and to induce rural youth to regard farming as a good and profitable way of life when properly practiced. Besides, the institutions endeavor to stimulate a positive attitude to development and conservation.

Many scholars have agreed that by pursuing the aims already mentioned, the training institution helps to achieve a reduction in the drift from rural areas; to develop a more positive attitude to farming; to develop self-reliance, resource fullness, problem solving abilities and responsibilities; to encourage a more methodical and scientific approach to farming; to foster the acquisition of practical and management skills; and to awaken an awareness of environmental considerations among the trainees (ILO/FAO, 1983). The above objectives are also achieved through a program of instruction that include the

abilities and responsibilities; to encourage a more methodical and scientific approach to farming; to foster the acquisition of practical and management skills; and to awaken an awareness of environmental considerations among the trainees (ILO/FAO, 1983). The above objectives are also achieved through a program of instruction that include the essential theoretical aspects of farming, together with a strong emphasis on practical field training.

2.2.1. General Objectives of Technical Vocational Training Program

Technical and vocational education and training can be used to resolve the problem of unemployment. Some writers, in favor of such idea, have tended to argue that the provision of such training and education not only enable trainees to acquire skills in specific occupation that lead to employment in the economic sectors but also enable them to prepare themselves for "self-employment" (ILO, 1999:59).

Supporting the above ILO's statement, Ronald (1996), on his part asserts that training should be based on learning by doing. The aim is not to produce highly qualified professionals but to create people who are able to work effectively with local communities. From this one may realize that when we come to the agricultural training, the man who farms as his fathers did cannot produce much food no matter how hard he works or how rich is his soil. Undoubtedly, the farmer who has access to and knows how to use what science knows about soil, plants, animals and machines, can produce an abundance of food though the land be poor. The knowledge that makes this transformation possible is also a form of capital whenever it is an integral part of the material inputs that farmers use and whenever it is a part of their skills and what they know.

It is true that the present farmers have a wealth of knowledge associated with traditional agriculture, but unfortunately as suggested by ILO/FAO (1982:26), a new "form of capital" is needed to provide for the future. Thus, increased emphasis on

vocational training of agriculture in developing countries is becoming necessary for the following reasons:

- The farming is entirely dependent or rain as a source of irrigation. If that fails, there is an acute shortage of food for home consumption.
- The village crafts are giving way to cheaper consumer goods produced by industries overseas.
- In rural areas, there is no trade worth mentioning and there is hardly any cash economy. The money, as soon as it is earned by the farmers, flows back to the cities.
- Agriculture, being traditional and subsistence in nature, has not been able to attract rural youth to take up farming as a profession

Thus, training objectives are the guidelines of training program. In this regard, training is vital for the development of national importance in all countries, and is recognized as a great concern among educationalists, industrialists and government (Butler, 1998:114). As education and training are prerequisites for manpower development and economic growth, developing countries must train citizens to use their vast human resources for their development in their institutions they have had at their disposal. Effective training opens wide opportunity to use their human resource efficiently and effectively in the world of work.

Cognizant this fact, the Ethiopian Education and Training Policy (ETP), launched in 1994, states that in every level of education there will be a vocational training program parallel to formal education. According to this policy, Technical and Vocational Education and Training (TVET) is structured as Basic, Junior, and Middle-level Training programs in different fields of training. The purpose of training as it is indicated above is to satisfy the need for trained manpower that performing practical works in the economy. Trained citizens can alleviate personal and societal problems by

taking parts in manipulating hand tools and machineries using raw materials from the localities for local consumptions.

As stated by MoE (2001), the technical and vocational straining program has its particular character in that it is expected to produce trainees who are capable to satisfy the growing demand of the Ethiopian economy for trained middle-level manpower tailored in particular trade. In other words, the program for TVET promotes education and training to meet the demand of the world of work.

Furthermore, (ILO, 1996), also suggests that the primary function of vocational agricultural education and training is to assist people to become more proficient in farming. The training program in agricultural sector provides opportunities for persons who wish to acquire the necessary information and skills in operating and managing a farm and in helping those who are already established to improve their efficiency in farming operations.

In view of the above fact, the ultimate and primary purpose of agricultural training is to prepare present and prospective farmers for proficiency in farming and farm living and to provide them with basic preparation for related occupations. The principal objective of general agriculture is to fit those who are not now and do not intend to be farmers for their responsibilities which have a relationship to agriculture and to give all people a better understanding of the place of agriculture in the society.

By doing so, boys and girls who have the opportunity to work with the materials and processes of the farm will have a better understanding and appreciation of the farm and will probably able to make more intelligent decisions regarding policies affecting agriculture. In light of this, UNESCO (1996), lists other abilities which might be developed through agricultural training:

1. To choose for or against agriculture and country life;
2. To utilize agricultural products wisely as consumers;

3. To enjoy recreational opportunities available in agriculture pursuits such as gardening, landscaping and livestock raising;
4. To associate with farm people and share their interests;
5. To enjoy the country side and use its facilities; and
6. To find and use the information and assistance needed in whatever agricultural activities they may engage.

Thus, the basic objective of technical vocational education and training is to apply qualified manpower at various levels ranging from lower to middle skill levels. In this regard, a system that permits proper organization and coordinated as well as deployment of qualified manpower need to be carefully designed and implemented. In supporting this thought, ILO (1999), expresses that the development of any country is largely determined by its ability to train and utilize those trained citizens effectively and efficiently. One of the principal fears in technical vocational education and training is to make sure whether that skills learned in a training setting will transfer to a real working setting as well as maintained after the trainee has graduated.

2.2.2. Determination of the Training Needs

It is a difficult task to decide on training needs in rural areas. Overall needs are immense and the resources available are always limited. It is, therefore, a question of determining priorities. In the same token, training needs and available resources necessitate the establishment of priorities. However, the training offered should aim at a rapid economic result and the rural beneficiaries must perceive the fact that this training effort offers economic possibilities "with in their reach" (FAO/ILO, 1983:78). The trainees must be able to put into practice the training they have received after, or even during, the training period, whether this be on their land, in the workshop or craft center or within their own dwelling.

In developing world, training at all level is accepted as part of the rural development. Such training is also necessary for understanding of technical subjects related not only

to agriculture but also to the needs of rural people. The training pattern and periods vary, but are directly related to the level of trainee. Being this is the case, before launching any program, the training needs should be identified and determined in line with the present policies the country pursues.

As a matter of fact, a training institute is fundamentally established to achieve a certain purpose. This can be possible, however, if an organization's, its employees' and the community's needs are clearly determined. Hence, determining the community's, the organization's or individual's needs is the first step in developing training programs. To this effect, pretty (1995:112), reinforcing this fact as follows:

> *Before any training begins, the most important step for you is to find a way of understanding the training needs of the relevant institution and individuals, and the constraints present in the particular institutional setting. Although it might be a tempting option, and certainly it involves less work, a pre-designed training program is rarely going to fit the specific needs of a new institution or group of trainees for various reasons. And the best way to adopt and finely tune a program is to find out as much as you can about institutional context before hand.*

Most of the literatures indicate that the main purpose of determining training needs is to see the gap between the desired level of performance and the actual level of performance of an individual or an organization in the community in particular and regions and nations in general.

In other words, the determination of training needs entirely aims at defining the gap between what is happening and what should happen in the target area or population. And this idea can similarly be stated as "... in defining training needs, we have to start by identifying two levels of performance: the standard (desired, optimal and future) and the current (existing, real) performance level" (Plokopenko, 1998:81).

Generally speaking, assessing the gap between the desired and the actual level of performance of an individual or an organization is the first and the most step to be

carried out to meet the particular objectives of a training program of an institution. Thus, to keep abreast of current conditions mainly the changing of technologies, the training needs should continuously be assessed to make necessary changes in the training programs of the respective institution. Above all, it is also worth considering identifying the local community needs where the training is most targeted at.

Furthermore, as have been forwarded by World Bank (2002) and ILO (1996), the importance of labour market information, during training program of planning for technical and vocational training, the program should be better oriented to labour market forces and the information on labour market which may be obtained through need assessment can improve both pre-employment training and on-the-job training. In connection with this UNESCO, (1996), has the following to say:

> *Constant investigations, inquires, studies, and occupational surveys are needed to determine current needs in vocational training. The structure of the world of work undergoes constant change. Occupational truth of yesterday may not hold true for today. It would be most unfortunate to train persons for jobs that will not exist and in skills they cannot use to advantage (P. 103)*

Besides, information about the duration as well as the different types of training provided, conditions for access to the various types of training, characteristics of each type of training in relation to the prospects of employment or promotion, the nature of financial or other assistance, and examination as well as qualification of such training should be continuously collected and available to all interested persons and agencies. It is because that the primary purpose of technical and vocational training is to promote education and training to meet the demands of the world of work.

As repeatedly stated, it is not enough to bring the training to the rural people, however, it is important that the training methods used by training institutions should be appropriate to the level of the trainees. Rural people may perceive the progress of an operation more easily if they see the process with their own eyes in its real context rather than by reading a written description (FAO/ILO, 1983:78-79). A demonstration

correctly conducted, is by far the best method of teaching rural people how to perform a task correctly.

2.2.3. Planning of Training Programs

Training programs are the result of careful planning. The process usually starts with expression of a felt need for some form of training program from a number of possible sources. In developing world, training at all levels is accepted as part of rural development. This type of training is necessary for an understanding of technical subjects related not only to agriculture but also to the needs of rural people for whom the ultimate benefit of the training program is designed. Whenever planning is conducted, the training pattern and periods of the program may vary, however, it should be directly related to the level and needs of the trainees. Thus, the training program has to be designed in such a manner that trainees are exposed to various aspects of practical training along with theoretical aspects before they are absorbed into Ministry of Agriculture and different organizations. And there are also some trainees those are expected to become self-employed while others are absorbed in rural development work (FAO/ILO, 1982:63).

According to Drar (in Gurage, 1970:49), planning can be defined as "the process of preparing a set of decisions for action in the future that directed at achieving goals by optimal means." Thus, from such definition, one can clearly understand that planning is a means of controlling or minimizing problems that could probably appear in the future. It is goal oriented, means oriented and condition oriented.

So, planning for manpower training also requires looking into the future in order that the training organization can meet its needs. In a time of declining resources and increasing inflation for various reasons, planning with respect to this, can really have a significant impact to achieve the objective of a training program. Many contemporary writers such as Schermerhird (1989); Stoner (1995); and Sims (1993 more or less have similarly stated that the primary objective of any training program is to help trainees

It is evident that some approaches or methods of training are appropriate for certain specific types of training programs while some others are applicable to other types. Thus, different approaches of training can be used during a training program. At any circumstances, which one approach or method of training to be used for a particular program is largely determined by a variety of factors which may not be worth mentioning enumerating each of them hereunder. Most writers, however, have asserted that the design of training programs varies between on-the-job and off-the-job training approaches or methods.

Strengthening the aforementioned point, Chandan (1999); Webb and Norton (1999), have stated as "... the type of a training approach or method can be affected by factors such as skills called for in jobs to be filled, the available training resources, the kind of operating problems confronted by the organization, the size of the training group and the trainers' strengths in performing their tasks." In the training system, the major aim of planning is to direct the available resources of the training system towards the intended results. Here one thing that should be consider is, the use of proper planning encourages accountability on the part of personnel.

Planning in agricultural training programs would also help to increase skills in performing specific job. Good planning for training can increase the general knowledge and understanding of the respective environment in which the training institution is operating. It will return considerable values to the organization in terms of increased productivity, motivate the participants and make the training cost to be more effective (Flippo, 1998).

Accordingly, planners of agricultural training program should have to consider the values, attitudes, and motivation of both the trainees and trainers along with meeting the demand of the required amount of agricultural technicians and mechanics in the local areas as well as in the regions. If it is desired, through vocational training, to create an impact with a rapid effect on the rural environment, it is much easier and

local areas as well as in the regions. If it is desired, through vocational training, to create an impact with a rapid effect on the rural environment, it is much easier and advantageous to plan localized training action focusing on specific objective, establishing very clearly identified tasks, which the future trainees should be capable of accomplishing on completion of their training (FAO ILO, 1983:78). In this way, the context of the training program will be much easier to establish than if the aim is to cover the whole of their professional activity.

Planning for the training program proceeds on several levels: estimating costs, selecting participants, designing the program timing, location of a venue, and involving the rural people who would be the beneficiaries of the training program. All this can have a significant impact for the success of the training program if it involves systematic approaches of planning. At the early stage of planning, the planner is seen as the major link between other planners, decision-makers, field workers, trainees and the rural people. The major concern is that a high level of involvement of all parties be established so that interest is maintained throughout the program. The very thing that should not be forgotten during the planning of the training program is that the ultimate benefits should go to the rural people at any possible means (FAO/ILO, 1982:60).

On this ground, during the training session, the trainee is expected to develop a sound appreciation of the cultural background of the rural area, a command of communication skills, and a commitment to rural work and people. The relevance of the training programs which originated from felt needs, largely rests on the realization that work of all development agents should be regarded as a single process of educating the community for change (FAO, 1982:64). The variations in levels of training and forms of specialty should directly be related to differing rural needs and existing natural resources. Thus, the content of the planning for training has focused on much more definit objectives and the real training needs of the course participants. During the planning time, it should be understood that the facilities and equipment of the training center have to be adapted and made more relevant to working and living conditions in

the rural environment. The more likely approach would seem to be the setting up of simple institutional organizations, which are able to reach the rural people where they work and live and meet the training needs of the rural works (FAO/ILO, 1983:77). Regarding this, a consensus has been reached that most vocational training must be brought to the rural people as close as possible to their working and living environment since the overall goals of the training program is likely to help them to be more productive citizens.

2.2.4.Methods of Training Programs

The primary objective of any training program is to help trainees learn. To achieve such objective, it is necessary for the training centers to adopt the right method.

According to Chandan, I (1999) different methods of training can be used during a training programme. However, which one approach method of training to be used for a particular program is determined by a variety of factors such as by the types of skills called for in jobs to be filled, the availability of training resource facilities, the size of the training group and the trainer's preferences as well as by the kinds of operating problems confronted by the organization and the likes.

Most of the writers such as Schermorhird (1989); Stonr (1995); Sims, (1993), etc have stated that there are a variety of training methods which training institutions can use that very between on-the- job and off-the-job training methods.

On-the-job Training Approach or Method. This method is the most widely used method and it simply means of putting the worker on the job under close supervision of a trained instructor. In support, there may be a variety of training aids and techniques such as lecture manuals, procedure charts, sample problems, demonstrations and so on. This training continues until the superior is satisfied that the employee adequately perform the job without supervision.

Off-the Job-Training Method or Approach

Such training takes place outside the actual work place but attempts to stimulate actual working conditions. Also known as "vestibule training", such a method does not disrupt the normal operations and also, it avoids "on-the-job" pressures that might interfere with the learning process which can both reduce the time needed for training and provide more help for individual training (Chandan, 1999:283-284).

2.2.5. Evaluating Training Programs

Evaluating training program helps to ensure the extent to which things are going on in light of the objectives of the organization is essential to an effective training. Like any other organizational activities, training takes a lot of time, energy, and money. Knowing the worth and effectiveness of the investment in the training program is, hence very essential (Mbamba, 1993). All the efforts made to get information on the result and identifying the value of the training program can be considered as a training evaluation.

To this effect, Hamblin (in Sims, 1993:136), has defined evaluation of the training program as "... an attempt to obtain information or necessary feedback on the effects of a training program, and to access the value of the training in light of that information." Hence, evaluation can be conducted either at the end of the training program or at every stage of the training process.

Thus, evaluation is not only meant examining the results of a training to determine the extent to which its objectives have been achieved but it is also the examination of the means and the whole training efforts. Nevertheless, evaluation is not a one time activity called out by superior or by any concerned person else in a training establishment. To this extent, it is a continuous process that should be undertaken by the involvement of all people who participate in the training program.

Emphasizing on this idea, Heneman (1996:444), has indicated the time of evaluating a training program with the purpose of evaluating the nature of the course which is a part of program evaluation and the involvement of trainees in the process as follows:

> *Participants reaction is usually assessed during or immediately following the training program either through interview or questionnaires. As a good example the course evaluation completed by college students at any universities at the end of each semester would be worth mentioning.*

Although training evaluators frequently use the participants response and other means such as observations to collect necessary information and thereby to make judgments, the main aim of evaluation of a training program is explained by the author Noe as follows:

> *Examining the outcome of a training program helps to evaluate its effectiveness. These outcomes should be related to the program objectives, which enable trainees to understand the purpose of the program (1996:365)*

In general, for a study of a training program of an institute, having a look at the different aspects of the program is indispensable. This includes the training needs, the objectives of the program, the overall plan, the methods or approaches in the training process, the relevance of the program, the trainees, trainers, the financial and material resource management as well as the evaluation process of the training program of the respective training institute.

Thus, evaluation has a common practice in most training programs in various training institutions. The most common type is the self-evaluation system. However, trainees and other participants are asked to give their views about the programs and to suggest ways of improvement (FAO/ILO, 1982:63). Yet, evaluation exercises are of no use if recommendations are not brought down to the grass-root level mainly to the rural farmers. Moreover, regarding monitoring and evaluation of TVET MOE (2002:39) in its ESDP II document has the following points to say:

- Monitor the implementation of the TVET programs in the newly established Skill Development Centers (SDC), with a view to ensuring strong links with employers and the labour market.
- Assist regions in developing evaluation instruments for TVET programs such as tracer studies, to gauge the appropriateness and adequacy of the training programs. Evaluate in collaboration with regions, employers and training institutions syllabi and textbooks of the TVET schools on regular basis and ensure that these evaluation results are fed-back into the curriculum development process.

2.3. Building Institutions and Partnerships

Effective development requires partnerships among different levels of government, the private sectors, donor groups, and civil society. A comprehensive strategy is simply too demanding for any one level or area of government or for a single donor. National governments need to provide the guidance those agencies and organizations require to coordinate their efforts to remove bottlenecks to development (World Bank, 2000:56).

Recently, as a development agenda, the world requires new institutional responses that are needed in a globalization world. Globalization necessitates national governments to seek agreements with partners i.e. with other national governments, international organizations, non government organizations and multinational corporations through supernational institutions.

Similarly, progress on educational and training requires strong productive partnerships. The job of strengthening education and training is too big for any single institution, and not important to be left to one perspective only. Governments, NGOs and local stakeholders, with the support of bilateral and multilateral development agencies will have to work closely together in a prolonged effort to ensure each country's objectives

for education are to be met, and to build public and educator understanding of the need for educational change.

Highlighting this, ILO (1999), emphasizes on the above that partnerships among central government, local government and communities within a more decentralized form of management can improve service delivery and in that poor communities and rural non-government providers can be effective partners in upgrading the quality of education and training. It is apparent that local partners in particular they have the local knowledge and the understanding of the local values, culture and traditions that are essential features of sustainable development. As stated by Pretty (1995), agencies which actively use local knowledge make participation a goal and monitor and reward it are more likely to succeed.

On this account, most writers agree that many others have also important roles to play alongside the various levels of government. These other players also include students, parents, families, communities, local and non-governmental organizations and foundations, teacher groups, various forms of private and public private ventures and numerous international organizations to promote education and training. The more this rich array of partners can work together effectively, the better the results will be and the faster education and training will improve.

Furthermore, designing of modalities to strengthen the NGO-public partnership in the provision of TVET, and establishment of closer collaboration between the work place and the training institutions are important tasks (MoE, 2002:16).

2.3.1. The Role of NGOs in Promoting Access to Education and Training

Many Non-government Organizations (NGOs) have been actively participating in the education sector producing resources for a range of activities such as training, seminars and project work. As a matter of fact, NGOs are organizations that are formed by people who have a common goal and cooperation on voluntary basis to achieve their

common interests. Non-government organizations can also be identified by their institutional location. They usually located at local, regional, national and international levels (Kassahun, 1997). They can be either profit making or non-profit making organizations in terms of their provision of education as well as training. NGOs vary in the scope and type of activities they are involved. They mainly involved in activities that pertaining to agriculture, education, health and so forth.

The role NGOs play in improving access in education sector has a long history. Since 1960s, a number of Non-government Organizations have tended to focus on developing in identifying alternative approaches, or promoting non-formal education (Archer, 1994:233). It is believed by many scholars that social problems including unemployment are global phenomenon facing many developing countries which these governments alone can not alleviate such problems. The need for having Government Organization - Non-government Organization partnership basically stems from the fact that education, like all other sectors of the development, is a collective endeavor that demands the full participation of its various stakeholders. This is particularly true in a poor and developing country like Ethiopia where the problem of access to education is chronic and the scarcity of resources is especially acute. This problem is further accentuated by the country's high population growth rate per annum and the dispersed settlement of the rural population that accounts for over 85% of the total population (MoE, 2002:9).

In light of the above-mentioned facts, if any developing country wants to attain its educational goals effectively, government alone cannot handle educational requirements for its citizens. So, there is a need to mobilize the resources and individual efforts of NGOs, private investors, and the community at large towards the goal of attaining educational and training needs of the country.

According to MoE (2002:13), it is imperative to mobilize the contribution of non - government organizations, private proprietors and the community at large in promoting

access to education and training particularly in rural areas of developing countries like ours, Ethiopia. Yet, the existing partnership between Government Organizations (GOs) and Non-government Organizations (NGOs) was found to be inefficient to cope with the expansion and the needs of education and training.

Whereas, countries which realize the significant role that NGOs play in bridging the gap between the demand and supply of education, have been encouraging the establishment of non-government education and training institutions. They also have been inviting the potential private sectors and NGOs to participate in educational and other social service sectors. History and many of the written documents have clearly indicated some experiences of such efforts were made to bring the involvement of NGOs in the education sector was observed about seventy years ago in our country, Ethiopia.

In order to ensure that NGOs and the private sectors are working according to their objectives, and that their activities are in line within the policies, rules as well as regulations some monitoring systems have to be established. Such monitoring system may be effectively implemented by mutual agreement and cooperation of the private sectors, the government, and the community. The cooperation of these parts, NGOs, the government, and at large the community is also considered as the basis for the determination of training needs and the achievement of the objectives of an institution (Solomon, 2000:8).

It is clearly seen that even good programs of training are impossible without joint planning by citizens and educators, it should be rather obvious that the kind of training needed is the one which will provide the opportunity for such planning. In most cases, vocational training centers run by NGOs aspire to offer need-based and job-oriented vocational training programs with minimum wastage (Yekunoamlak, 2000). Besides, the curriculum in these training centers consist of 30 percent theory and 70 percent practice.

2.3.2. Training Facilities of Institutions

The type of training program to be offered determines the facilities needed though the training institutions differ in what they have to work with. Thus, the facilities for agricultural courses should meet the needs of several training programs. The enrollment of students in courses of agricultural education in various institutions is one of the important factors in determining the kind and number of training facilities to provide.

The development of effective training programs of technical and vocational education in agricultural institution requires a great deal of attention to facilities needed for viable and lovely programs. It is known that trainees activity in technical and vocational training institutions involving work with materials is a dominant characteristic in this area. Besides, many reference materials also have to be made to the use of agricultural institution resources in furthering such training program. Hence, it should be recognized that no programs can be successful if the training facilities are limited to what may be available outside the training institution. Facilities may either limit or help to develop a training program, depending upon their adequacy (Reilly, 1996:96).

Departments of technical and vocational education and training require more in the way of floor and equipment than any other. However, such technical and vocational training institutions are among the more expensive department to equip. Furthermore, each department is unique in its needs. For instance, a shop ideally organized for industrial arts would not meet all the requirements for teaching farm mechanic aspects of agriculture (World Bank, 2002).

It is, therefore, highly important to understand the principals upon which sound planning of facilities for vocational education and training should be based. Here, we deal, first of all, with some of the basic principles that must be considered in planning facilities in the training institution and that apply to most or all departments of technical and vocational training and education. This principle also holds true that the

first principle is that planning of facilities must be preceded by careful study of needs by setting of objectives and outlining of the programs for the field of technical and vocational education and training under the consideration (UNESCO, 1996).

Moreover, the size and arrangement of facilities should be adjusted such as to provide for use by various departments that offer training programs in the respective training institution that will use the shops, laboratories, classrooms, libraries and the likes when they are not used by others. It is also very important, especially in the field of technical and vocational education, if the size and number of training classes for specific occupational preparation are to keep pace with expansion and contraction of occupational opportunities.

However, Teshome (1998:32), has identified the extent of the existence of facilities as "... in well developed countries where adequate infrastructures exist the availability of physical resources is not as such a serious problem, while developing countries where these facilities are scarcely available or do not exist, special consideration is needed when a choice is made to use these facilities.

Thus, availability of modern training facilities with adequate financial resources in any training institution are the major important factors for providing quality training for students as well as for providing skilled-manpower the labour market requires currently.

It may seem trite to say that vocational training institutions should use their own resources. However, facilities often overlooked by training institutions may be of great value. Therefore, it should be recognized that the training institutions have to use resources such as training facilities which trainers and trainees can make use of in connection with their own training programs.

Generally speaking, where various departments of vocational education are providing training for specific occupations, it is important to have facilities and equipment that

are up-to-date with the latest method in business, farm, industry and the home. Obsolete facilities make for obsolete training. Obviously, is impossible for training institutions to provide all the facilities for teaching all phases of all occupations. But some training institutions have made great strides in developing teaching aids for teaching purpose (UNESCO, 1996).

Regarding the utilization of available facilities, ILO (1999:39), states that if training institutions are to utilize more fully the training facilities already existing in the local communities, their programs of vocational education and training should be much more significant than they are.

By definition, training institution is one which, among other things, makes use of training facilities in improving training programs. There are no areas of the training program where this is more essential than in vocational and technical education and training (ILO, 1999). The resources inherent generally in the economy of as community and particularly in the training institution are the very lifeblood of technical and vocational education and training.

If the training institutions are to make the fullest possible educational use of training resources, we should have programs of vocational education and training commensurate with the needs of local community and the economic scale of the given country (World Bank, 2002).

2.4. Financing the Training Institutions

Training institutions are dependent upon economic resources for their existence. It is true that no institute could continue to provide various training programs without having financial aid from elsewhere. To put this idea more clearly, the funding of professional education and training at the stage of development in developing countries should involve that the government has to provide the necessary training funds that can in turn fulfill infrastructures and teaching resources in the training institutions. In this

regard, a strong and stable economy is needed in the country, if the country wants to have the kind of training institutions required by its society (World Bank, 2002).

However, in most developing countries including Ethiopia, the problem seem still remain the same that of inadequate funding of these training institutions, inadequate, facilities, supplies, equipment as well as shortage of well-qualified teachers for delivery of TVET programs in accordance with their objectives. Most training institutions are plagued by problems of financing and the provision of adequate programs of these training institutions is not an unbearable burden. And it is advisable for such institutions that they should start with all what hey have at their disposal.

In view of this inadequate funding MoE (2002:15), has further added that the quality of training remained poor which has resulted in difficulty in obtaining appropriate and adequate equipment as well as facilities; sufficient number of qualified instructors; flexible and up-to-date occupational standards; adequate functional relationship between training centers and the real world of work; stakeholders' participation in curriculum design and implementation and sufficient management system as well.

Recognizing the importance of developing sufficient supply of skilled and productive manpower for the economic development, the Ethiopian government education and training policy and the education sector strategy assign high priority for the development of Technical and Vocational Education and Training (TVET) programs in the country. The policy and the strategy stipulate the provision of technical and vocational training in different areas to students who have completed the primary and secondary level of education. It also emphasizes on the need for expanding the vocational and technical training facilities through the provision of necessary funds, development of relevant curriculum, improving the standards of trainers and the complementary role of the private sector (MoE, 2002:16).

Realizing the essence of this sector, recently the Ethiopian government has undertaken an extensive effort at restructuring the technical and vocational education and training

program. As a result of the restructuring and expansion efforts that are underway in TVET starting 2001/2002, considerable expansion and diversification of the TVET system have been taken place. Yet, according to the MoE annual report of 2003, still several major issues pertaining to strengthening and the organization and maintenance of quality of TVET need to be addressed in the future for 10+1, 10+2, 10+3 programs. The restructuring largely envisages the expansion of the intake through addition of new courses, institutions and rehabilitation of existing ones, increasing the entry opportunities into TVET program as well.

This may be difficult as long as the governments remain to continue the largest funders and providers of education in most countries. Nevertheless, the role of government in creating and sustaining the kind of macro-economic environment that provides incentives for education helps education systems fulfill their potential is so crucial. MoE (2002), in its Education Sector Development Program (ESDP), has confirmed that government generally regulates the education sector that provides different training programs at various levels by defining curricula, setting standards, monitoring performance, accrediting institutions and in addition to being direct providers of education, they often also subsidize education provided by private institutions.

Public spending on education can be a strong investment for equity-expanding opportunity and raising living standards for all, but especially for the poorest. Overall spending on education and training in developing countries has been found to be progressive in that the benefits received by the poorest groups are greater to their incomes than those received by richer groups (World Bank, 2000).

2.4.1. Managing Finance in Training Establishments

The financial crises are a matter for concern, as they threaten to increase in scope and depth. While constituting an element of economic and political uncertainty for the coming years mainly in developing countries, these crises and their repercussions have

already caused deeply depressed economic and food insecurity situations in some countries (FAO, 1998:5).

The economic crises of third world countries in recent times have called for proper and wise use of financial resources in training institutions that are available at their disposal. For the achievement of all objectives of a training program in the training institution, financial resources play a substantial role in making the training program to be more effective. Andesia (1990:122), has put the importance finance in educational institution as "...the cost of goods and services embodied in the school system is a sufficient justification of the emphasis commonly placed on school finance".

Successful implementation of the training program in part depends on the extent of the available of financial resources that exist in the training institution like schools and colleges. However, many developing countries do not have promising financial base to support their training programs efficiently. In such context, in line with this, Webb and Norton (1999), have expressed that in many developing countries, education systems are almost chiefly dependent on the central government for their funding of different programs that conducted in various training establishments. Surprisingly, the low financial base obtained from tax in developing countries really cannot satisfy the training and educational demand of the given country. To improve the provision and financing of education, in this regard, a joint and coordinated efforts of different partners like that of the government, communities, NGOs, and the private sector is highly essential. By doing so, emphasis should be laid on the fact that the training actions mostly conducted in rural areas must be closely linked with the capital investment. Often there is lack of coordination between different organizations to bring about sustainable development in rural areas.

Nevertheless, it is not only the economic problem and low financial base, but also the lack of appropriate financial management of training institutions that result in poor performance of the training program. In order to avoid the problems related to

mismanagement of financial resources, administrators of the training institutions should be provided with the necessary courses of financial management (Solomon, 2000:16). This may ultimately help the administrators and other personnel in the training institution to use their limited resources in their institution more effectively and efficiently. Although the concept of financial management in the school system seems more or less similar to that of business and other firms, there are some differences. Schools as training institutions in most cases are also concerned with the use of funds to produce services. But, profit maximization is not their motives.

Thus, schools can take inputs from any possible sources they have, as other organizations do. They require inputs such as human, labour, equipment, supplies, and buildings as well as money in different forms for the purpose of effective operation. As part of the management of a training program, the effective and efficient utilization of available resources including financial resources should be monitored and evaluated in light of the objective of the training institution. This shows that the compulsory evaluation process can ensure the financial management within a training institute.

However, World Bank (2002:15), argues that a high degree of inefficiency in financial resource utilization is mainly resulted from management problems of inefficiency that persisting in many training institutions which in turn drain scarce resources away from the fundamental objectives of increasing access, quality and relevance of the programs provided that pertaining to the issues of education and training. World Bank also adds another areas of inefficiencies by pointing out that some of inefficiencies include underutilization of training facilities, duplication of programs offered, low student-staff ratio, high dropout and repetition rates, uneconomical procurement procedures and allocation of a large share of the budget to non-educational expenditures. World Bank document again confirms that the problem of inefficient, and sometimes declining of funding is often compounded by the inefficient use of available resources.

Similarly, both ILO (1999) and World Bank (2002), have stated that government funding is likely to remain the dominant source of financing for tertiary education in most countries. Financial incentives can be applied creatively to steer tertiary education institutions more effectively toward compliance with quality, efficiency and equity goals. Government has also to encourage tertiary education institutions to be more responsive to the needs of society and industry by providing incentives for them to mobilize additional resources through increased cost-sharing, the sale of goods, and services and donations.

However, to create incentives for fiscal efficiency, a large portion of Organization for Economic co-operation and Development (OECD) members and some developing countries such as Ethiopia and South Africa have abandoned the traditional approach of "Negotiated" budget, which are generally based on historical trends and political influence (World Bank, 2002:91).

It is recently evident that the scope of the state intervention has diminished in financing as well as provision of tertiary education institutions. Although most cost sharing efforts take the form of tuition fees by students attending private institutions, public institutions, etc., have moved increasingly toward cost-sharing, with students being charged fees in one form or another. Such cost-sharing can represent between 10 and 30 percent of total costs, depending on the country and the institution (Ibid:71).

2.4.2. Training Constraints and Challenges

When and where land was plentiful, African agricultural systems involved very extensive use of land with minimum inputs. Land is no longer abundant and intensive land use, which is relatively new to Africa, will call for newer approaches. Yet, the dominance of subsistence production presents special obstacles to agricultural development. Both farmers and trainers have to be more educated to produce for a market economy and to adopt new crops, livestock and production packages. There is an urgent need to change over from traditional cultural practices to newer farming

systems. Agricultural research and experimentation, including information on climate, soil, land use and socio-economic aspects, have been lacking. The fragility of African soils, the irregularity of rainfall, and its ecological diversity, necessitate site-specific detailed knowledge. The paucity of this knowledge, coupled with a scarcity of intellectual raw materials, presents a sever obstacle or challenge to effective agricultural development. Trainees and researchers are also faced with an acute shortage of local literature, equipment, funds and facilities. The problem becomes enormous when language barriers are also taken into consideration (UNESCO, 1996).

In light of these constraints, David (1998), has stated most likely certain possible adjustments that are necessary for the future. With respect to training and education in agricultural microbiology, some suggestions are applicable to the present theme. David adds that there is an urgent need to adapt the academic training acquired locally or abroad to the practical needs of a country. The teaching practice under such constraints should be prepared to deal with larger numbers of students with minimal facilities at their disposal.

To this effect, ILO (1999) and IER (1996) suggest that development and generation of local teaching materials then become a matter of urgency, especially as the continuously increasing complexity and interrelationships of the subject-matter dictate new methods and approaches in training.

Similarly, FAO (1983:66), emphasizes that monitoring the syllabus with a view to making them more relevant to the local setting is quite vital. Since the institutions in developing countries are thinly scattered and most of the people who work in them are trained in different environments, there is a need for closer institutional links and locally coordinated refresher courses for staff.

In the same token, UNESCO (2000), has restated that in some university faculties, there is still a heavy bias toward the basic and applied natural sciences and the curriculum needs to be adjusted to accommodate socio-economic aspects, programs of

institutions of agriculture must be geared not only to agricultural production but also to the wider requirements of rural development, the elimination of poverty and the use of the socio-economic structures for an improved agro-technology. However, ILO (1996), explains that many institutions have not fully realized this wider role in providing trained manpower for the overall rural development process. It is true that in the course of restructuring a comprehensive agricultural education, the role which professional societies play is extremely important. All this what mentioned above, would be worthwhile when considered by all concerned bodies seriously in collaboration with the other partners. With respect to solving such constraints, the Botswana and Kenya Agricultural Teachers' Associations are the two prominent national examples of the keen interest taken in encouraging the teaching of agriculture.

But, a number of questions remained unanswered on issues inseparable from training and rural development. One of these is the lack of clear-tenure policies in many African countries plus the fact that most agricultural graduates do not take up farming as a profession. Similarly, there is a need to rationalize the qualifications of agricultural manpower and the utilization of the end-products. If proper agricultural manpower projections were made, this might also help to reduce the current wastage whereby expensively acquired technical skills are used only in administrative and commercial situations (World Bank, 2000).

2.5. The Supply and Demand of Teachers

Bush and West-Burnham, (1994:199), have described that no organization can depend on genius; that the supply is found always scarce and unreliable. Many organizations in general and training institutions like schools and colleges in particular are heard of claiming for the supply of personnel in order to run their institutional activities effectively.

In relation to this, especially, since the introduction of Universal Primary Education (UPE), schools have been thrown into a crisis of supply and demand in education sphere. The demand for education and training has by far outstripped the capacity to provide it (Ukeje, et al. 1992).

Similarly, Webb and Norton (1999), have argued that even in the instances in which the teacher supply is likely seemed sufficient, however, the supply of quality teaching personnel within various educational and training institutions remains limited. Consequently, this calls for educational officers to ensure that the supply of qualified teachers is sufficient for all educational institution. The increased demand for teacher does not come from the blue, but it mainly resulted from projected growth in schools enrollments rather than any significant reductions in class-size (Ibid:18).

On their part, Gorton, et al (1988:283), however, have pointed out that the two factors contributing to an increased demand for teachers are changes in students enrollment pattern and some teachers have tended to leave their previous jobs to elsewhere for various reasons. Reinforcing this idea, Boe and Grilford (1992), report that the main factors determining teacher demand in any particular year are the number of students enrolled, policies pertaining to curriculum and teacher-pupil ratio. However, ILO (1991:12), has taken a bit unique position in saying that:

> *Expansion of education systems is not the only cause for teachers shortage. National budgets have not also been able to cope with the rapid increase in school enrollment. Teacher training establishment has not been able to keep up with the demand or adopt to changing needs. Due to low salaries and poor working conditions, a growing number of teachers as dissatisfied with teaching and that has resulted in leaving the profession either to take up other kinds of employment or to continue their education in various colleges.*

To this end, ILO (1991), furthermore recommends that to minimize teachers' shortage, there should be an accelerated promotion scheme to keep the best teachers who might be tempted by other career elsewhere.

2.5.1. Qualifications of Trainers in the Training Institutions

Trainers of Agricultural Technical and Vocational Education and Training need to have the necessary educational background which will enable them among other things, understanding human behavior and especially how the individual learns and must also be competent in the subject matter to be taught.

To this effect, World Bank (1986), has stated that the quality of any training program is determined to a very large extent by the personal qualities, professional competence, attitudes and insights of trainers. The full involvement of instructors in the process of improvement of training program is absolutely essential because good training is partly the result of the trainer's total experiences, not merely the classroom experiences with trainees.

For the instructor to be maximally effective, he/she must participate in planning and evaluating the training program. All what has been said about the involvement of instructors in the improvement of training program applies to vocational and technical education and training instructors too, in that their training program must be based upon real-life activities in the community and the product of their training has to affect the people who live and work in the community. Training programs in these areas must be ever-changing to adjust to community conditions and the needs of people under the consideration (FAO, 1998).

Supporting the above, UNESCO (2000), ensures that human resources along with material and financial as well as time resources should efficiently be utilized if training institutions want to attain their goals. Thus, the qualification of teachers has profound influence for the effective operation of the training programs. Accordingly, technical and vocational education and training is considered as the preparation of individuals for the work, teachers in this area should have special qualification and experience for they are preparing students for the world of work. Consequently, the efficiency of any organization in part can be realized through proper use of skills and talents of its

existing human resources. No doubt that in training institutions instructors are the key actors and very crucial in achieving the overall objectives of the institution. Therefore, the strength of a training institution that conducting different training program is, for the most part determined by the quality of its instructors.

Webb and Norton (1999), have furthermore suggested that the mere existence of people, however, does not guarantee the effective operations of training establishment: effective and efficient coordination as well as mobilization of workers is indispensable in order to enable them to work as a single whole. Keeping this in mind, the knowledge and competency of the institutional management is of paramount importance in the better utilization of scarce teaching personnel in the training institutions.

Thus, the training institution should be able to retain those instructors who joined the profession so as to alleviate the scarcity of trained and competent instructors. In view of this fact, for the better utilization of existing instructors in the training institutions, their salaries, working conditions, on-the-job training and the likes should be seen as a great concern of the higher body of agricultural officials and the state. Hallack and Calliods (1995:3), has more stressed on the importance of instructors by saying:

> *Instructors are definitely key elements in the teaching-learning process if not the only agent of transmission of knowledge and skills in the training institutions. In order to utilize these teaching personnel in institutions effectively, there should be a need for having appropriate leadership for carrying out effective managerial activities in the training institutions.*

From the foregoing discussion, it can be understood that the major task of training of trainees and equipping them with the necessary knowledge and skills lies largely on technical and vocational training institutions. Presumably, the effectiveness of training programs depends upon the professional competence of assigned instructors and the placement of trained persons in the world of work.

It is obvious that one of the most important factor in an effective training program is to have the right quality and quantity of trainers. If the trainers are poorly qualified, the best-planned training programs are likely to be ineffective. A well-qualified instructor is one who not only has mastery of technical details of the particular job, but also knows how to train trainees. Being this is the case, the selection of competent trainers should involve a well defined criteria and methods. However, it is not only the instructor that matters an effective training program but the effects of the trainees also should be highly considered for the successful of the training program (Craig, 1987).

Among the causes of failure or only partial success of agricultural training program, according to FAO (1982:37), is the low qualification level of instructors and extension works. Thus, where training is seen as something more than the simple teaching of certain jobs, it is highly desirable to employ technicians of a high professional level. This does not mean that farmers who have been selected from among the most capable and who have received short-term training should be rejected for teaching at grass-root level.

Most people, as has repeatedly been described by Craig (1987) consider the instructor as being the great leader and producer of learning. But, suggesting that the best way to think of the instructor is as a facilitator of learning should change this idea

The same holds true, as stated by UNESCO (1996), that in any training institution like that of TVET, teachers are likely to occupy a key position in the development of the modern world. It is they who make the better link between training institutions and the world of work and who is responsible for educating and training the required skilled workers and technicians needed in the economic and technical progress.

In relation to this, Dessalgn (1996:7), has supported the above points which are required of TVET teachers by stating "... the teaching staff for the education of technicians should possess either a degree or a high technicians qualification in an appropriate field and should have industrial or comparable experiences in their

particular discipline." Likewise, in the study conducted on the TVET experiences of many countries, UNESCO (1993:65) has come out not only with the need to up-date teachers educational level but also expressed some of the drawbacks that TVET faced by saying: "Among the most pressing problems reported by several countries was the serious shortages for the TVET subjects." At times, the figure obtained from the sample TVET schools show that 60.8% of them do not possess the required level of qualification for teaching in those respective schools.

Furthermore, once a study carried out by Berhanu and others (in Habte, 1993), some years back shows teachers with diploma to be 85.1%. This implies that there is some improvement though their TVET knowledge and skills are not still compatible with the rapidly changing technology and working conditions.

2.6. Trainees Selection Criteria

Before launching any training program news about admission requirements has to be announced and spread prior to the starting time of the training all about the courses and the college programs for the would be trainees. According to FAO (1982:28), in order to be admitted to the agricultural training college, trainees have to be at least 17 years of age, have achieved at least a pass in the school-leaving certificate, produce a medical certificate indicating fitness and a sound physique that will permit involvement in agriculture and community life, and the candidate must produce a certificate from two referees about his/her character. In most cases, regarding the duration of the training program, on average the course lasts for two to three years.

By doing so, provisionally selected candidates are personally interviewed by the principal and a few members of the community and faculty on their arrival at the college. Personal interview or admission tests serve the following purposes:

- They probe into the personal and family background of the candidates;
- They reveal the extent of past technical or farming experience or exposure;

- They discover the reasons why the candidate wants to join the agricultural training courses;
- They clarify student objectives and determination which they are to be pursued;
- They establish whether the student has family support including the extent of financial assistance available; and
- They establish the extent to which each student has been associated with developmental activities in his locality (ILO, 1992:27). This rigorous procedure can ensure a minimum of drop-out and the retention of those candidates who have the seriousness to take up agriculture as a profession.

Undoubtedly, no training should proceed until one has a clear picture about whom to be trained. After having selected, these trainees must be able to put into the practice all the training that they have received.

First and foremost, it is the trainees that make the training program quite necessary. Furthermore Pretty (1995:14), has described that one should have to raise certain questions that will help him to determine the sort of trainees, the type of program and the training materials. Among other things, hereunder some questions might be raised:

- How many people will be presented?
- What are they attending? is it their own choice?
- What are their hopes and expectations?
- What are their fears and concerns?
- What changes of experience, discipline, age gender, status, etc., are likely to be represented?
- What prior knowledge might have they about the subject matter of the training?

Accordingly, it is wise to formulate a guideline of criteria for the selection of trainees. Such criteria will in turn help to promote the process of training. It also improves the competition and performance of the trainees and the achievement of the objectives of the training program. Although the selection of trainees is seemed successful, it will

not be possible to provide the training program in some training institutes without the allocation and management of the necessary and adequate financial and material resources.

2.6.1. Accreditation of Institutions

In addition to the support provided through accreditation components in specific country projects, the World Bank usually contributes toward the goal of establishing an international qualification in relation to quality assurance framework through consultations with donors and specialized professional associations as well as through the development of Grant Facility (World Bank, 2002).

Moreover, Gillie (1973:182), has supported the above idea that a number of national professional associations in the health-related and engineering-related areas have established criteria for accreditation of training programs. In America, the Southern Association of Colleges and Schools (SACS) has instituted a special committee for the establishment of standards for occupational programs in their respective regions.

Governments, licensing bodies, and tertiary education institutions have applied the following criteria to evaluate foreign providers that are not yet accredited by internationally recognized agency:

a. minimum infrastructure, facilities and staffing requirements;
b. appropriate and accurate information on the policies, mission statements, study programs and feedback mechanisms including the channels for complaints and appeals;
c. capacity-building partnerships between foreign providers and local institutions; and
d. comparable academic quality and standards, including the full recognition in the home country of the degrees and qualifications delivered by foreign providers in a developing countries (World Bank, 2002:31).

The integration of vocational subjects in education needs to be accomplished by the practice of guidance that encourages a positive attitude toward work. Guidance and counseling must define career development as a systematic process during which individuals develop their vocational awareness, employability and maturity. It must monitor the requirement of the labour market and help both the gifted and disadvantaged ones so as to develop career plans that suit them best. However, most teachers and training personnel are not likely seemed sufficiently competent to provide vocational guidance and counseling. Even in institutions where service is available, it is often confined to the school and does not cater to the needs and of unemployed youth and adults (UNESCO, 1996:6).

CHAPTER THREE

PRESENTATION AND ANALYSIS OF THE DATA

This part of the thesis deals with presentation, analysis and interpretation of the data gathered from the sample teachers and students. The data obtained through questionnaires, observation checklist and documents were analyzed and interpreted. Hence, the basic questions raised in the proceeding chapter one were given appropriate treatment.

Out of the total of 684 questionnaires distributed to the teachers and the students in government agriculture TVET colleges, 594 (86.84%) were filled and returned. On the other hand, from the total of 163 questionnaires distributed to the teachers and the students in non-government training colleges, 140(85.88%) were filled and returned. Based on the responses obtained from the sample respondents, the analysis and interpretation of the data are presented following each table.

3.1. Background Information

Table II. Characteristics of the Respondents

Nº	Items	Respondents Form							
		Government Colleges				NGO Colleges			
		Teachers		Students		Teachers		Students	
		Nº	%	Nº	%	Nº	%	Nº	%
1	Sex								
	• Male	88	86.27	432	87.80	34	72.27	84	87.5
	• Female	14	13.73	60	12.20	10	22.23	12	12.50
	Total	**102**	**100**	**492**	**100**	**44**	**100**	**96**	**100**
2	Service Year								
	• 1 - 5	11	10.79	-	-	9	20.45	-	-
	• 6 - 10	26	25.49	-	-	8	18.18	-	-
	• 11 - 15	8	7.84	-	-	16	36.36	-	-
	• 16 - 20	52	50.98	-	-	8	18.18	-	-
	• 18-25 years	5	4.90	-	-	3	6.83	-	-
	Total	**102**	**100**	**-**	**-**	**44**	**100**	**-**	**-**
3	Age								
	• 18 - 28 years	77	75.49	435	88.41	18	40.91	47	48.96
	• 29 - 39 years	14	13.73	57	11.59	16	36.36	49	51.04
	• 35 - 39 years	9	8.82	-	-	7	15.91	-	-
	• 40 - 49 years	2	1.96	-	-	3	6.82	-	-
	• 50 years and above	-	-	-	-	-	-	-	-
	Total	**102**	**100**	**492**	**100**	**44**	**100**	**96**	**100**
4	Qualification								
	• Diploma	12	11.76	-	-	14	31.81	-	-
	• B.A / B.Sc	86	84.31	-	-	14	31.81	-	-
	• M.A/M.Sc	4	3.93	-	-	12	27.28	-	-
	• Ph.D	-	-	-	-	4	9.10	-	-
	Total	**102**	**100**	**-**	**-**	**44**	**100**	**-**	**-**
5	Level of education prior to joining the college								
	• Grade 10 complete	-	-	204	41.46	-	-	-	-
	• Grade 12 complete	-	-	288	58.54	-	-	96	100
	Total	**-**	**-**	**492**	**100**	**-**	**-**	**96**	**100**

As depicted in item 1 of Table II, majority of the teachers from the government colleges 88(86.27%) as well as non-government colleges 34(72.27%) were found to be males. Similarly, 432 (87.80%) of the students from the government colleges and 84(87.50%) of the students from Non-government Colleges were males. This may indicate that the participation of female teachers and students in training and education system mainly at the college level is low. Consequently, the responses of the teachers and students in this study from both government and non-government training colleges represent chiefly males' ideas.

In relation to service year of the teachers, as Table II shows, nearly half i.e., 52(50.98%) of the teachers from government colleges served from 16-20 years. Whereas, teachers of non-government training colleges had no significant differences in their service years. However, when they are compared to the teachers of government colleges, most of the teachers from NGO colleges served less than 16 years. Here it can be deduced that most of the government college teachers might have better experiences than teachers of NGOs that enable them in dealing with the training programs of their respective colleges more likely to understand about various issues pertaining to the training program of their respective colleges.

As far as item 3 of Table II is concerned, 77 (75.49%) of the teachers from the government colleges under the study were 18-28 years. The remaining 25(24.51%) were 29 years old and above. Whereas, 18(40.91%) of the teachers from non-government colleges were 18-28 years old. The remaining, the majority 26(59.09%) of the teachers respondents were 29 years and above. From the Table it can be inferred that the respondents from NGO training colleges were relatively older than the teachers form government TVET colleges.

Regarding the age composition of the students, as shown in Table II item 3, majority 435(88.41%) of the respondents from sample government colleges under the study were 18-28 years old. On the other hand, half 49(50.04%) of the students from NGO training colleges were in the age range of 29-39 years old and above.

Concerning qualification of teachers in the government colleges, 86(84.3%) had B.A/B.Sc and 12 (11.76%) were diploma holders. Besides, there were also teachers 4(3.93%) who had second degree M.A/M.Sc in government colleges. Even though there were no many in number as that of government colleges, there were equal number of teachers 14(31.81%) in NGO colleges for both respondents who had diploma and first degree. And there were also teachers 12(27.28%) and 4(9.10%) who had M.A/M.Sc and Ph.D degrees respectively. Based on this fact, it is evident that staff composition by qualification varies in the two types of colleges. Therefore, it is possible to deduce that NGO colleges seem to have better staff composition by qualification that ranging from diploma to Ph.D degrees even they had less number of first degree holders teachers as compared to government Agriculture TVET colleges.

With regard to students' level of education prior to joining the college, the Table reveals that majority 288(58.54%) of the students from the government colleges were students who completed grade 12. The rest 204(41.46%) of the students were who completed general secondary education (Graded 10). Moreover, all of the students of the sample NGO colleges were students who had completed grade 12. From the above data, it could be realized that majority of students and all of students joined both colleges were students who completed grade 12 of government and NGO colleges respectively.

As a whole, the findings obtained from the age profile of the respondents indicate that students from non-government training colleges were older than students from government TVET colleges. The most likely probable reason could be late entry of

Table III. A Chi-square Test on Major Objective(s) of the Training Colleges as Responded by Teachers

Nº	Items	College	R- Value			
				Agree	Disagree	Total
1	To produce middle-level manpower	Government College	Count	96	2	98
			% within RESP	98.0%	2.0%	100%
			% within R-value	70.6%	33.3%	69%
			Total	**67.6%**	**1.4%**	**69%**
		NGO College	Count	40	4	44
			% within RESP	90.9%	9.1%	100%
			% within R-value	29.4%	66.7%	31.0%
			Total	**28.2%**	**2.8%**	**31.0%**
2	To provide employment opportunity to graduate students	Government College	Count	64	12	76
			% within RESP	84.2%	15.8%	100%
			% within R-value	71.1%	54.5%	67.9%
			Total	**57.1%**	**10.7%**	**67.9%**
		NGO College	Count	26	10	36
			% within RESP	72.2%	27.8%	100%
			% within R-value	28.9%	45.5%	32.1%
			Total	**23.2%**	**8.9%**	**32.1%**
3	To support students who were not able to pursue their education at degree level	Government College	Count	70	20	90
			% within RESP	77.8%	22.2%	100%
			% within R-value	72.9%	76.9%	73.8%
			Total	**57.4%**	**16.4%**	**73.8%**
		NGO College	Count	26	6	32
			% within RESP	81.3%	18.7%	100%
			% within R-value	27.1%	23.1%	26.2%
			Total	**21.3**	**4.9%**	**26.2%**
4	To introduce modern farm-technology and industry in the rural areas through its graduates	Government College	Count	88	10	98
			% within RESP	89.8%	10.2%	100%
			% within R-value	72.1%	62.5%	71.0%
			Total	**63.8%**	**7.2%**	**71.0%**
		NGO College	Count	34	6	40
			% within RESP	85%	15%	100%
			% within R-value	27.9%	37.5%	29%
			Total	**24.6%**	**4.4%**	**29%**
5	The enrich trainees' knowledge and practical skills through the training program	Government College	Count	96	2	98
			% within RESP	98%	2%	100%
			% within R-value	70.6%	33.3%	69%
			Total	**67.6%**	**1.4%**	**69%**
		NGO College	Count	40	4	44
			% within RESP	90.9%	9.1%	100%
			% within R-value	29.4%	66.7%	31%
			Total	**28.2%**	**2.8%**	**31%**

N.B: *RESP= Respondents*

R-Value= Rate of value difference within group.

In Table III, both respondents from government and NGO colleges were asked to identify the major objectives of their training colleges that they think the colleges strive to achieve presently.

To this effect, about five objectives were presented in the list of items. Table III shows the results of the chi-square tests on the view of teachers from both government and NGO colleges regarding such major objectives. As can be seen from the Table the data obtained from the respondents considered the responses given as either agree or disagree. As indicated in the above Table almost all 96(98.0%) of the teachers from government training colleges confirmed that one of the major objectives of the training college is to produce middle-level manpower the country requires currently. In general, even if major objective of the college to produce middle-level manpower relatively seems to be higher in government TVET colleges, both of the colleges considerably agree as they targeted to produce middle level manpower for the economic development of the country.

As regards item 2 of Table III, majority of the respondents in government colleges, i.e., 64(84.2%) of the teachers and 26(72.2%) of the teacher respondents in NGO training colleges asserted that one of the major objectives of the training program of the college is to provide employment opportunities to graduate students. According to the responses, the chi-square tests indicate that there is no as such significant difference regarding the objective of college in creating job opportunities to the students after the completion of the college's training.

Similarly, both types of the respondents from government and NGO training colleges responded positively towards item 3 of the Table III. Accordingly, as the results of chi-square tests depict, a remarkable percent 70(77.8%) of the teacher respondents from the government colleges and most of the respondents 26(81.3%) of the teachers from NGO colleges endorsed more or less similarly that colleges are aimed at supporting students that were not able to pursue their further education mainly at degree level. As

can be observed from the Table, respondents from NGO colleges had relatively better stand in supporting the objective of their colleges that is assumed to help students who did not join a college at degree program than government TVET colleges. This shows that NGO colleges have more inclined to have views that to assist students who were not able to join any other colleges for various reasons than government colleges. From this, it is possible to conclude that almost in both types of colleges there is still a high degree of supporting students to pursue education at degree level.

Chi-square test was also calculated in item 4 of the same table to identify major objectives of both government and NGO training colleges of the two study groups. To this effect, the result of the test shows that in both types of colleges more or less there is a great deal of similarity and had no as such considerable variation that existed between them regarding the issue questioned to them. Accordingly, 88(89.8%) of the teacher respondents in the government colleges under the investigation and 34(85%) of the teachers from NGO training colleges asserted that their colleges are highly aimed at introducing modern farm-technology and industry in the rural areas through its graduates (World Bank, 1991).

In the last item of the same table, almost all 96 (98%) and 40(90%) of the teacher respondents from both the government and NGO colleges confirmed that colleges are aimed at enriching trainees' knowledge and practical skills through the training programs respectively.

As a whole, the major objectives in both types of government and non-government colleges are quite consistent with the overall objectives that the Ethiopian Government set to be achieved. Besides, the results of the findings obtained from chi-square tests indicate that there is no significant difference in major objectives, which the training program pursued in both government and NGO colleges that being aimed at to be achieved.

In general, as major objectives of the training programs of the colleges, high proportion of respondents from both types of the study groups agreed on the major objectives mentioned above irrespective of the type of college and it is evidenced that those objectives to be pursued were similarly existing in both types of colleges.

Table IV. Summary Table of One-way ANOVA on Availability of Teachers and Supportive staff with the Necessary Skills and Qualification

Nº	Items	Teacher Respondents	N	Mean	S.D
1	Availability of Teachers with the necessary skills and educational qualification	Government College	492	2.8780	1.34837
		NGO College	96	3.3333	1.28691
		Total	**588**	**2.9524**	**1.34802**
		Teacher Respondents			
		Government College	102	3.4118	0.99854
		NGO College	44	3.2727	0.92419
		Total	**146**	**3.3699**	**0.97566**
2	Adequacy of supportive staff with the required level of education	Student Respondents	-		
		Government college	492	2.8780	1.34837
		NGO College	96	3.3333	1.28691
		Total	**588**	**2.9524**	**1.34802**
		Teacher Respondents			
		Government College	102	1.9608	.93260
		NGO College	44	3.3636	.89159
		Total	**146**	**2.3836**	**1.12195**

N.B: Sig. level of alpha <0.05 is used for computation throughout this paper.

The above result indicates that the overall differences among the mean scores of the study groups are statistically significant at an alpha level less than 0.05. As responded by students, NGO colleges have significantly more qualified teachers than government colleges. In other words, as it can be observed from Table iV, the data indicate that in government Agriculture TVET colleges the number of qualified teachers that have

higher level of academic qualification is seemed to be less than the minimum requirement as compared to that of NGO training colleges. That is evidenced there are a good number of teachers with Ph.D and MA/Msc degrees by composition of qualification in NGO training colleges than government colleges.

Regarding teacher qualification, teacher respondents of government TVET colleges endorsed that there are significantly better-qualified teachers with necessary skills in their colleges. When teacher respondents of both types of colleges are seen, there is no significant difference in terms of teachers' qualification though the number of BA/B.Sc degree holder, teachers were rated higher in government Agriculture TVET colleges.

On the contrary, student respondents from NGO training colleges rated that their teachers had the required qualification and skills than government colleges' teachers as compared to the responses of student respondents from government colleges. Thus, teachers and students differ in opinion on the issue raised concerning qualification of the teachers teaching in both types of colleges. (See Appendix 4)

As can be seen from Table IV, as students responded it, there is less number of administrative staff than it should be in the government Agriculture TVET colleges. As it was rated higher by respondents, NGO colleges have a larger number of administrative staff to support the academic activities of the training program of the colleges. More specifically, there is significantly less qualified number of supportive staff in government colleges than non-government colleges.

Similarly, a noticeable proportion of teacher respondents from NGO colleges confirmed that NGO training colleges have adequate number of administrative staff with the required level of education to enhance and facilitate the training program of the respective colleges. Unfortunately, as the result of one-way ANOVA indicates, government colleges run their activities under inadequate number of supportive staff that might be gradually resulted in hindering the proper functioning of the colleges under the study. Thus, it can be said that there is a significant difference in having

adequate number of supportive staff with the required standard of education between the two types of colleges. It is obvious that the availability of these personnel can play a positive role in enhancing and promoting the training program. (See Appendix 4)

Table V. Summary Table of One-way ANOVA on the number of Trainees as Compared to the Number of Instructors and Training Facilities

Student Respondents	N	Mean	S.D
Government college	492	2.2846	1.29872
NGO College	96	3.4583	1.29710
Total	588	2.4762	1.36809

Teacher Respondents	N	Mean	S.D
Government college	102	2.2745	1.14457
NGO College	44	4.0000	1.18125
Total	146	2.7945	1.39910

As can be observed from the Table V, the one-way ANOVA result shows that NGO training colleges have a better number of instructors by composition of educational qualification and training facilities that congruent with the number of trainees as replied by the student respondents. Whereas, in government Agriculture TVET colleges respondents rated below the average regarding the adequate number of teachers and training facilities that consistent with the number of trainees enrolled in their respective colleges.

Likewise, a large proportion of teachers rated that their NGO colleges have adequate teachers and training facilities at their disposal as compared to that of government TVET colleges. Besides, teacher respondents themselves from government colleges asserted that they have no adequate teachers and training facilities that go in line with the number of students enrolled by rating the issue below the average.

From the data obtained, it could be realized that the two types of colleges have a significant difference in the extent of the adequacy of the training facilities and number of teachers to the number of students enrolled to the training program.

In general, the adequacy of teachers and training facilities is below the required quality. However, better and above the average quality is found in NGO training colleges when compared with the number of students enrolled in their respective training institutions. It was also observed by the researcher that there were more number of training facilities available in the NGO colleges to promote the training program in the given sample colleges than was appearing in the government Agriculture TVET colleges. There was also relatively a better use of the existing facilities efficiently for the betterment of the training purpose in NGO colleges perhaps which resulted from good management practices that observed in such colleges. (See appendix 4)

Table VI. Summary Table of One-way ANOVA on the Quality and Adequacy of Training Facilities

N°	Items	Student Respondents	N	Mean	S.D
1	Class room condition	Government College	492	2.0081	1.21428
		NGO College	96	3.5417	1.50728
		Total	**588**	**2.2585**	**1.38667**
		Teacher Respondents			
		Government College	102	3.2549	1.50040
		NGO College	44	4.1814	1.12628
		Total	**146**	**3.5342**	**1.45822**
2	Condition of the workshops	Student Respondents			
		Government College	492	1.3902	.89017
		NGO College	96	3.1250	1.40113
		Total	**588**	**1.6735**	**1.17998**
		Teacher Respondents			
		Government College	102	2.2353	1.35834
		NGO College	44	4.0000	1.18125
		Total	**146**	**2.7671**	**1.53596**
3	Adequacy and modernness of Equipment/Machines	Student Respondents			
		Government College	492	1.3415	.78509
		NGO College	96	3.1667	1.52638
		Total	**588**	**1.6395**	**1.16125**
		Teacher Respondents			
		Government College	102	3.2549	1.39082
		NGO College	44	4.1364	1.19283
		Total	**146**	**3.5205**	**1.3907**
4	Availability and Adequacy of teaching aids and raw materials	Student Respondents			
		Government College	492	1.4715	.72573
		NGO College	96	2.9583	1.60208
		Total	**588**	**1.7143**	**1.07631**
		Teacher Respondents			
		Government	102	2.0980	.93882
		NGO College	44	3.9545	1.99889
		Total	**146**	**2.6575**	**1.33100**
5	The extent of relatedness and up-to-datedness of references and textbooks in the library	Student Respondents			
		Government College	492	1.6016	1.09908
		NGO College	96	2.4167	1.56048
		Total	**588**	**1.6347**	**1.16348**
		Teacher Respondents			
		Government	102	1.9804	1.02426
		NGO College	44	1.6336	1.27755
		Total	**146**	**2.3973**	**1.27295**
6	Availability of supplies and equipments for laboratory works	Student Respondents			
		Government College	492	1.2439	.71460
		NGO College	96	2.4583	1.66649
		Total	**588**	**1.4422**	**1.03847**
		Teacher Respondents			
		Government	102	1.8039	.91239
		NGO College	44	3.7273	1.33580
		Total	**146**	**2.3836**	**1.67595**
7	Adequacy of farm-lands for practical teaching	Student Respondents			
		Government College	492	2.3984	1.26838
		NGO College	96	3.0417	1.62815
		Total	**588**	**2.5030**	**1.35327**
		Teacher Respondents			
		Government	102	2.4118	1.21340
		NGO College	44	3.7273	1.33580
		Total	**146**	**2.8082**	**1.38621**

N.B. An Average for this computation purpose is 3.00 through out this paper.

From the table Vi it can be seen that student respondents in non-government training colleges had scored significantly higher than government college students regarding the condition of their classrooms. Likewise, teacher respondents from NGO training colleges had considerably rated higher than that of government college teachers. However, teachers from both types of colleges rated the condition of classrooms of their training colleges above the average even if it was rated higher in NGO training colleges than government Agriculture TVET colleges.

This shows that though the classroom conditions of NGO training colleges seemed better than government colleges, teacher respondents from the government colleges rated the overall general condition of classrooms above the average. Conversely, students from government colleges rated the condition of their classrooms below the average and that they perceived their classrooms are of inferior quality as compared to the result obtained from NGO college students who had rated higher than average. Any how, in generally speaking, the condition of classrooms of government training colleges was not in a worse condition and as such there was also no chronic shortage as it was observed by the researcher himself. In fact, it was evident that adequate classrooms and other facilities did not accompany the present increased enrollment of students in government Agriculture TVET colleges. However, NGO training colleges were noticed that they admitted students only that to the extent their colleges in general and their facilities in particular to accommodate. This lesson might be a good trend to be learned by government TVET colleges from such NGO training colleges.

Respondents were also requested to rate the quality and adequacy or the overall condition of workshops. To this end, as shown in Table XI, the result of analysis of variance suggests that there is significant difference between the mean scores of the respondents. Accordingly, students from Agricultural Colleges of the government rated the condition of workshops below the average whereas students from NGO training colleges rated the existing condition of workshops slightly above the average. In both cases, it can be realized that the problem of workshops existing in both types of

colleges even if it seemed more acute in government Agriculture TVET colleges. Therefore, it is possible to say that the availability of workshops is said to be fair in NGO training colleges. In other words, NGO colleges are better than government TVET colleges in adequacy of workshops.

Similarly, teacher respondents confirmed the condition of workshops relatively in a better position in NGO colleges than government colleges as significantly rated above the average by respondents. Moreover, teachers themselves in government colleges perceived that their colleges are of inferior and poor quality of workshops (See the Appendix 4).

As shown in Table III item 3, the result of analysis of variance reveals that there are statistically significant differences between the mean scores of the study groups with respect to the adequacy and modernness of the equipment and machines. Regarding this, students from the government TVET colleges rated the adequacy and modernness of machines as well as equipment below the average while teachers from the government TVET colleges rated slightly above the average. On the other hand, student respondents and teachers from NGO training colleges rated the extent of adequacy and modernness of the equipment/machines slightly more than the average and significantly more than the average respectively.

The above findings indicate that NGO colleges are better than government Agriculture TVET colleges in having adequate and modern machines as well as training equipment. (See Appendix 4).

Furthermore, in the same Table of item 4, an attempt was made to investigate the extent of availability and adequacy of teaching aids and raw materials in both types of colleges. With this regard, students from the government Agriculture TVET colleges extremely rated the issue below the average (i.e., mean = 1.4715) and the students from NGO training colleges also slightly rated the issue below the average (i.e., mean = 2.9583). Likewise, teachers from the government colleges and from NGO training

colleges rated about the availability and adequacy of teaching aids and raw materials below the average and significantly above the average respectively [as depicted in the Table VI).

From this, it can be concluded that the government colleges seemed relatively unable to provide adequate teaching aids and raw materials mainly for practical teaching while NGO colleges were relatively fair in the provision of these materials for the effective operation of training program. However, respondents of both types of colleges claimed to have adequate teaching aids and raw materials at their disposal.

As seen in Table VI item 5, student respondents from both the government and NGO training colleges rated below the average concerning the relatedness and up-to-datedness of references as well as textbooks in the library. However, the problem seems more sever in government Agriculture TVET colleges than NGO colleges as the respondents rated from both types of colleges (i.e., mean = 1.6016 and mean = 2.4167) respectively. On the other hand, teachers from NGO training colleges slightly rated above the average and teachers of government colleges rated the up-to-datedness of references and textbooks in their colleges below the average.

It can be inferred from the analysis of the finding that library books are likely to be said not latest in both types of colleges. However, in relatively speaking, the qualities of books that are found significantly better or comparatively latest reference books available in NGO colleges.

In connection with supplies and equipment for laboratory works, students and teachers were asked to rate the availability of these materials at their disposal for the purpose of the training program. Accordingly, students from both types of colleges rated below the average that accounted for the mean 1.2439 and 2.4583 respectively. Yet, teachers from NGO training colleges rated the availability of supplies and equipment for laboratory works above the average whereas teachers from the government colleges

rated the issue below the average as that of the students from the government colleges did.

The above information shows that both types of colleges faced the problem of provision of supplies and equipment for laboratory works as responded by the students from both government and NGO colleges and by the teachers from the government colleges though teachers from the NGO colleges rated the issue above the average (i.e., 3.7273). It can be understood that less number of laboratories are found in both colleges, though NGO training colleges are better in this regard.

Thus if these colleges are not provided with adequate farmlands, they will face a problem of achieving their objectives.

Table VII. Summary Table of One-way ANOVA on the Extent of Utilization and Availability of General Services

N	Items	Student Respondents	N	Mean	S D
1	Provision of Health service	Government College	492	1.4472	80935
		NGO College	96	3.6250	1.23387
		Total	**588**	**1.8027**	**1.21680**
		Teacher Respondents			
		Government College	102	1.5882	97851
		NGO College	44	3.8636	1.06947
		Total	**146**	**2.2740**	**1.45042**
2	Provision and utilization of food service and condition of the cafeteria	Student Respondents			
		Government College	492	1.7236	1.01557
		NGO College	96	3.2500	1.42902
		Total	**588**	**1.9728**	**1.22965**
		Teacher Respondents			
		Government College	102	2.1961	1.10838
		NGO College	44	4.1364	1.06947
		Total	146	2.7808	1.41174
3	Provision of dormitory service	Student Respondents			
		Government College	492	1.5122	1.00804
		NGO College	96	3.7500	1.13323
		Total	**588**	**1.8776**	**1.32025**
		Teacher Respondents			
		Government College	102	1.7647	1.00668
		NGO College	44	3.8636	1.19283
		Total	**146**	**2.3973**	**1.43589**
4	Guidance service	Student Respondents	492	1.8211	1.14192
		Government College	96	2.5000	1.45095
		NGO College	**588**	**1.9320**	**1.22250**
		Total			
		Teacher Respondents			
		Government	102	1.1020	1.13023
		NGO College	44	2.7273	1.18839
		Total	**146**	**2.1507**	**1.20540**
5	Accessibility of road for transportation	Student Respondents			
		Government College	492	3.1220	1.47531
		NGO College	96	4.0833	1.08256
		Total.	**588**	**3.2789**	**1.46175**
		Teacher Respondents			
		Government	102	3.7059	1.24748
		NGO College	44	4.0000	1.18125
		Total	146	3.7945	1.23130
6	Supply of water	Student Respondents			
		Government College	2.7561	2.7561	1.38271
		NGO College	3.9583	3.9583	1.46479
		Total	2.9524	2.9524	1.46432
		Teacher Respondents			
		Government	3.2157	3.2157	1.36887
		NGO College	4.2727	4.2727	1.06452
		Total	**3.5342**	3.5342	1.37045

Regarding the health services provided to the students in the colleges, a remarkable portion of the students and teachers from government colleges confirmed that the health services given in their colleges were almost non-existent by rating extremely below the average, that is, 1.4472 and 1.5882 respectively. However, provision of such service as it was rated above the average by both the students and teachers in NGO colleges seemed relatively better hence both of them rated above the average. Presumably, there is a significant difference between government Agriculture TVET colleges and NGO training colleges regarding the provision of health service to their students in their colleges.

As observed in item 2 of Table VII, the result of the analysis of variance of means shows that there is a considerable difference between the mean scores of the study groups in terms of the provision and utilization of food service and cafeteria condition of their colleges. Both student as well as teacher respondents from government sample colleges significantly rated the availability and provision of food services in their colleges below the average i.e., 1.7236 and 2.1916 respectively. However, food service condition in NGO training colleges was rated above the average by both students and teachers which accounted for 3.2500 and 4.1364 respectively.

In general, it can be concluded that in government colleges food service is either not available or not in a position to provide services as it should have served the students of the respective colleges. Even when food service is available, the way the students utilized was quite difference. For instance, among from the government colleges, some of them provided their students with money instead of the provision of food service in their colleges (e.g. Dilla) and the other colleges provided students with food service in their colleges.

With regard to the provision and availability of dormitory service, item 3 shows that there is quite a significant difference between the mean scores of the study groups. To this end, students and teachers from government Agriculture TVET colleges rated concerning dormitory services much below the average, that is, 1.5122 and 1.7647 respectively. Whereas, both students and teachers from NGO colleges rated the extent of the dormitory services above the average which accounted for 3.7506 and 3.8636 respectively.

From the information provided by the study groups, it can be deduced that NGO training colleges are better in providing dormitory services to their students as compared to that of the provision of dormitory services given to the students by government TVET colleges.

The data tabulated in item 4 of Table VII impart that respondents from both the government and non-government training colleges under the study had almost similar opinion in relation to the provision of the guidance service for the students in their respective colleges. Consequently, in both types of the colleges all the groups rated below the average the issue that pertaining to the provision of guidance service in their colleges. Nonetheless, as can be observed in the table, students and teachers from government TVET colleges rated the case extremely below the average.

Thus, even if the guidance service was not properly provided as such satisfactory in both types of colleges, the problem seemed much worse in government colleges than that of NGO training colleges.

Concerning road accessibility, as shown in item 5, the result of analysis of variance of means reveals that there are no statistically significant differences between the mean scores of the study groups since all of them rated above the average.

From the finding obtained, it is possible to say that both types of colleges either the government or NGOs were constructed where the roads are convenient for the transportation to both the students and the teachers.

A brief look at item 6 of Table VII, above indicated that the one-way ANOVA result shows a significant difference between government and non government training colleges regarding the availability or the power supply of water in both types of colleges. Accordingly, students and teachers from NGOs and teachers as well as students from government TVET colleges had rated the availability of water supply above the average, below the average and slightly above the average respectively.

Thus, it can be inferred that NGO colleges have a better supply of water that utilized for various purposes in their colleges as compared to that of their counterparts government Agriculture TVET colleges.

Table VIII. Factors Affecting the Operation of the Training Programs of the College

N	Items	Government College		NGO College	
		Teachers		Teachers	
		N	%	N	%
1	Limited capacity of accommodation of existing classrooms, workshops etc. in relation to the number of students				
	a) Very high	17	16.66	-	-
	b) High	46	45.10	1	2.27
	c) Moderate	12	11.76	4	9.09
	d) Low	13	12.75	7	15.90
	e) Very low	14	13.73	32	72.73
	Total	**102**	**100**	**44**	**100**
2	Inappropriate machines as well as equipment to the nature of courses and to capacity of the trainees				
	a) Very high	13	12.75	2	4.54
	b) High	18	17.65	-	-
	c) Moderate	20	19.60	6	13.64
	d) Low	42	41.18	10	22.73
	e) Very low	9	8.82	26	59.09
	Total	**101**	**100**	**44**	**100**
3	Shortage of the training time				
	a) Very high	14	13.73	-	-
	b) High	12	11.76	2	4.54
	c) Moderate	28	27.45	6	13.64
	d) Low	42	41.16	10	22.73
	e) Very low	6	5.90	26	59.09
	Total	**102**	**100**	**44**	**100**
4	Inadequate number of trainees				
	a) Very high	7	6.86	3	6.82
	b) High	6	5.88	6	13.64
	c) Moderate	19	18.63	6	13.64
	d) Low	38	37.26	13	29.54
	e) Very low	32	31.37	16	36.36
	Total	**102**	**100**	**44**	**100**
5	Budget Problem				
	a) Very high	64	62.75	2	4.54
	b) High	12	11.76	2	4.54
	c) Moderate	16	15.69	4	9.09
	d) Low	6	5.88	10	22.73
	e) Very low	4	3.92	26	59.09
	Total	**102**	**100**	**44**	**100**
6	Irrelevant nature of training in relation to the world of work				
	a) Very high	18	17.65	-	-
	b) High	8	7.85	-	-
	c) Moderate	12	11.76	5	11.37
	d) Low	52	50.98	9	20.45
	e) Very low	12	11.76	30	68.18
	Total	**102**	**100**	**44**	**100**
7	Having no adequate and qualified teachers				
	a) Very high	8	7.85	4	9.09
	b) High	6	5.88	4	9.09
	c) Moderate	14	13.72	8	18.18
	d) Low	56	54.90	6	13.64
	e) Very low	18	17.65	22	50.00
	Total	**102**	**100**	**44**	**100**
8	The degree of misutilization of the existing training facilities				
	a) Very high	8	7.85	1	2.27
	b) High	14	13.72	5	11.36
	c) Moderate	12	11.76	4	9.09
	d) Low	54	52.95	4	9.09
	e) Very low	14	13.72	30	68.19
	Total	**102**	**100**	**44**	**100**
9	Out-datedness of the training facilities				
	a) Very high	12	11.76	2	4.54
	b) High	18	17.65	5	11.37
	c) Moderate	12	11.76	9	20.45
	d) Low	42	41.18	10	22.73
	e) Very low	18	17.65	18	40.91
	Total	**102**	**100**	**44**	**100**
10	Shortage of vehicles for the training purpose				
	a) Very high	19	18.63	-	-
	b) High	16	15.69	2	4.54
	c) Moderate	16	15.69	7	15.91
	d) Low	42	41.18	9	20.45
	e) Very low	9	8.81	26	59.10
	Total	**102**	**100**	**44**	**100**

As depicted in item 1 of the Table VIII, almost all teachers 32(72.73%) from the sample non-government training colleges replied very low regarding the problem of limited accommodation capacity of the existing classrooms, workshops etc., in relation to the number of their students. On the contrary, majority of the respondents, that is, 46(45.10%) of the teachers from the government colleges asserted that the problem of limited accommodation capacity of existing classrooms and workshops in connection to the number of students enrolled in their respective colleges was found "high".

From the responses given by both groups from both types of colleges, it is possible to realize that NGO training colleges had no a problem of accommodation capacity of classrooms and workshops in relation to their students enrolled as compared to that of the government Agriculture TVET colleges.

Equipment and machine hold a relatively important place in certain types of training programs mainly in Technical Vocational Education and Training Institutions. Based on this fact, on item 2 of Table VIII, respondents were asked to rate as how machines and equipment were inappropriate to the nature of the course and capacity of the trainees. Accordingly, 26 (59.09%) and 42(41.18%) of the teachers from NGO training colleges and government colleges replied regarding the existence of the problem mentioned "very low" and "low" respectively.

Concerning the problem of shortage of the training time, as the proceeding item of the same table, the majority 26 (59.09%) of the teacher respondents from NGOs and a considerable proportion of teachers 42(41.16%) from government Agriculture TVET colleges endorsed that the problem regarding the issue was also "very low" and "low" respectively in both types of colleges.

As can be seen from item 4, 38(37.26%) of the teacher respondents from the government colleges and 16(36.36%) of teachers from NGO training colleges pointed out that the extent of inadequate number of trainees that enrolled in the colleges under the investigation was found to be "low" and "very low" respectively.

In item 5 of the same table, the teachers from both types of colleges were questioned to rate whether they had a problem of budget to run the training program effectively in their colleges or not. In connection with this, a large proportion 64(62.75%) of the teachers from the government Agriculture TVET colleges confirmed that their colleges had faced a problem of budget to conduct the training program in their respective departments, as it should. Conversely, most of the teachers 26(59.09%) from non-government TVET colleges agreed that as such their colleges had no the budget problem. This shows that NGO colleges are much better in terms having adequate and necessary budget to undertake their training programs more likely in better quality than that of government colleges for they are relatively able to provide necessary teaching materials to their respective departments for the betterment of the training program.

Regarding the relevancy of the training courses provided in relation to the world of work, a sizable proportion 52(50.8%) of the teachers from government colleges and most 30(68.18%) of the teacher respondents from non government colleges asserted that the degree of irrelevant nature of the courses to the world of the work that the labour market demanding was replied as being "low" and "very low" respectively.

Moreover, from both types of colleges teachers were inquired to rate if their colleges had adequate and qualified number of teachers at their disposal. To this effect, as the table reveals, majority 56(54.90%) of the teachers from the government colleges confirmed that the above-mentioned problem was found to be "low". Likewise, half 22(50%) of the teachers from the NGO colleges rated the problem of having adequate number and an existing constraint of qualified teachers in their colleges was "very low". From this information, it can be concluded that both types of colleges have no a problem of teachers by qualification of having minimum required standard and by a problem of adequacy of number of teaching staff.

As can be noted from item 8 of the same table, most 30(68.19%) of the teachers from NGO training colleges and majority 54(52.95%) of the teacher respondents from the

government colleges answered that the degree of misutilization of the existing training facilities in their colleges was "very low" and "low" respectively. From such data it is possible to say that the existing training facilities in both types of colleges were in relatively speaking utilized for the effective functioning of the training programs in the sample colleges that the study undertaken.

Respondents were also questioned to indicate the degree of the out-datedness of the training facilities of their colleges. To this end, almost an equal proportion of respondents 42(41.18%) and 18(40.91%) from both types of government and NGO colleges rated the problem of an existing of an out-datedness of the training facilities as "low" and "very low" respectively. Thus, this information reveals that both government and NGO colleges are relatively equipped with modern training facilities to conduct the training programs more efficiently and effectively in their colleges.

In the last item of Table VIII, the teachers were asked to rate the extent of the problem of shortage of vehicles to be used in their colleges for the purpose of the training program. To this effect, 42(41.18%) and 26(59.10%) of the teachers from government and non-government colleges rated the problem of vehicles in their colleges was "low" and "very low" respectively.

As a whole, the above findings obtained from most of the items of Table VIII indicate that there is no as such a serious problem to the extent in both types of colleges and there is also no difference that could be significantly observed as a major problem in government as well as NGO colleges as being most of the items were rated "low" and "very low" in both types of colleges respectively. But, the problems of the budget and accommodation capacity of classrooms were considerably identified as the two prominent problems prevailing in government sample TVET colleges as being rated "very high" and "high" by teacher respondents.

Table IX. A Chi-square Test on Some Parts of the Training Programs that Need to be Improved as Responded by Teachers

REsP = Respondents

N°	Items	College		R- Value		
				Agree	Disagree	Total
1	The curriculum (if it lacks relevance)	Government College	Count	84	8	92
			% within RESP	91.3%	8.7%	100%
			% within R-value	73.7%	57.1%	71.9%
			Total	**65.6%**	**6.3%**	**71.9%**
		NGO College	Count	30	6	36
			% within RESP	83.3%	16.7%	100%
			% within R-value	26.3%	42.9%	28.1%
			Total	**23.4%**	**4.7%**	**28.1%**
2	Training facilities (machines, equipment, tools, etc)	Government College	Count	96	4	100
			% within RESP	96%	4%	100%
			% within R-value	77.6%	25%	71.4%
			Total	**68.6%**	**2.8%**	**71.4%**
		NGO College	Count	28	12	40
			% within RESP	70%	30%	100%
			% within R-value	22.6%	75%	28.6%
			Total	**20%**	**8.6%**	**28.6%**
3	Practical aspect of the training (if it is more of theoretical)	Government College	Count	82	12	94
			% within RESP	87.2%	12.8%	100%
			% within R-value	77.4%	42.9%	70.1%
			Total	**61.2%**	**9%**	**70.1%**
		NGO College	Count	24	16	40
			% within RESP	60%	40%	100%
			% within R-value	22.6%	57%	29.9%
			Total	**17.9%**	**11.9%**	**29.9%**
4	Teachers' qualification (to meet the standard)	Government College	Count	78	12	90
			% within RESP	86.7%	13.3%	100%
			% within R-value	69.6%	85.7%	71.4%
			Total	**61.9%**	**9.5%**	**71.4%**
		NGO College	Count	34	2	36
			% within RESP	94.4%	5.6%	100%
			% within R-value	30.4%	14.3%	28.6%
			Total	**27.0%**	**1.6%**	**28.6%**

Regarding some parts of the training programs that need to be improved, 84(91.3%) of the teacher respondents from government colleges and 30(83.3%) of the teachers from NGO colleges agreed to work on the curriculum. Here, relatively a higher proportion of teachers from the government colleges claimed that the existing curriculum has to be

improved to some extent and the most probable reason might be it lacks relevance to the world of work in competitive labour market. Thus, both types of colleges stressed on the need of changing the existing curriculum.

As far as training facilities such as machines, equipment, tools, etc., are concerned, 96(96%) of the teachers from the government colleges and 28(70%) of the teacher respondents from NGO colleges pointed out that the training facilities of their respective colleges need to be improved for the betterment of the training program provided in the colleges. However, government colleges showed a significantly higher need of expanding and improving training facilities as mentioned above which accounts for 96% of the demand. As the table shows, there is quite a considerable difference in the opinion of respondents of both types of colleges in connection with the need to improve training facilities. From such data one can conclude that NGO colleges have better training facilities for the proper functioning of the training programs than that of government colleges at their disposal. Furthermore, the observation conducted in actual setting of both types of colleges by the researcher proved that the prevalently existing of such similar problems regarding the training facilities required to be improved chiefly in those government TVET colleges.

It is also worth noting the findings obtained from the same Table of item 3 on the issue of practical teaching in both types of colleges. Accordingly, from the data it could be observed that 82(87.2%) and 24(60%) of the teacher respondents from government and NGO colleges respectively confirmed that the practical aspect of the training program needs to be improved for it is more of theoretical aspect. As a matter of fact, the table reveals that both types of these colleges differ in their opinion of practical training. Government TVET colleges believed to have a higher need of practicality of the training program than NGO colleges. From this, it could be understood that practical trainings are being more provided by NGO training colleges than government colleges.

In relation to teachers' qualification in the last item of Table IX, majority of the respondents 34(94.4%) of the teachers from NGO training colleges and 78(86.7%) of the teacher respondents from government colleges approved that teachers' qualification need to meet the required standard which stipulated in the documents of Education and Training policy of the country. Even if almost all the respondents claimed that the qualification of the teachers should meet the required level or standard in that circumstance the opinion of raising teachers' qualification is observed as a concern of both types of colleges.

When closely examined, most of the respondents insist to pay attention for the expansion and improving of the training facilities for the training program. Besides, both types of colleges commonly share these issues (i.e, issue of curriculum, training facilities, practical aspect of the training and teachers' qualification) to a higher proportion. Nevertheless, the government colleges relatively had higher need for expansion and improving on the training facilities and practical aspects of the training programs as compared to that of NGOs training facilities. Conversely, NGO colleges require to upgrade the qualification of their teaching staff as they consisted of a considerable proportion of diploma holders than that of government TVET colleges. (See Appendix 4).

So far the data assembled under three parts of the questionnaire have been processed to construct appropriate interpretations. Winding up the task of presenting, interpreting and analyzing the data, the course of this paper leads to the last chapter that refers to the summary, conclusions and recommendations.

CHAPTER FOUR

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The final part of this thesis deals with the summary of the major findings of the study, the conclusion reached at, and the recommendations forwarded on the basis of the findings.

4.1. Summary

The major purpose of this study was to investigate the extent to which the training colleges of both the government and non-government possess and utilize the training facilities in providing graduates that are adequately trained and competent enough agricultural personnel in Ethiopia. To this end, basic questions were raised which addressed the major objectives that urge for Agriculture TVET colleges to come into being, the extent of adequacy of training facilities and effective utilization of the existing ones in the colleges, the similarities and differences between the government and NGO colleges and finally, the measures that have been so far taken to improve and strengthen training facilities in the respective colleges were raised.

The study employed comparative analysis and it was conducted in four government Agriculture TVET colleges and two non-government training colleges. These sample training colleges were from Harari, Oromia and SNNP on the basis of purposive sampling technique.

The subjects of the study were 588 students and 146 teachers. The teachers were selected through availability sampling while the students wee chosen using purposive sampling technique.

Information was obtained from these sample respondents through questionnaires, observation of actual setting and documentary analysis. The data obtained were

analyzed using various statistical tools such as percentages, One-way ANOVA and Chi-square Test.

According to the results of the data analysis, the major findings of the study are the following.

1. As the finding reveals, participation of female teachers and students in both types of colleges government as well as non-government training programs was found to be "low". The small number participation of females in both colleges might be contributed to the perception of the community where technical and vocational training mainly the agricultural training is regarded as a profession devoted to males.
2. Concerning service year of the respondents, teachers in government Agriculture TVET colleges had relatively served more years in their respective profession than teachers in NGO training colleges.
3. Regarding qualification of the teachers, government colleges had more teachers with BA/B.Sc degrees than NGO colleges. On the other hand, NGO training colleges had a better number of teachers with MA/M.Sc and Ph.D degrees than government Agriculture TVET colleges. Thus, NGO training colleges could be said that they had a better staff composition by qualification. Besides, the study disclosed that the students in the NGO training colleges were relatively older than the students in government colleges by age.
4. With respect to educational level of the students prior to joining their colleges, all the students from NGO colleges were students who completed grade 12. Whereas, the students joined government Agriculture TVET colleges were students who completed grade 10 and 12.
5. Most of the teachers from the NGO colleges and some of the teachers from the government colleges were not provided with any type of refresher courses pertaining to their training programs recently.

6. According to the order of their preference of responses, for most of the teachers in both types of colleges, the major objectives of the training colleges want to achieve were:

- to produce middle-level manpower the country requires;
- to enrich trainees' knowledge and practical skills through the training programs thereby to have dedicated citizens having the readiness for either self or wage employment;
- to introduce modern farm- technology and industry in the rural areas through its graduates;
- to provide employment opportunities to graduate students; and to support students that were not able to pursue their education at degree level and to develop self-reliance in solving personal and societal problems on the part of trainees as well. In addition, non-government colleges aimed at alleviating poverty of economically disadvantaged community groups which is being as one of the major objectives pursued by NGOs largely by Menschen fur Menschen Agro-Technical Training college.

7. It was evidenced that most of the teachers from the government Agriculture TVET colleges claimed some areas that need to be improved for further expansion of the training programs as follows:

- the existing curriculum lacked relevance;
- colleges were not adequately equipped with the necessary training facilities that would cope with an alarmingly increased enrollment rates of students from year to year; and training programs were more of theoretical and thus practical training aspects received less attention by the sample colleges.

Conversely, their counterparts did not seriously raise the above-mentioned claims that made by government college respondents i.e., by NGO colleges. However, teachers

from the NGO colleges claimed that the qualification of some of their teachers, which favour the training programs should meet the required standards.

8. Based on the finding, NGO training colleges had a higher number of administrative staff to support the academic activities of the training program of their colleges with the required level of education than that of government colleges. Even the available documents indicated that the existing few number of the supportive staff had no the desired standard of educational background in government colleges.
9. The majority of the respondents reported that NGO training colleges had a better number of instructors by staff composition of educational qualification and training facilities that consistent with the number of trainees enrolled in their respective colleges as compared to that of government colleges.
10. It was seen that in government TVET colleges there were no adequate classrooms for the training program and such problem of shortage of classrooms according to the opinion of the majority of the respondents emanated from that the number of students enrolled in their colleges exceeded the available training facilities in which the number of students is being continually increased from year to year without significant increment of facilities. Whereas, with this regard, NGO colleges were observed that they enrolled the number of students each year only that what their colleges in general and their facilities in particular are able to accommodate.

Interestingly, the actual settings were observed that in both types of colleges as much as possible some attempts were made to a certain degree in utilizing the available facilities exhaustively.

11. The information obtained from the respondents indicates that both colleges (government and NGO) had a problem of having adequate workshops, teaching aids, raw materials, etc., even if the problems seemed more sever in government colleges than NGO training colleges. Besides, both types of colleges had less

number of laboratories, which were not equipped with the necessary supplies and equipment for laboratory works. Nevertheless, there were some attempts made to conduct laboratory experiments in NGO colleges than government colleges to promote the training program by using laboratory investigations.

12. From the finding it was observed that there were no adequate farmlands in both types of colleges which enable them to demonstrate practical teaching on. Partly, the issue of farmland seemed not perceived as one part of the training facilities by majority of government TVET colleges. Moreover, it was evidenced that a great proportion of the two study groups i.e., of the students and the teachers asserted that health service given to the students was almost non-existent in the government TVET colleges. Whereas, the provision of such service as both respondents in NGO colleges positively responded it seemed relatively better as it was being rated above the average.
13. The majority of the respondents from government TVET colleges reported that the provision of food service was either inadequate or inavailable. However, the provision and utilization of food service and cafeteria conditions in NGO training colleges looked relatively better than government colleges as it was rated above the average by both teachers and students. In addition, the provision and availability of dormitory service, a very noticeable portion of teacher and student respondents from the government colleges confirmed that students were not provided with dormitory service in their colleges rather they were given money to rent houses from the outside of the college. However, a very few number of female students were provided with dormitory service in all sample government colleges found in Oromia region. To the country, NGO training colleges provided both their female and male students with better dormitory service.

Undoubtedly, sample NGO colleges were observed that they give due emphasis to the importance and adequacy of the basic training facilities that can fit with the

annual trainees intake capacity of their colleges as a matter of fact, the observation made by the researcher at the actual settings also proved the above findings.

14. Both the government and NGO training colleges did not give any guidance service that worth mentioning in well-organized manner to their students. Though the guidance service was not properly given an appropriate place in both colleges, the problem seemed much worse in government TVET colleges than NGO training colleges.

15. Most of the respondents from both types of colleges asserted that almost all sample training colleges (i.e., government and NGO) were constructed where roads are convenient for the transportation to both the students and the teachers.

Besides, almost both types of colleges had no serious problem regarding the availability and the power supply of water in their colleges so as to use for various purposes. However, the two government colleges (i.e, from E. Hararge and W. Hararge) sometimes faced a problem of water supply [i.e., Kombolcha and Chiro Agricultural TVET college respectively].

16. Concerning factors affecting the proper functioning of the training programs of the government colleges, based on the data of respondents some of the major problems can be identified as follows:

- Limited accommodation capacity of existing classrooms, workshops, etc., in relation to the number of students was found to be "high" problem for government TVET colleges.
- Budget problem to provide the training programs with different teaching materials was also identified as "very high" problem in government colleges.

17. To sum up, according to the responses of open-ended questions forwarded by the teacher and student respondents from government TVET colleges some of the major problems that hindered the proper implementation of the training programs were:

- Lack of adequate training facilities [classrooms, workshops, laboratories, student seats, etc] which fail to go in line with the ever increasing enrollment rate of the students;
- Lack of reference books, textbooks, learning materials, teaching aids and the likes;
- Weak management;
- Neglecting the use of already constructed facilities such as library and computer room [in Kombolcha Agriculture TVET College];
- Inadequate funding and delaying in reaching colleges timely;
- Absence of provision of health service to the students; and
- Almost practical training was non-existent in all government colleges.

On the other hand, both types of the respondents from NGO training colleges raised some major problems that impeded the training programs as follows:

- Absence of upgrading the educational status of the teachers with refresher courses so that they might cope with the ever changing technological development;
- Inadequacy and out-datedness of reference books in the college libraries; and
- Weak attention given to practical training.

4.2. Conclusion

It is a fact beyond dispute that the successful of the training programs does not entirely depend on the availability of skilled manpower alone. The training of middle-level agriculture personnel is also one of the most important factors for the economic development of the country. In fact, in producing such required manpower with the necessary knowledge and skills, the availability and adequacy of training facilities

along with conducive policy environment as well as other factors are equally important.

In light of those major findings of the study mentioned under the summary, the following conclusion is drawn.

As the study revealed availability and utilization of training facilities of the colleges under the study was insufficient, as they were supposed to be. Mainly, the government Agriculture TVET colleges were not relatively equipped with minimum requirements of laboratories, workshops, libraries, classrooms etc., and with necessary supportive administrative staff as well. In sample colleges, basic learning materials such as textbooks, relevant and up-to-date reference books, machines, agricultural tools, equipment, student seats, budget and management practices and the other were to be among the major problems of the training colleges.

However, concerning the problems already mentioned above NGO training colleges had relatively better laboratories for their respective departments, well equipped workshops, slightly furnished libraries and also had a considerable capacity to provide their students with raw materials and necessary teaching aids as well as with enough amount of machines, equipment and tools in their workshops and laboratories for the training purposes.

As a matter of fact, both types of colleges faced a problem of having adequate farmlands for practical teaching aspects. As a result, in many government sample colleges practical teaching was either practised in very small scope or non-existent. Even if the conditioned seemed better, NGO colleges also did not give as such significant attention to the practical teaching in their respective colleges. Thus, the extent of the problem in both types of colleges seemed vary. To mention, In NGO training colleges, for teachers provision of in-service training as one of the strategies for the staff development was not given due attention by their colleges. Whereas,

claimed to have adequate budget to conduct the training programs effectively mainly that of practical teaching part.

In general, there is a widespread shortage of appropriate and adequate reference books to be used in both government as well as NGO colleges. Surprisingly, even the available books in the libraries were out-dated and in poor condition.

Among the other functions, one of the aims of the management in the training college is to make the most efficient use of the available training facilities in order to achieve the predetermined objectives that largely aimed at the community to be served by the college and the national system of the education and training policy. In the two government colleges, one from the Oromia, at Chiro College and the other from SNNP, at Dilla college, there were idle machines, trucks, workshops and so forth that could not yet serve the training programs recently. This might be originated from the fear of facing accountability on the part of the college management. This doesn't hold true for other colleges, despite inadequate number of supportive staff, they tried to utilize the existing facilities almost to its fullest use as much as they can.

The inadequacy of the training facilities chiefly in government TVET colleges does not come from the blue. It is evidenced that the increased demands for training facilities largely resulted from the projected growth in college's enrollment that is being increased from year to year rather than any significant increase of facilities or reduction in class size. The other reason more likely probable to conclude is that government colleges seemed not to consider the importance of some of the basic facilities that can fit with the annual trainees intake capacity of their training colleges. In this respect, NGO training colleges have better and appreciable trends in that in most cases they usually admit students that their colleges in general and their facilities in particular to accommodate.

In general, as the study revealed, it is possible to deduce that shortage of textbooks, lack of reference materials, insufficient provision of learning materials, inadequate

facilities, shortage of health service, and the likes were mainly characterized in government sample TVET colleges as major implementation problems of the program by the study as compared to that of NGO training colleges.

Therefore, when the two types of colleges compared with each other, even though NGO colleges seemed better in availability and utilization of training facilities, despite the various problems that government TVET colleges faced, it is possible to say their endeavors and achievements can also be considered as the promising and encouraging ones.

4.3. Recommendations

On the basis of the outcomes of the study obtained and conclusion arrived at, the following suggestions are forwarded to promote the colleges through the use of available and adequate training facilities in general and to produce quality and dedicated graduates of agricultural workers that the labour market demands in particular.

4.3.1. Purchase and distribute supplementary reading materials and other relevant and up-to-dated textbooks to college libraries or photocopy books and other teaching materials which are of helpful for the training purposes from nearby other universities or equivalent colleges.

4.3.2. The on going construction of classrooms, dormitories, clinics, libraries, laboratories, houses for teachers, and the likes in government Agriculture TVET colleges should be hurried and ought to be equipped with necessary and adequate furniture so as to provide timely services for the proper functioning of the training programs of the colleges. Besides, sufficient budget for the supply of adequate water should be allocated for the two colleges found in both East and west Hararghe Zones.

4.3.3. The necessary training materials should be bought and distributed to the respective departments prior to the time of the training programs and made available to both teachers and students to be used properly in the colleges in order to enhance the effectiveness of the training programs.

4.3.4. Ensuring the availability of essential training facilities is a prerequisite for both quality improvement and for quantitative expansion of training and education. Therefore, workshops, laboratories, classrooms, and the likes should be equipped adequately with the necessary machines, tools, equipment, seats, etc., that are able to accommodate enrolled students of the respective departments. In addition, teachers have to be encouraged to produce local teaching aids from locally available materials other than waiting only for things to be purchased by government budget. For the government, before launching the training programs, as good trend was observed in NGOs, the government should ensure the extent of its available resources either human, material or finance that can be helpful in implementing the objectives of the training programs in light of the enrollment rates of their students. Furthermore, the issue of expansion of the training facilities that are being undertaken should be given equal emphasis for every college of the government that providing similar programs regardless of the regions they belong to, being they are financed by Federal government TVET department of MOA.

4.3.4. Before claiming for additional facilities, government TVET colleges should ensure that whether they utilize their facilities exhaustively to its fullest use for the purpose of the effective implementation of the training programs.

4.3.5. If it is properly devised, it is also possible to minimize the existing problem of facilities by sharing them with other equivalent colleges that found nearby (i.e., universities, colleges, research centers, dairy farming, woreda Agricultural Office, etc.).

4.3.12. Farm land should get due attention as it is being one of the training facilities that helps much for the effective functioning of the training program by way of demonstrating practical teaching on it in government TVET colleges. Therefore, it is quite indispensable for TVET colleges to have this type of facility from the government in general and from the surrounding community in particular to demonstrate some aspects of practical teaching on it.

4.3.13. The training programs cannot be successful only with teachers who are dealing with classroom teaching. Administrative staffs are required to support the academic activities of the training programs. Among other supportive staff, unfortunately, laboratory technicians and librarians were not assigned in some of the government colleges. Therefore, these key personnel should be promptly assigned in such colleges if the training programs expected to be implemented effectively. Besides, care should be taken whenever assigning a person to top management position in such circumstance, only capable and competent managers must be identified and assigned who are possessing managerial skills that required of him.

Finally, these government TVET colleges were the newly opened ones that established with the aim of providing a 10+3 program in producing the middle-level manpower the country requires currently. On this ground, the writer recommends a more detail and comprehensive investigation in the same area so as to further strengthen the findings of this study and since such study on issue of training facilities is not an end by itself in area of Agriculture TVET colleges rather it is likely to be a small endeavor to explore.

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APPENDICES

Addis Ababa University
School of Graduate Studies
Department of Educational Planning and Management

Questionnaire to be filled by Technical and Vocational Teachers

Introduction: The purpose of this questionnaire is to investigate as to how training facilities have effect on the provision of effective training programs in both Government and Non-government Technical and Vocational Training colleges of Agriculture in the Harari, Oromia and SNNP regions.

Besides, it is also the intention of this instrument to appreciate the strong points discovered and thereby forward possible solutions for the problems encountered so far. Accordingly, the success of this study depends on the sincerity (honesty and frankness) of your response that is of great value.

Instruction: A. No need of writing your name

B. For alternative answers fill in the box by using 'X' mark.

C. Please, write short answer on the space provided.

Thank you in advance for your concern

Part One: Personal Profile

1. Name of the training college: _____
2. Ownership of the training college

   A. Government ☐ B. Non-government ☐
3. Sex A. Male ☐ B. Female ☐
4. Age range A. 23 - 28 years C. 35 - 39 years

   B. 29 - 34 D. 40 years and above
5. Major field of study _____

6. What is your educational status and respective year of service?

Qualification	Year of Service				
	1- 5	6-10	11-15	16-20	above 20
A. Diploma (12+2)	☐	☐	☐	☐	☐
B. B.A/ Sc	☐	☐	☐	☐	☐
C. M.A/M.Sc	☐	☐	☐	☐	☐
D. Ph.D	☐	☐	☐	☐	☐

E. If others, specify _____

7. Have you attended any type of refresher courses recently?

A. Yes ☐ B. No ☐

Part Two: General Questions

No	Factors	Agree	Undecided	Disagree
8	From your point of view, what is/are the major objective/s of your training college?			
	A. To produce middle-level manpower	☐	☐	☐
	B. To provide employment opportunities to graduate students	☐	☐	☐
	C. To support students that were not able to pursue their education at degree level	☐	☐	☐
	D. To introduce modern farm-technology and industry in the rural areas through its graduates	☐	☐	☐
	E. To enrich trainees' knowledge and practical skills through the training programs	☐	☐	☐
	F. If others, please specify_____			
9	In your opinion, if need arises to expand the training programs which need to be improved			
	A. The curriculum (if it lacks relevance)	☐	☐	☐
	B. Training facilities (machines, equipment, etc)	☐	☐	☐
	C. Practical aspect of the training (if it is more of theoretical)	☐	☐	☐
	D. Teachers' qualification (to meet the standard)	☐	☐	☐
	E. If others, specify _____			

Part Three: Opinion Survey

Given below are a number of points indicating about adequacy and quality of training facilities, trainers, trainees, machines, workshops, classrooms, laboratories, libraries, teaching materials, and so on.

Please, score these items in 5-point scale according to your view of their appropriateness or otherwise in accordance with the degree of your agreement to each item.

Scoring scale:

5 = Very good 4 = Good
3 = Moderate 2 = Poor 1 = Very poor

[Please, indicate your choice by circling one of the following]

No	*Factors*	*5=Very good*	*4 = Good*	*3 = Moderate*	*2 = Poor*	*1= Very poor*
10	Adequacy of teachers, students and supportive staff					
10.1	Availability of teachers with necessary skills and educational qualification	5	4	3	2	1
10.2	Adequacy of supportive staff with the required level of education	5	4	3	2	1
10.3	The number of trainees as compared to the number of instructors and training facilities	5	4	3	2	1
11	Quality and Adequacy of Training Facilities					
11.1	Classroom condition	5	4	3	2	1
11.2	Condition of the workshops	5	4	3	2	1
11.3	Adequacy and modernness of equipment/machines	5	4	3	2	1
11.4	Availability and adequacy of teaching aids and raw materials	5	4	3	2	1
11.5	The extent to which related and up-to-dated references and textbooks in the library	5	4	3	2	1
11.6	Supplies, equipment and the likes for laboratory works	5	4	3	2	1
11.7	Adequacy of farm lands for practical works	5	4	3	2	1
11.8	Convenience of the site where college established on	5	4	3	2	1
11.9	Time allotted for practical aspect of training	5	4	3	2	1
12	The extent of utilization and availability of general service					
12.1	Health service (clinic)	5	4	3	2	1
12.2	Food service (cafeteria)	5	4	3	2	1
12.3	Dormitory service (only if provided to students)	5	4	3	2	1
12.4	Guidance service	5	4	3	2	1
12.5	Road accessibility (convenient for transportation)	5	4	3	2	1
12.6	Power supply of water	5	4	3	2	1

No	*Factors*	*Rating*				
		5 = Very high	*4 = High*	*3 = Medium*	*2 = Low*	*1 = Very low*
13	To what extent do the following factors affect the operation of the training of the respective college>	☐	☐	☐	☐	☐
131	Limited capacity of accommodation of the existing classrooms, workshops, etc in relation to the number of students	☐	☐	☐	☐	☐
13.2	Inappropriateness machines as well as equipment to the nature of courses and capacity of trainees	☐	☐	☐	☐	☐
13.3	Shortage of the training time	☐	☐	☐	☐	☐
13.4	Inadequate number of trainees	☐	☐	☐	☐	☐
13.5	Budget problem	☐	☐	☐	☐	☐
13.6	Irrelevant nature of training in relation to the world of work	☐	☐	☐	☐	☐
13.7	Having no adequate and qualified teachers	☐	☐	☐	☐	☐
13.8	The degree of misutilization of existing training facilities	☐	☐	☐	☐	☐
13.9	Out-datedness of the training facilities	☐	☐	☐	☐	☐
13.10	Shortage of vehicles	☐	☐	☐	☐	☐
13.11	Others, (please specify) _____					

14. In your college, what are the major problems that hindered the implementation of training programs?_____
_____
_____

15. If any things done, what are the major strategies so far used in your college to overcome or to minimize those identified problems? _____
_____
_____

16. What points do you suggest that would be helpful to improve technical and vocational training programs? _____
_____
_____

NB: Please, you can use the back page of this paper for more additional comments.

Thank you!

በአዲስ አበባ ዩኒቨርሲቲ
በድህረ ምረቃ ት/ቤት
የትምህርት ዕቅድና አመራር ዲፓርትመንት

መጠይቅ፡- በ2ኛ ዓመት የቴክኒክና ሙያ ትምህርት ሠልጣኝ ተማሪዎች የሚሞላ::

የዚህ መጠይቅ ዋና አላማ በሐረሪ፤ በኦሮሚያና በደቡብ ብሔር ብሔረሰቦች ባሉት መንግሥታዊና መንግሥታዊ ባልሆኑ ማሰልጠኛ ኮሌጆች ውስጥ ለሥልጠና እገዛ የሚያደርጉ የማሰልጠኛ ፋሲሊቲዎች (Training Facilities) ያሉበትን ተጨባጭ ሁኔታ ለማጥናት ታስቦ የተዘጋጀ ነው::

እንደዚሁም በተገኘ ጥናት ላይ በመመርኮዝ ጠንካራ አሠራሮችን ለማድነቅና ለሚታዩት ደካማ ጐኖች ደግሞ የማሻሻያ የመፍትሔ ሀሳብ ለመጠቆም ነው::

ይህን ተረድተው መልስ በመስጠት ስለተባበሩኝ ከልብ አመሰግናለሁ::

መመሪያ፡- 1. ሥም መፃፍ አያስፈልግም

2. ትክክለኛ መልስ ሲሰጡ፡-

ሀ. በተሰጠው ሳጥን ውስጥ የ «X» ምልክት ያድርጉ

ለ. ለክፍት ቦታዎች መልስዎን በአጭሩ ያስቀምጡ

ማሳሰቢያ፡- ለሥራ ያመቸኝ ዘንድ በወንዶች ፆታ ብቻ በመጠቀሜ ሴት ተማሪዎችን ከወዲሁ ይቅርታ እጠይቃለሁ::

ክፍል አንድ መረጃ

1. የማሰልጠኛው ኮሌጅ ሥም _____
2. ኮሌጁ ሀ. የመንግሥት ☐ ለ. መንግሥታዊ ያልሆነ ድርጅት ☐
3. ዕድሜ ሀ. 16-18 ዓመት ☐ ለ. 19-21 ዓመት ☐
   ሐ. 22-24 ዓመት ☐ መ. 25 ዓመት እና ከዚያ በላይ ☐
4. ፆታ ሀ. ወንድ ☐ ለ. ሴት ☐
5. ኮሌጅ ከመግባትዎ በፍት የነበረዎት የትምህርት ደረጃ
   ሀ. 10ኛ ክፍል ያጠናቀቁ ☐ ለ. 12ኛ ክፍል ያጠናቀቁ ☐
   ሐ. ሌላ _____

ክፍል ሁለት መጠይቅ

6. በእርስዎ አስተያያት በማሰልጠኛው ኮሌጅ ውስጥ ያሉት ለሥልጠና የሚያገለግሉ ፋሲልቲዎችና ሌሎችንም ተዘማጅ ጉዳዩች ምን ያህል በቂ እንደሆኑ በተሰጡት የማወዳደሪያ ነጥቦች አንዱን ብቻ በመምረጥ ይክበቡ::

5 = በጣም በቂ 4 = ከበቂ በላይ 3 = በቂ

2 = በመጠኑ በቂ 1 = በቂ አይደለም

6.1	በኮሌጅ ያሉት የመምህራን የትምህርት ደረጃና ብቃት ከኮሌጁ የሥልጠና ኘሮግራም ጋር ሲታይ	5	4	3	2	1
6.2	የአስተዳደር (የድጋፍ ሰጭ ሠራተኞች) ብዛትና የላቸው የትምህርት ደረጃ	5	4	3	2	1
6.3	የተማሪ ቁጥር ከማሰልጠኛ ፋሲልቲዎችና ከመምህራን ቁጥር ጋር ሲታይ	5	4	3	2	1
6.4	የመማሪያ ክፍሎች አሁን ባሉበት ሁኔታ ለስልጣና	5	4	3	2	1
6.5	የወርክሾኘ ክፍሎች	5	4	3	2	1
6.6	የመሣሪያና የማሽን ብዛትና ጥራት	5	4	3	2	1
6.7	የማስተማሪያ መሣሪያዎችና ጥሬ ዕቃዎች አቅርቦት	5	4	3	2	1
6.8	በቤተመጽሐፍት ያሉት መጽሐፍት ዘመናዊነትና ለሥልጣና አስፈላጊነት	5	4	3	2	1
6.9	የላብራቶሪ መሥሪያዎችና ዕቃዎች	5	4	3	2	1
6.10	ለሠርቶ ማሣያ የኮሌጅ የእርሻ ሥፍራ	5	4	3	2	1
6.11	አሁን ኮሌጁ የተሠራበት ቦታ ለሥልጠና አመቺነቱ ሲታይ	5	4	3	2	1
6.12	ለተግባር ትምህርት የተመደበው ጊዜ	5	4	3	2	1
6.13	በአጠቃላይ የማሰልጠኛው ኘሮግራም በኮሌጅ አቅም ጋር ሲታይ	5	4	3	2	1

	7. ስለአጠቃላይ አገልግሎት ሁኔታ					
7.1	የህክምና አገልግሎት (ክሊኒክ)	5	4	3	2	1
7.2	የምግብ አገልግሎት (ካፍቴሪያ)	5	4	3	2	1
7.3	የመኝታ ቤት አገልግሎት (በኮሌጅ የመኝታ አገልግሎት ካለ)	5	4	3	2	1
7.4	የጋይዳንስ (የምክር) አገልግሎት	5	4	3	2	1
7.5	የቦታው ለትራንስፓርት አመቺ መሆን	5	4	3	2	1
7.6	የውሃ አገልግሎትና አቅርቦት	5	4	3	2	1
7.7	ሌላ ካለ ይግለፀ _____					

8. በኮሌጅዎ ውስጥ የሥልጠናውን ኘሮግራም በአግባቡ እንዳይፈፀም ችግሮች ናቸው ብለው የሚያስቡትን ቢጠቁሙን፤ _____

_____

_____

_____

_____

_____

9. ከላይ የተጠቀሱትን ችግሮች በኮሌጅ ደረጃ ለማቃለልና ብሎም ለማስወገድ የተወሰዱ ስትራቴጅያዊ እርምጃዎች ካሉ ቢገለፀልን፤ _____

_____

_____

_____

_____

10. የኮሌጅን የቴክኒክና ሙያ ስልጠና ኘሮግራም ይበልጥ ለማጠናከርና ለማሻሻል ይበጃሉ ብለው የሚያስቡትን የመፍትሔ ሀሳቦች ቢጠቁሙን፤ _____

_____

_____

_____

_____

አመሰግናለሁ!

Addis Ababa University
School of Gradate Studies
Department of Educational Planning and Management

A Guide for Documentary Analysis

This guide will be filled by principals/Deans of colleges. It is aimed to collect relevant information on the extent of availability of the training facilities, number of trainees, trainers and the likes from various documents.

1. Sex A. Male ☐ B. Female ☐
2. Age _____
3. Academic qualification _____
4. Field of specialization _____
5. Year of Service:
   A. As a teacher _____ Year/s C. As educational officer _____ years
   B. A Principal _____ Year/s D. Others, specify _____
6. Have you even attended refresher courses, recently?
   A. Yes ☐ B. No ☐
7. Name of the training college _____
8. Ownership of the training college. A. Government ☐ B. Non-government ☐
9. Year of college establishment _____
10. Number of total classrooms _____
11. Employees of the College:
    A. Administrative staff M _____ F _____ Total _____
    B. Academic staff M_____ F _____ Total _____
       Diploma (12+2) M_____ F _____ Total _____
       Degree M_____ F _____ Total _____
       MA/M.Sc M_____ F _____ Total _____
       Ph.D M_____ F _____ Total _____
       Others _____

12. Trainees enrolled by field of study and sex

Year	Field of study	Number of trainees			Remark
		Male	Female	Total	
2001/2002	1				
1994 E.C	2				
	3				
	4				
	5				
	Grand Total				
2002/2003	1				
1995 E.C	2				
	3				
	4				
	5				
	Grand Total				
2003/2004	1				
1996 E.C	2				
	3				
	4				
	5				
	Grand Total				

13. In your college, what are the major problems that hindered the implementation of the training programs? _____

_____

14. If there, what are the major strategies so far used in your college to over come or minimize those identified problems?_____

_____

15. What points do you suggest as solutions that would be helpful to improve technical and vocational training programs?_____

_____

Thank you!

Addis Ababa University
School of Graduate Studies
Department of Educational Planning and Management

Observation Check- list to supervise Technical Training College

The purpose of this checklist is to collect relevant data pertaining to the condition of training facilities of Government and NGO colleges

1. Name of the College _____
2. Ownership A. government ☐ B. Non-government ☐
3. Establishment Year _____

		5 = Very good	4 = Good	3 = Moderate	2 = Poor	1= Very poor
4	General condition of training facilities					
4.1	Classrooms condition	5	4	3	2	1
4.2	Classroom size	5	4	3	2	1
4.3	Blackboards	5	4	3	2	1
4.4	Desks/seats	5	4	3	2	1
5	Classes used for other offices					
5.1	Bookstore	5	4	3	2	1
5.2	Computer rooms	5	4	3	2	1
5.3	Laboratories	5	4	3	2	1
5.4	Libraries	5	4	3	2	1
5.5	Lecture theaters (conference hall)	5	4	3	2	1
5.6	Dormitories (if any)	5	4	3	2	1
5.7	Cafeterias (if any) _____					
6	Adequacy of workshop facilities					
6.1	Equipment/ machines and their spare-parts	5	4	3	2	1
6.2	Teaching aids	5	4	3	2	1

6.3	Hand tools	5	4	3	2	1
6.4	Raw materials	5	4	3	2	1
7	General service					
7.1	Access to power	5	4	3	2	1
7.2	Attractiveness of the college as training institution (trees, flowers, sport field, farm land, fence…)	5	4	3	2	1
7.3	Cleanness of the compound and availability of the toilet	5	4	3	2	1
7.4	Access to water supply	5	4	3	2	1
7.5	Provision for future expansion	5	4	3	2	1
7.6	Suitability of income generating	5	4	3	2	1
7.7	Maintenance capacity of the college	5	4	3	2	1
7.8	Utilizing the existing facilities to its fullest use	5	4	3	2	1
8	Overall condition of machines/equipment in relation to					
8.1	Upto-datedness	5	4	3	2	1
8.2	Its connection with local situation	5	4	3	2	1
8.3	Relevance to the capacity of the students	5	4	3	2	1
8.4	Appropriateness to the capacity of trainers	5	4	3	2	1
8.5	Relevance to the content of course teaching materials	5	4	3	2	1

Date _____20041

Appendix 4- Sample of Summary of One-way ANOVA

One-way q6 1

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	2.8780	1.34837	.06079	2.7586	2.9975	1.00	5.00
NGO College	96	3.3333	1.28691	.13134	3.0726	3.5941	1.00	5.00
Total	588	2.9524	1.34802	.05559	2.8432	3.0616	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.650	1	16.650	9.292	.002
Within Groups	1050.016	586	1.792		
Total	1066.667	587			

One-way q6 2

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	2.2520	1.17401	.05293	2.1480	2.3560	1.00	5.00
NGO College	96	3.4167	1.35853	.13865	3.1414	3.6919	1.00	5.00
Total	588	2.4422	1.27953	.05277	2.3385	2.5458	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	108.953	1	108.953	74.930	.000
Within Groups	852.081	586	1.454		
Total	961.034	587			

One-way q6 3

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	2.2846	1.29872	.05855	2.1695	2.3996	1.00	5.00
NGO College	96	3.4583	1.29710	.13238	3.1955	3.7211	1.00	5.00
Total	588	2.4762	1.36809	.05642	2.3654	2.5870	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	110.671	1	110.671	65.641	.000
Within Groups	987.996	586	1.686		
Total	1098.667	587			

One-way q6 4

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	2.0081	1.21428	.05474	1.9006	2.1157	1.00	5.00

Appendix 4- Sample of Summary of One-way ANOVA

NGO College	96	3.5417	1.50729	.15384	3.2363	3.8471	1.00	5.00
Total	588	2.2585	1.38667	.05719	2.1462	2.3708	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	188.907	1	188.907	117.790	.000
Within Groups	939.801	586	1.604		
Total	1128.707	587			

One-way q6 5

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	1.3902	.89017	.04013	1.3114	1.4691	1.00	5.00
NGO College	96	3.1250	1.40113	.14300	2.8411	3.4089	1.00	5.00
Total	588	1.6735	1.17998	.04866	1.5779	1.7690	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	241.733	1	241.733	246.112	.000
Within Groups	575.573	586	.982		
Total	817.306	587			

One-way q6 6

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	1.3415	.78509	.03539	1.2719	1.4110	1.00	5.00
NGO College	96	3.1667	1.52638	.15579	2.8574	3.4759	1.00	5.00
Total	588	1.6395	1.16125	.04789	1.5454	1.7335	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	267.597	1	267.597	299.278	.000
Within Groups	523.967	586	.894		
Total	791.565	587			

One-way q6 7

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	1.4715	.72573	.03272	1.4073	1.5358	1.00	5.00
NGO College	96	2.9583	1.60208	.16351	2.6337	3.2829	1.00	5.00
Total	588	1.7143	1.07631	.04439	1.6271	1.8015	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	177.565	1	177.565	207.098	.000

Appendix 4- Sample of Summary of One-way ANOVA

Within Groups	502.435	586	.857		
Total	680.000	587			

One-way q6 8

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	1.6016	1.01908	.04594	1.5114	1.6919	1.00	5.00
NGO College	96	2.4167	1.56048	.15927	2.1005	2.7328	1.00	5.00
Total	588	1.7347	1.16348	.04798	1.6405	1.8289	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	53.360	1	53.360	42.184	.000
Within Groups	741.252	586	1.265		
Total	794.612	587			

One-way q6 9

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	1.2439	.71460	.03222	1.1806	1.3072	1.00	5.00
NGO College	96	2.4583	1.66649	.17009	2.1207	2.7960	1.00	5.00
Total	588	1.4422	1.03847	.04283	1.3581	1.5263	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	118.469	1	118.469	134.916	.000
Within Groups	514.565	586	.878		
Total	633.034	587			

One-way q6 10

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	2.3984	1.26838	.05718	2.2860	2.5107	1.00	5.00
NGO College	96	3.0417	1.62815	.16617	2.7118	3.3716	1.00	5.00
Total	588	2.5034	1.35327	.05581	2.3938	2.6130	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	33.241	1	33.241	18.699	.000
Within Groups	1041.752	586	1.778		
Total	1074.993	587			

One-way q6 avg

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	Minimum	Maximum

Appendix 4- Sample of Summary of One-way ANOVA

					Lower Bound	Upper Bound		
Government College	492	2.0288	1.26874	.05720	1.9164	2.1412	1.00	5.00
NGO College	96	3.1442	1.51699	.15483	2.8369	3.4516	1.00	5.00
Total	588	2.2109	1.37446	.05668	2.0996	2.3222	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	99.947	1	99.947	58.048	.000
Within Groups	1008.980	586	1.722		
Total	1108.927	587			

One-way q7 1

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	1.4472	.80935	.03649	1.3755	1.5188	1.00	5.00
NGO College	96	3.6250	1.32387	.13512	3.3568	3.8932	1.00	5.00
Total	588	1.8027	1.21680	.05018	1.7042	1.9013	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	380.990	1	380.990	457.382	.000
Within Groups	488.126	586	.833		
Total	869.116	587			

One-way q7 2

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	1.7236	1.01557	.04579	1.6336	1.8135	1.00	5.00
NGO College	96	3.2500	1.42902	.14585	2.9605	3.5395	1.00	5.00
Total	588	1.9728	1.22965	.05071	1.8732	2.0724	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	187.158	1	187.158	156.587	.000
Within Groups	700.407	586	1.195		
Total	887.565	587			

One-way q7 3

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	1.5122	1.00804	.04545	1.4229	1.6015	1.00	5.00
NGO College	96	3.7500	1.13323	.11566	3.5204	3.9796	1.00	5.00
Total	588	1.8776	1.32025	.05445	1.7706	1.9845	1.00	5.00

Appendix 4- Sample of Summary of One-way ANOVA

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	402.257	1	402.257	379.630	.000
Within Groups	620.927	586	1.060		
Total	1023.184	587			

One-way q7 4

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	1.8211	1.14192	.05148	1.7200	1.9223	1.00	5.00
NGO College	96	2.5000	1.45095	.14809	2.2060	2.7940	1.00	5.00
Total	588	1.9320	1.22250	.05042	1.8330	2.0310	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	37.019	1	37.019	25.817	.000
Within Groups	840.260	586	1.434		
Total	877.279	587			

One-way q7 5

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	3.1220	1.47531	.06651	2.9913	3.2526	1.00	5.00
NGO College	96	4.0833	1.08256	.11049	3.8640	4.3027	1.00	5.00
Total	588	3.2789	1.46175	.06028	3.1605	3.3973	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	74.242	1	74.242	36.869	.000
Within Groups	1180.016	586	2.014		
Total	1254.259	587			

One-way q7 6

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	1.9837	1.16977	.05274	1.8801	2.0874	1.00	5.00
NGO College	96	2.5417	1.42102	.14503	2.2537	2.8296	1.00	5.00
Total	588	2.0748	1.23044	.05074	1.9752	2.1745	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	25.004	1	25.004	16.965	.000
Within Groups	863.703	586	1.474		

Appendix 4- Sample of Summary of One-way ANOVA

					Lower Bound	Upper Bound		
Government College	102	3.7059	1.24748	.12352	3.4609	3.9509	1.00	5.00
NGO College	44	4.0000	1.18125	.17808	3.6409	4.3591	1.00	5.00
Total	146	3.7945	1.23130	.10190	3.5931	3.9959	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.659	1	2.659	1.763	.186
Within Groups	217.176	144	1.508		
Total	219.836	145			

One-way q12 6

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	3.2157	1.36887	.13554	2.9468	3.4846	1.00	5.00
NGO College	44	4.2727	1.06452	.16048	3.9491	4.5964	1.00	5.00
Total	146	3.5342	1.37045	.11342	3.3101	3.7584	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	34.347	1	34.347	20.783	.000
Within Groups	237.982	144	1.653		
Total	272.329	145			

One-way q12 avg

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	2.3954	1.39442	.13807	2.1215	2.6693	1.00	5.00
NGO College	44	3.8106	1.23973	.18690	3.4337	4.1875	1.00	5.00
Total	146	2.8219	1.49490	.12372	2.5774	3.0664	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	61.564	1	61.564	33.776	.000
Within Groups	262.473	144	1.823		
Total	324.037	145			

Appendix 4- Sample of Summary of One-way ANOVA

Total	888.707	587			

One-way q7 avg

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	492	2.0559	1.29228	.05826	1.9414	2.1704	1.00	5.00
NGO College	96	3.3854	1.45725	.14873	3.0902	3.6807	1.00	5.00
Total	588	2.2730	1.40799	.05806	2.1589	2.3870	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	141.988	1	141.988	81.437	.000
Within Groups	1021.702	586	1.744		
Total	1163.690	587			

One-way q10 1

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government	102	3.4118	.99854	.09887	3.2156	3.6079	1.00	5.00
College								
NGO College	44	3.2727	.92419	.13933	2.9917	3.5537	1.00	5.00
Total	146	3.3699	.97566	.08075	3.2103	3.5295	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.594	1	.594	.623	.431
Within Groups	137.433	144	.954		
Total	138.027	145			

One-way q10 2

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	1.9608	.93260	.09234	1.7776	2.1440	1.00	5.00
NGO College	44	3.3636	.89159	.13441	3.0926	3.6347	1.00	5.00
Total	146	2.3836	1.12195	.09285	2.2000	2.5671	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	60.496	1	60.496	71.390	.000
Within Groups	122.025	144	.847		
Total	182.521	145			

One-way q10 3

Descriptive
RVALUE

Appendix 4- Sample of Summary of One-way ANOVA

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	2.2745	1.14457	.11333	2.0497	2.4993	1.00	5.00
NGO College	44	4.0000	1.18125	.17808	3.6409	4.3591	1.00	5.00
Total	146	2.7945	1.39910	.11579	2.5657	3.0234	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	91.522	1	91.522	68.529	.000
Within Groups	192.314	144	1.336		
Total	283.836	145			

One-way q10 avg

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	2.5490	1.20473	.11929	2.3124	2.7857	1.00	5.00
NGO College	44	3.5455	1.05921	.15968	3.2234	3.8675	1.00	5.00
Total	146	2.8493	1.24666	.10317	2.6454	3.0532	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	30.521	1	30.521	22.558	.000
Within Groups	194.831	144	1.353		
Total	225.352	145			

One-way q11 1

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	3.2549	1.50040	.14856	2.9602	3.5496	1.00	5.00
NGO College	44	4.1818	1.12628	.16979	3.8394	4.5242	1.00	5.00
Total	146	3.5342	1.45822	.12068	3.2957	3.7728	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	26.411	1	26.411	13.490	.000
Within Groups	281.918	144	1.958		
Total	308.329	145			

One-way q11 2

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	Minimum	Maximum

Appendix 4- Sample of Summary of One-way ANOVA

					Lower Bound	Upper Bound		
Government College	102	2.2353	1.35834	.13450	1.9685	2.5021	1.00	5.00
NGO College	44	4.0000	1.18125	.17808	3.6409	4.3591	1.00	5.00
Total	146	2.7671	1.53596	.12712	2.5159	3.0184	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	95.729	1	95.729	55.956	.000
Within Groups	246.353	144	1.711		
Total	342.082	145			

One-way q11 3

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	3.2549	1.39082	.13771	2.9817	3.5281	1.00	5.00
NGO College	44	4.1364	1.19283	.17983	3.7737	4.4990	1.00	5.00
Total	146	3.5205	1.39070	.11510	3.2931	3.7480	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23.884	1	23.884	13.406	.000
Within Groups	256.554	144	1.782		
Total	280.438	145			

One-way q11 4

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	2.0980	.93882	.09296	1.9136	2.2824	1.00	5.00
NGO College	44	3.9545	1.19989	.18089	3.5897	4.3193	1.00	5.00
Total	146	2.6575	1.33100	.11015	2.4398	2.8753	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	105.948	1	105.948	101.084	.000
Within Groups	150.929	144	1.048		
Total	256.877	145			

One-way q11 5

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	1.9804	1.02426	.10142	1.7792	2.1816	1.00	5.00
NGO College	44	3.3636	1.27755	.19260	2.9752	3.7520	1.00	5.00
Total	146	2.3973	1.27295	.10535	2.1890	2.6055	1.00	5.00

Appendix 4- Sample of Summary of One-way ANOVA

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	58.816	1	58.816	48.083	.000
Within Groups	176.143	144	1.223		
Total	234.959	145			

One-way q11 6

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	1.8039	.91239	.09034	1.6247	1.9831	1.00	5.00
NGO College	44	3.7273	1.33580	.20138	3.3212	4.1334	1.00	5.00
Total	146	2.3836	1.37595	.11387	2.1585	2.6086	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	113.715	1	113.715	101.831	.000
Within Groups	160.806	144	1.117		
Total	274.521	145			

One-way q11 7

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	2.4118	1.21340	.12014	2.1734	2.6501	1.00	5.00
NGO College	44	3.7273	1.33580	.20138	3.3212	4.1334	1.00	5.00
Total	146	2.8082	1.38621	.11472	2.5815	3.0350	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	53.197	1	53.197	33.981	.000
Within Groups	225.433	144	1.566		
Total	278.630	145			

One-way q11 8

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	3.7647	1.26785	.12554	3.5157	4.0137	1.00	5.00
NGO College	44	4.2273	1.13841	.17162	3.8812	4.5734	1.00	5.00
Total	146	3.9041	1.24473	.10301	3.7005	4.1077	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.

Appendix 4- Sample of Summary of One-way ANOVA

Between Groups	6.577	1	6.577	4.343	.039
Within Groups	218.080	144	1.514		
Total	224.658	145			

One-way q11 9

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	3.2745	1.25987	.12475	3.0270	3.5220	1.00	5.00
NGO College	44	3.8636	1.02506	.15453	3.5520	4.1753	1.00	5.00
Total	146	3.4521	1.22098	.10105	3.2523	3.6518	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.669	1	10.669	7.476	.007
Within Groups	205.496	144	1.427		
Total	216.164	145			

One-way q11 avg

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	2.7059	1.37724	.13637	2.4354	2.9764	1.00	5.00
NGO College	44	3.9091	1.22034	.18397	3.5381	4.2801	1.00	5.00
Total	146	3.0685	1.43867	.11906	2.8332	3.3038	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	44.502	1	44.502	25.070	.000
Within Groups	255.613	144	1.775		
Total	300.115	145			

One-way q12 1

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	1.5882	.97851	.09689	1.3960	1.7804	1.00	5.00
NGO College	44	3.8636	1.06947	.16123	3.5385	4.1888	1.00	5.00
Total	146	2.2740	1.45042	.12004	2.0367	2.5112	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	159.153	1	159.153	157.094	.000
Within Groups	145.888	144	1.013		
Total	305.041	145			

Appendix 4- Sample of Summary of One-way ANOVA

One-way q12 2

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	2.1961	1.10838	.10975	1.9784	2.4138	1.00	5.00
NGO College	44	4.1364	1.06947	.16123	3.8112	4.4615	1.00	5.00
Total	146	2.7808	1.41174	.11684	2.5499	3.0117	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	115.726	1	115.726	96.182	.000
Within Groups	173.260	144	1.203		
Total	288.986	145			

One-way q12 3

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	1.7647	1.00668	.09968	1.5670	1.9624	1.00	5.00
NGO College	44	3.8636	1.19283	.17983	3.5010	4.2263	1.00	5.00
Total	146	2.3973	1.43589	.11884	2.1624	2.6321	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	135.424	1	135.424	119.247	.000
Within Groups	163.535	144	1.136		
Total	298.959	145			

One-way q12 4

Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Government College	102	1.9020	1.13023	.11191	1.6800	2.1240	1.00	5.00
NGO College	44	2.7273	1.18839	.17916	2.3660	3.0886	1.00	5.00
Total	146	2.1507	1.20540	.09976	1.9535	2.3479	1.00	5.00

ANOVA
RVALUE

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	20.938	1	20.938	15.890	.000
Within Groups	189.747	144	1.318		
Total	210.685	145			

One-way q12 5

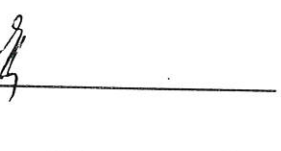
Descriptive
RVALUE

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	Minimum	Maximum

Declaration

I here by declare that this thesis is my work and that all sources of material used for the thesis have been duly acknowledged.

Name: Getachew Adere

Signature: 

Date: June 7, 2004