PRACTICES AND CHALLENGES OF COOPERATIVE TRAINING IN TVET INSTITUTES AND COMPANIES IN

Gurage Zone

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ACRONYMS AND ABBREVIATIONS

ANOVA	Analysis of Variance
AU	African Union
CT	Cooperative Training
CSTC	**C**ommunity Skill Training Centers
ECBP	Engineering Capacity Building program
FDRE	Federal Democratic Republic of Ethiopia
GTP	Growth and Transformation Plan
ILO	International Labor Organization
MDGs	Millennium Development Goals
MOE	Ministry of Education
NF-TVET	None formal TVET
OS	Occupational Standard
SNNPRS	Southern Nation Nationality People Regional State
TVE	Technical and Vocational Education
TVETB	Technical and Vocational Education and Training Bureau
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organization

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ABSTRACT

The main objective of this study was to assess the practices and challenges of cooperative training (CT) in technical vocational education &training (TVET) colleges and companies in Gurage zone. To conduct this study descriptive survey design was employed. Stratified random sampling and purposive sampling techniques were used to select sample TVET colleges and respondents. Accordingly, 2(50%) of TVET colleges in Gurage Zone, 36.6% & 20% of the sample TVET trainers and trainees respectively, sample TVET college deans, V/deans, supervisors and company managements were included in the study. Questionnaire, interview, observation checklist, and document analysis were data collection tools employed in this study. Having pilot tested the instruments; data were collected from trainers and trainees through questionnaire. The data are analyzed and interpreted quantitatively as well as qualitatively. Data from management of companies and college through interview. Percentage, individual group mean, weighted mean, and One-way ANOVA were employed as statistical tools to analyze data. The findings of this study revealed that the trainers are not qualified and experienced; stakeholders have no adequate awareness on the purposes, objectives, and the implementation process of CT. The involvement of companies in Planning, Implementing and Evaluating CT was low; enrollment of trainees was not implemented as indicated in the national TVET strategy, and shortage of CT offering companies were high. Un similarity of activities during CT with the activities in the world of work was major factors that affect the implementation of the program, lack of collaboration between stakeholders, lack of capable supervisor, lack of appropriate machines and training materials, shortage of budget, lack of promotion activities, lack of training for trainers, and lack of subject matter and pedagogical knowledge of trainers moderately affected implementation of CT program, and lack of transportation service during CT. based on the findings and conclusions, the following points were recommended to address the existing challenges in the zone under study; staff development in the college; organized TVET systems in companies and TVET colleges; raise-social awareness about the importance of CT in the zone for all stakeholders should seriously be considered; and the TVET colleges strives to implement trainees enrollment as indicated in national TVET strategy. Necessary facilities should also be fulfilled. In addition, further studies should be carried out on the relevance of the curriculum. Besides, strengthen the labor market information system; enhancing supervisory and professional support for companies; offering opportunities for further education for trainers are issues to be addressed in future researches.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Technical vocational education and Training (TVET) refers to a range of learning experiences which are relevant to the world of work and which occur in a variety of training context, including educational institution and world of work place (UNEVOC, 2006). Stevens (2001), clarified the essence of TVET by stating that TVET encompasses programs providing participants with skills, knowledge and attitude that enable them to engage in productive work to adapt rapidly to changing market economics and to participate as responsive citizens in their society .Quality TVET is also recognized to be key for enhancing economic competitiveness for contributing to the social inclusion ,decent employment and income, and poverty reduction (ADEA, 2008).

In relation to this fact UNESCO (1979), stated that political leaders, economic planners and educators in many countries appear to consider the development of TVET as cornerstone of educational system that can be adapted to the need of individuals in society in which he or she lives.

Although TVET has potential benefits as stated above, it has been criticized for some practical problems. Atchoarena and Dalluc (2002),summarized the problem in evaluating TVET in east Africa boldly as follows: "Poor quality, very high cost, training not suited to the actual socio economic conditions, disregard of the informal sector's needs and disregard of the labor market and the high unemployment rate among graduates. However these criticisms against TVET likely to be reduced by creating productive linkage with the companies/enterprises." NCVER (2005), indicated that effective company vocational education linkages have benefits for companies, government, vocational institution and students. They can be useful mechanisms for identifying companies' skill needs, and for developing appropriate guide lines and /or materials for the delivery of education, training assessment to meet these needs.

Taylor (2006) understood that partnership is generally considered consistent with the public management approaches which emphasized alliances, shared responsibility, increased transparency and accountability for the result. Tessessaring and Wannan (2004),argued that work place Partnership is an innovative way to link companies and develop regional innovation centers, including vocational school, and higher education. In addition, partnership programs are helpful in making companies to be competitive in the market, in expanding employment opportunities for employees, and communication between employers and TVET providers (Hawley, 2006, Van Horn & Fichtner, 2003). In Ethiopia, following many years of structural adjustment, TVET system has been a focus of educational polices and strategies. The current system is expected to enable trainees to get employment, either working as employees of company or as self employed. The goal of the system is to create competent and capable work force to be the foundation of the economy and social development of the country.

The national TVET strategy(2009), indicated that main objective of the training is to create a committed, motivated ,adoptable and innovative work force contributing to poverty reduction ,social and economic development through facilitating demand driven , high quality TVET relevant to all sectors of the economy, at all levels and to all people .Thus the potential to use our human resource for the competitive advantage in our industry depends upon our capacity, efficiency, willingness to deal with the problem and related issues of TVET. Hamel and Perhaled (1996) indicated that key to being productive in the future lies not in out dated management strategies, but rather in area of strategic development and the application of an organization's brain power and intellectual capital. In their view, an organization's competitive strength comprises the collective learning of its employees, particularly their ability to absorb knowledge and use it to the benefit of the core process of organization.

Several Ethiopian government documents point out the necessity of including company based training in the existing TVET system: the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) envisages TVET to provide the necessary "relevant and demand – driven education and training that corresponds to the needs of economic and social sector for employment and self employment."

If further stresses the need for an increasing role and involvement of the private sector and non-governmental organizations, as well as community involvement in the delivery of educational services. The Education Sector Development Program (ESDP) III has started to outline a comprehensive development vision for the TVET sector: measures to ensure financial sustainability, to improve management in training institutions and to involve campiness in planning management and delivery of TVET are envisaged.

As Ministry of Education and the Ethio-German TVET program documents on Ethiopian Technical and Vocational Education and Training Qualification Systems (2003), "in the past employers have not been satisfied with the outcome of training : In particular they complain about the lack of practical skills of trainees as well as inappropriate training contents. The lack of competencies of the trainees compelled employers (enterprise) to provide additional training programs to fill the gap. In order to build a comprehensive TVET system, this enterprise training should be linked with the reformed public TVET system. On the one hand, this will be achieved through occupational standards which reflect the needs of the economy: experts from the world of work, i.e. from enterprises are involved in the development of occupational standards as well as in the assessment and certification procedures."

Trainees from enterprises will be able to have their competencies tested and certified just like trainees from public or private /NGO TVET institutions/colleges. On the other hand, enterprise –based training should be conducted in closer cooperation with TVET institutions wherever possible. This will help TVET institutions to understand the needs of the world of work and to translate them in to learning outcomes. In the Engineering Capacity Building Program (ECBP) in Ethiopia –road map 2005 -2009 (2004),the advantages of integrating enterprise –based training into the existing TVET system are pointed out as follows: "in addition to the advantage of better training results ,the burden on the government like cost of machinery and equipment for center workshops would be reduced." The Technical and Vocational Education and Training proclamation (2004), states the corresponding need "to establish a system under which trainees undergo apprenticeship training in productive and service rendering enterprises."

The new TVET strategy defines the framework for the implementation of cooperative and the integration of enterprise based training: since the reformed TVET system is outcome based, it allows for great flexibility in the actual training delivery process. Public and private TVET providers are free to choose how best to organize TVET for their target groups according to the requirement of the labor market in their state. However, they can choose to adopt and adapt model curricula which are developed for each occupational standard, recommending training content, its organization and its duration. The term "cooperative training" encompasses all forms of training conducted jointly by TVET institutions and companies/enterprise/.The training takes place alternatively in the school environment and in the real-life environment of the workplace.

Most of the training occurs in the enterprise where practical skills and application of theory take place .The trainee goes to TVET institutions for only limited period of time to acquire theoretical knowledge and basic skills in the specific training area. Enterprise and TVET institutions are expected to cooperate in planning, implementing and assessing cooperative training (Richard, 2000 and Girma 2009).In the planning phase enterprise/companies are asked to state their expectations for training outcomes: what skills, knowledge and attitudes do they wish trainees to acquire at the end of their training .These Expectation help to set occupational standards and develop curricula to meet the standards. Enterprises are further expected to contribute their expertise to how the desired training outcomes will be achieved. In the implementation phase enterprises participate in implementation by providing practical training on their premises. They communicate with TVET institution and other enterprise regarding the achievement of training objectives; further training needs, problems, experience during training and other issues (ECBP, 2008). In the assessment phase enterprises take part in the communicates that perform the final assessment of training out comes, e.g. through occupational assessment. To this end there are various factors needed to be fulfilled such as partner establishing a TVET institutions training curriculum, a training coordinator and so forth. Hence, this paper tries to explore and assess the practices and challenge of cooperative training in gurage zone TVET institutes and companies.

1.2 **Statement of the Problem**.

The success in cooperative training has its own implication in the achievement of the objective of the TVET system. To implement cooperative training there are various input needs to be full filled. It also needs the participation of various stakeholders. Stakeholders such as trainees, enterprise/companies, governmental and non Governmental organizations have to be aware of the basic logic of cooperative training as well as practically see the benefit of the system to all stakeholders directly and indirectly. Moreover, a successful cooperative training demands the harmony relations between stakeholders, mainly TVET institutions and enterprise /companies, appropriate input and infrastructures, skilled and committed trainer and managers and so on. With all these input and human coordination that cooperative training can minimize the existing structural and other problems that TVET system had faced in developing countries like Ethiopia. From this context an assessment of the status and implementation of cooperative training in TVET system is very significant. Assessing the performance of cooperative training at national or sub national level has to be indispensible task of all concerned bodies. This study also attempted to explore the practice and challenges of cooperative training in TVET College and companies /enterprises in gurage zone. It tried to describe the practices and explore the challenges and the gaps in designing and implementing cooperative training in the college .It is show what peculiar problems and challenges encountered the practice of cooperative training in the college. Moreover, it discussed how the stake holders interact to deliver appropriate cooperative training service and how this service benefit or affect all participants by achieving the intended objectives of cooperative training at large.

1.3 Research Questions.

1. To what extent enterprises/companies are involved in Planning, implementing and evaluating cooperative training?
2. What are the factors that adversely affect cooperative training?
3. What are the state of availability, capability and readiness of companies to provide cooperative training?
4. Are there any motivating factors during cooperative training for trainers and trainees?
5. What planning, organizing, coordinating and evaluating mechanisms help CT program to become effective?

1.4 Objective of the Study

The general objective of the study is to assess and explore the practices and challenges of cooperative training in Gurage Zone TVET institutes and companies.

Specific Objectives:

- Assess the involvements of enterprises /companies in planning ,implementing and assessing cooperative training
- Explore the level of financial, material and human resource fulfillment and its implication on the status of cooperative training.
- Check availability, capability and readiness of companies to provide cooperative training.
- Identify motivating factors during cooperative training.
- Investigate mechanisms of planning, organizing, coordinating and evaluating cooperative training program for its effective implementation.

1.5 Significance of the Study

Administering effective and organized CT program is one of the duties of TVET institutions and also the responsibility of other stake holders. The successful implementation of this program helps to come up with the intended profile of middle level technicians in various field of study. Even though it has been clearly stipulated in the Ethiopian Education and Training police that the development of TVET has been given high priority in increasing training facilities, development of relevant curriculum , and improving the standards of trainers , some problems may hinder the successful practice of CT program, which in turn affect the overall quality of TVET program, hence, conducting a study to point out the constraints related to CT program could have the following contributions: It may provide relevant information to decision makers about the strengths, and weakness of existing CT program implementation in relation to their objectives. Research on TVET particularly on CT program is almost none; the writer hopes that the study will enrich the existing literature. It may also insist interested groups or individuals to do further study on issues of TVET and CT training program in particular.

1.6, Scope of study

The study was limited to assess the practices and challenges of CT in TVET institutes and companies in Gurage Zone. The zone has four TVET institutes. The study focuses on these two TVET institutes due to time and financial constraints.

1.7 Limitation of the Study

One of problems that the researcher encountered was Reluctance of some trainers and trainees to fill out and turn back the questioners in time. One trainer was refused to returns the questionnaires because of the research conducted before are not viable. However, the researcher managed these limitations with continuous follow up and negotiation.

1.8 Definitions of Terms

Awareness – an understanding of stakeholders on the CT program.

Cooperative training- mode of training delivery of technical and vocational education and training that combines training in companies and institutions based on a training plan collaboratively designed and implemented by industries and respective TVET institutions. (MoE,2000)

Stakeholders- participants who are expected to be involved in planning, implementing and evaluating the performance of implementation of CT program including trainers, trainees and companies.

Trainee – a person who participates in TVET program provided by training institution with a view to acquiring or upgrading his/her technical and vocational skills.

Trainer – a TEVT trainer is an instructor, facilitator, or supervisor who is qualified to facilitate specific occupations (MoE, 2010:7)

Company- a business enterprise (company, enterprise and industry used interchangeably in the study).

1.9 Organization of the Paper

The study is divided in to five chapters. The first chapter discussed the back ground of study, statement of problem, research objective, research questions, significance of study, limitation and scope of the study .The second chapter, explains the relevant review of literature on the issues of cooperative training. The third chapter was about different methodological approach of the study. In the fourth chapter data analysis was presented. The last chapter consists of summary, conclusion and recommendation of the research.

CHAPTER TWO

2. Review of Related Literature

2.1 The Concept of TVET

The current vocational education system called TVET system defined as combination of theory, practice, elements of education such as specific calculation of knowledge about certain materials, working methods and so on combined with practical training through instruction in the work shop of a training institution or practical work in an enterprise. While the T(technical), in TVET appeals to be different and higher level (above higher education).The V(vocational) is linked with specific practical occupations which include training and upgrading in all occupation fields of agriculture, industry, crafts and the service sector (ECBP,2006). TVET is concerned with the acquisition of knowledge and skills for the world of work. In the past various terms have been used to describe elements of the field that are now conceived as comprising TVET. The second international congress on Technical & Vocational Education held in Seoul in 1999 decided that the most comprehensive term to use is technical & Vocational Education & training (TVET) (MoE Rwanda, 2008). According to UNESCO (2006), the definition of TVET : "……. refers to all forms & levels of education process involving, in addition to general knowledge the study of technology & related sciences & the acquisition of practical skills, know how, attitudes & understanding relating to occupations in the various sectors of economic & social life". "…… in educational institutions or through Co-operative programs organized jointly by educational institutions, on the one hand and industrial, agricultural, commercial or any other Undertaking related to the world of work, on the other. This is any education, training & learning activity leading to the acquisition of Knowledge, understanding & skills which are relevant for employment or self employment. TVET serves here as an overarching term to describe all kinds of formal, non-formal and informal training & learning provided by or in all different institutions, providers & learning locations. To comprehend the concept deeper it is necessary to conceptualize terms constituted in the concept of TVET. This is done as follows.

2.1.1 Vocational Training /Education.

Vocational training education is a system which aims at providing recipients with the necessary knowledge and skills to exercise a profession in order to be integrated in the labor market. Vocational training includes initial vocational training/education & continuing vocational training here understanding of the concept give much weight to its purpose. UNESCO in Bennet (2003:6) defined vocational education giving much weight to typology, departmentalization & level as "formal education designed to prepare for skilled occupation in industry, agriculture & Commerce generally at secondary level." In so doing here Vocational education considered as formal education. By giving much emphasis to its value in life UNESCO & ILO in Bennet (2003:12) describe it as "provision of opportunity for individual or groups to gain directly & broadly applicable long term relevant option of alternative for improving the quality of their life." Continuing TVET refers to training activities in which people take part in order to obtain knowledge and/or learn new skills for a current or a future job, to increase earnings, to improve carrier opportunities in a current or another field (MOE, Ruwanda, 2008).

2.1.2 Technical Education

Technical Education is a structured system aimed at providing recipients with the necessary knowledge & skills to continue their studies at tertiary education level or to exercise a profession in order to be integrated in to the labor market. Technical Education, on the other hand puts more emphases on theoretical education (Ibid). By combining the above two as Technical & Vocation Education (TVE) UNESCO & ILO (2001:17) stated as: "all forms & aspects for education that are technical & vocational in nature provided either in vocational institution or under their authorities of the private sector or through other forms of organized education, formal or non formal aiming to ensure that members of the Community have accessed to the pathways of lifelong learning."

2.2 Principles of TVET

TVET in Ethiopia has various conceptual & non Conceptual principles. One of the conceptual principles is "stakeholders involvement" (Ibid), specifically stakeholders are needed to play a major role in various function as the TVET system, one of these function is stakeholders are needed since they contribute much to the success of the system by participating in "TVET delivery through the provision of training to their own staff, offering internship to trainees & providing apprenticeship training." Concerning TVET delivery, the non-public sector needs to play a decisive role. It already contributes significantly through in-company TVET schemes & in particular, through wide spread traditional apprenticeship training provided in the micro & small business sector. In addition to these employer based TVET schemes, non-government TVET institutions will become an increasing important pillar of the overall TVET supply. Hence, in short among various role of improving & widening training delivery made in the central role that stakeholder could play; this led us to the discussion cooperative training which warrants a genuine Cooperation between TVET institution and stakeholders.

2.3 Modes of TVET Delivery and Their Challenges

There are two types of TVET delivery modalities in Ethiopia: formal & non formal. Non formal TVET (NF-TVET) is any organized form of training for which the content, learning aims & targets have been defined. By definition, NF-TVET means training based on well defined curricula, either within or without an institution, with or without guidance from a teachers or trainer.

From the general economic development & the demand for better livelihood point of view, NF-TVET is considered a broad area of learning that accommodates learning/training needs of various target groups both in content, scope, depth and goal orientations .It also includes informal training ,e.g. learning on the job or self-learning (Education Expertise center, Ethiopia :2008). In the Ethiopian TVET strategy (MoE, 2008) traditionally, Technical and Vocation Education and Training (TVET) has been fragmented and delivered by different providers at various qualification levels. Hence, this gives the modalities of training multiple pictures.

Historically, such training as institutionalized in 1976 when Community Skill Training Centers (CSTC), established in 1976 in various Woredas with the intention of initiating integrated rural development through a joint effort off all development sectors particularly those working at woreda level (Education Expertise Center .Ethiopia :2008). Non -formal TVET programs, such as the above one designed by public institutions, NGOS, and private schools offer employment- oriented TVET programs to various target groups including school leavers, people in employment, school drop outs and marginalized groups in the labor market. In addition such Community Skill Training Center (CSTC), prisons, farmer training centers rural appropriate technologies, etc are known non -formal TVET training centers (MOE ,2008: Education Expertise center Ethiopia , 2008) while public TVET institution under the education sector were concentrating on producing middle level technical graduates at post grade 10 level .In parallel with this ,public and private companies have had their own TVET programs , as have NGOs and private TVET providers. Some of the known skill and training provided in the informal center include woodwork ,metal work, tailoring, embroidery ,waving ,typing ,computer training, driving ,etc .

However, experiences very across regions in the country and in other countries regarding the types of training given and the modality under which it is given. It appears important to high light the effort made to establish CSTCs for giving training on indigenous crafts and modern trades. The historical background, achievements, strengths and weaknesses of CSTCs is well documented in the Internal paper No.33, June 2005 issued by IIZ/DVV quoted in (Education Expertise Center, Ethiopia (2008). The Following extract is made from the same document.

Accordingly, more specifically CSTCs were created to provide education and training to youths and adults who had completed their literacy education .The objectives were:

- Introduce and expand appropriate technology for the rural community, particularly the farmers;
- Improve the backward agriculture practice of the farmers through short term training;
- Train community members with different vocational skills training areas; and
- Establish a development resource center for the community at large.

The many studies made on CSTCs indicate that they were not effective as expected. Some of the reasons documented are:

The issue of integrating planning and human resource from various sectors and providing budget to CSTCs was not addressed sufficiently right from the very beginning.

The skill training centers were neither need based nor market oriented.

The skill training centers are under equipped.

Many were looted and destroyed during the last years of the Derg government. CSTCs are underutilized due to low budget and lack of trained coordinators. CSTCs are used only a few months of a year leaving the trainers idle most of the year. As a result the staff of CSTC is unmotivated and not sufficiently trained. In addition unlike formal TVET, these programs are not yet systematic assessment and certification system there are currently no mechanisms to recognize informal occupational learning.

The formal TVET is much better researched than that of none formal .There are data that helps have to have a general picture on the area for example between 1996/7 and 2004/5,the number of TVET institutions providing formal TVET increased from 17 to 199,and enrolment from 3,000 to 106,305. Of these, 31% were trained in non-government TVET institutions. Around 60% of formal TVET is provided in the form of regular programs and 40% in evening classes. However, despite the enormous expansion, formal TVET only caters for less than 3% of the relevant age group. Enrolment figures in formal TVET programs show a fair gender balance with 51% female students. However, girls are over proportionality represented in commerce and typical female occupations such as textiles and hospitality, and underrepresented in traditional technical occupations. In 2004/5, another 42,000 trainees were enrolled in agriculture TVET programs and some 10,000 in teacher training institutes and colleges (MoE, 2008). However the following have been major problems in the sector by the national TVET strategy (MOE, 2008:10-11) Lack of cooperation of the employers as they were not consulted during the planning process. An internship and cooperative training system based on profound cooperation between TVET institutions and employers and a joint training delivery still needs to be developed in order to increase the quality of TVET and hence the employability of graduates.

There are also indications that TVET lacks effectiveness and efficiency. Studies have shown that many TVET graduates remain unemployed even in those occupational fields that show a high demand for skilled manpower .Furthermore, substantial resource wastages occurred as a result of underutilization of equipment in public TVET institutions.

The shortage of a sufficient corps of TVET teachers/instructors represents one of the obstacles to TVET development in Ethiopia. The quality of TVET teachers/instructors has suffered as a result of the low reputation of their profession. Most TVET teachers/instructors have relatively low formal qualifications, severely affecting TVET delivery at higher qualification levels. Furthermore, technical teachers, more often than not, have been unmotivated. They did not choose to become technical teachers, but were placed in technical teacher colleges because there were no other options available to them. Existing TVET teachers/instructors are (mostly) inappropriately practically skilled, i.e not competent to provide TVET in accordance with the occupational standards.

This is a result of a training system that long emphasized theoretical knowledge (though often not aligned with modern technology requirements), disregarding the importance of practical skills and appreciation of the world of work.

Finally, under-funding is a structural problem in the TVET sector, particularly in the public system. Costs of TVET will remain high, if it is to be provided as centre based training, which is still the predominant mode of TVET delivery in Ethiopia. As with most other countries, public TVET programs in Ethiopia are usually more expansive than general education, requiring lower than average teacher/student ratio and substantial capital and recurrent expenses incurred through practical training. AS a consequences of budgetary constraints, most urban public TVET programs are under-funded while rural public TVET program suffered from poor facilities and shortages of training materials.

Coming back to the non formal sector, traditional apprenticeships in the small and micro enterprise sector constitute another presumably important, yet entirely un –researched, training environment. Public and private training schemes planned to produce administrative and health personal to the market in sufficient quantity.

Agriculture TVET programs, which have been massively expanded during recent years, are disconnected structurally with non-agriculture TVET programs.

(Education Experts center,Ethiopia:2008)with the advent of the education and training policy, the formal TVET system of the country requires completion of a tenth-grade education and leads to certificates on the level of 10+1,10+2,or 10+3.By contrast NF-TVET designates every other form of technical and vocational education and training.

This includes: Training over different periods of time .From short-term courses of a few days to long-term programs of up to 6 months, training through different modalities (Institutional, community based, mobile, link and apprenticeship)

Life skills or add-on components for primary Educations. Training for a wide range of target groups: Unemployed, youth and adults, School dropouts and those with grade 8 – education or lower including illiterate people, People potential/active in the informal economic sector, People from urban and rural areas, Landless poor, and Disadvantaged groups People with disabilities. Hence, none-formal TVET differs from formal TVET in the following respects: The educational background of the target groups is different and very divers.

Teachers/ Trainers /Instructors are so far usually certified or examined. There are no standardizing curricula to be used in non-formal TVET Provision. The duration of training is usually shorter and varies widely. On-formal TVET is more cost effective than formal TVET.

2.4 Technical and Vocational Education in Africa.

The TVE policies followed by the newly independent African countries were aimed at providing the managers and skilled labor which these countries needed to support the growth of the modern sector. In the late 1970s, however, the African economic entered a period of recession and economic crisis. The growth of modern sector employment slowed sharply as a result of spending cuts in the public sector and massive lay-offs to maintain productivity in the private sector. The consequence was rapid rise in unemployment among young people, particularly, those who had completed their secondary schooling.

Gradually, the structure of employment in sub-Saharan African changed, with the rapid growing informal sector absorbing much of the labor force.

Imported models of technical and vocational education, which were developed in a context of economic growth, proved incapable of supplying skilled labor that meet the highly varied requirements of African production systems. A wave of criticism concerning the ineffectiveness and high cost of TVE began to be heard, and this form of education has been called into sharp question on the ground that it is poorly suited to labor markets dominated by informal sector employment. Numerous criticisms of technical education and vocational training have been voiced over the past decade. These may be summarized as poor quality, very high cost, training not suited to actual socio-economic conditions, disregard of informal sector's needs and disregard of the labor market and of the high unemployment rate among graduates (Atchoarena and delluc, 2002:37-38).

Besides, Girma (2009:20) states that in the 1960s and 1970s international development agencies; particularly the World Bank had played a significant role in popularizing the TVET system in various African countries. Nevertheless, in the following decades, TVET came under strong criticism and both national and international support had declined considerably. In recent years, however, TVET has come back to claim a place of important on the agendas of many international organizations and donor agencies. As a result, policy makers in many African countries as well as the international donor community have renewed their perspective of the role of TVET as a key to create wealth and emerge out of poverty by producing skilled and entrepreneurial or employable workforce. This is mainly because the need for economic competitiveness and technical improvement has rapidly grown through globalization and the number of young people, who have completed basic education but remain in poverty with low social participation because of high level of unemployment, has increased.

Studies aimed at examining TVET systems in developing countries, particularly sub-saharan Africa describes the system as being in a state of crisis already for twenty years. Here two of the main challenges in TVET delivery system will be referred to: quality and relevance. As evaluated by the AU the quality of training is low, with undue emphasis on theory and certification rather than skills acquisition and proficiency testing.

Inadequate instructor training, obsolete training equipment, and lack of instructional materials are some of the factors that combine to reduce the effectiveness of training in meeting the required knowledge and skills objectives.

With respect to relevance, many studies refer to mismatch between the training offered and the skills needed in the labor market, especially in formal public training. Formal public TVET delivery system often does not pay enough attention to the market trend (Girma, 2009:21-22). Wanna (1998:60) also witnesses that the quality of training, especially those given in vocational/technical schools can be affected by the quality of instructors, curriculum, resources, and administration. In view of the changes in the labor market, the objectives of technical and vocational education have become more divers: they are no longer simply economic but also social, including the fight against poverty and the integration of young people into the working world. Hence, to train the workforce for self-employment and to raise the productivity of the informal sector become two other major objectives (Ibid).

Many African countries consider today that the infrastructure and equipment of TVE institutions are for the most part obsolete, inadequate, and unable to adapt to private sector expectations and technological change. No country, however, can forgo the effort to train young people in the technical skills needed to master the occupations of modern economies. Imports of new equipments, which works must know how to use and maintain necessitate an effort to save this training system. It is for this reason that both the international community and African governments have focused their attention on the question of how to reform TVE (Atchoarena and Delluc, 2002:49). Most of the countries in sub-saharan Africa regard technical and vocational education as vital to their economic development, as this sector is associated with acquisition of the qualifications needed to be competitive in the international arena.

There are many movements underway in the countries of sub-Saharan Africa to change the content of TVE and the way it functions. All actors are deliberating the question of which innovations should be introduced in these countries, in the knowledge that the results obtained will depend on not only their economic and social environment but also cultural and historical factors (Atchoaena and Delluc, 2002:57-58).

2.4.1 Technical and Vocational Education and Training in Ethiopia

Ethiopia has been having an alphabet of its own for many centuries and it has been running its educational system in religious institutions. This was going on until early twentieth century when modern education was introduced. Towards the end of the 19th century, several things accentuated the need for modern education.

The victory of Adwa in 1896 resulted in gaining international recognition for the country so that several European and Asian countries expressed their wishes to establish embassies and negotiate treaties. The war itself alerted Emperor Menelik II to realize the inadequacies of church education if Ethiopia was to remain independent. The innovations introduced, such as the formation of the Council of Ministers, the starting of postal, telephone, and telegraphic systems, the establishment of the state bank and printing press, the construction of railway line, etc. all required a new type of personnel or qualified civil servants (Ayalew, 2000:8). Academic education continued to be provided until 1936 without the vocational curriculum. Immediately after the liberation, there was an urgent demand for trained people to introduce modern management and launch a program of reconstruction. It needed technicians of all levels, managers, planners, engineers, and other economic-oriented labor force.

The immediate response to this urgent demand was the establishment of technical and vocational schools to train and supply the critically needed trained people in the various areas of technology (Girma, 2009:26-27). The vocational/technical schools established in the years 1940s-1960s(Wanna,1998:57) were Addis Ababa technical school(1942), Addis Ababa Commercial school (1943), Addis Ababa Building Trade school (1946 (phased out)), Ambo Agricultural school(1946),Jimma Agricultural school(1944), and Bair Dar polytechnic school(1964). TVET was the most neglected area in the history of the Ethiopian Education System (FDRE, 2005:5).However, since 2000/01 a massive expansion of this sub-sector has been operational. The strategic thinking behind the expansion of the TVET sub-sector is to meet the middle-level human power demand of the industry, service sector, and commercial agriculture, which have become very essential to the overall development of the country.

TVET is an instrument for producing technicians, equipped with practical knowledge, who unlike in the past, would be job creators rather than expecting jobs to be provided by the Government. The objective is to provide quality education and training in the TVET sub-sector. To this end, the curriculum was revised; skill-upgrading training was given to TVET teachers, and expatriate teachers were employed to overcome the shortage of teachers.

In collaboration with the private sector and government enterprises, an apprenticeship program was also introduced to develop the skill of the trainees before their deployment to the world of work. The number of TVET institutions has increased from 17 in 1996/97 to 199 in2003/04 and enrolment from 2,924 to 106,336 out of which 51.2% are females (FDRE, 2005:5).

2.5 Cooperative Training

The difference between training and education discussed in which training is considered as system aiming at providing the necessary knowledge and skill to profession in order to be integrated in the labor market. While education aims at providing recipients with the necessary knowledge and skills to continue their studies at tertiary education level or to exercise a profession in order to be integrated into the labor market. Moreover, the later puts more emphasis on theoretical education. Hence, the difference between cooperative education and cooperative training reflects similar difference .The discussion of the two terms here is made from the above sprit. Cooperative education /training, a form of experiential or work integrated learning is common in tertiary educational institutions worldwide.

It is collaborative enterprise in which student, employers and other actors work together to produce work-ready graduate; that is graduate that have (particularly)practical skills that complement theoretical academic learning ,and that make them of almost immediate value to employers (Richard, 2007).Hence cooperative education /training is a triad or triplet partnership involving the institution ,the company and the trainee. Cooperative education has a variety of names and these often reflect its location.

So in the UK it is seen most commonly in sandwich programs, and in the USA, it takes the form of co-op, work placements, in Ethiopia it is called cooperative training or apparent ship (MoE ,2002 ,2007).

In any system ,the students spend predetermined periods of time –such periods of time commonly called work placement –in a relevant workplace .So an engineering student at university might complete from two to three –months work placements ‘in an engineering firm ,a food technology student at a polytechnic might do the placement in the form of one day a week in a food testing laboratory , and so on (Richard,2007).

Cooperative education appears to be the peak of series of experiential leering opportunities that include job shadowing, job twinning and work experience or internship, and is often an integral part of school – work transition programs. Job shadowing is a school – supervised career exploration activity , which can begin in middle of school and continue through high school.

Students visit worksites and ‘’shadow ‘’ employees as they perform their jobs. Job shadows are designed to be short term. Job shadows emphasize observing the workplace, not participating as a productive worker. The job shadow provides the student a meaningful introduction to world of work and provides a context for understanding the relationship and interaction between the academics taught in the classroom and the workplace. Job shadowing allows a student to spend one –half to one day (or, in some cases, up to three days) with a worker in a specific occupation (MOE Ontario, 2008). Job twinning provides the opportunity for the student to accompany a cooperative education student to his or her placement for one-half to one day. A student or trainee may participate in more than one job shadowing or job twinning experience ,there by obtaining a broader range of career information through observation in typical workplace environments (MOE Ontario, cited in Masersha, 2004).while internships help students move from school to the workplace by offering ‘’hands-on’’ learning, in real work setting, over relatively long period of time They are school –supervised and may be paid or unpaid .The internship is designed to give student a better sense of the jobs within a particular business or industry; to provide students with information about all aspects of the business; and to aid them in understanding ,through experience ,how each parts of a company aids another in meeting the goals objectives of a business or industry(Ibid).

Hence cooperative education resembles as a generic name for all experiential learning or training at work place. Irrespective of the difference between all the above types involved, cooperative education courses include classroom component ,comprising pre-placement and Integration activities and a placement . Students earn cooperative education credits by integrating classroom theory with planned learning experiences in the community to achieve learning based on the curriculum expectations of the related course (M0E Ontario, 2000). The same is true for cooperative training that is "a program which combines academic study with paid, monitored and credit bearing work"
(Bailey and Merritt, cited in Masresha, 2004:25).

Placements should provide student with challenging opportunities. These opportunities help them to apply and extend the knowledge, and practice and refine the skills, acquired in the related course and to demonstrate achievement of placement expectations that reflect current workplace practices and standards (MoE Ontario, 2000). Cooperative education involves a partnership between education and business, industry, agriculture, labor, or community organizations. It also includes students, teachers, parents, employers and placement supervisors. Additional participant may be involved in the case of exceptional student and other student with special needs. Joint planning by these individuals ensures that students are provided with a systematic introduction to career exploration, experiential learning and career planning (Ibid).

Cooperative training system in Ethiopia is derived from the "dual training system" of Germany and refers to mode of training delivery of technical and vocational education and training that combines training in enterprise and institution based on a training plan collaboratively designed and implemented by industries and respective TVET institutions. Under this system, the industries/companies and the TVET institutions share the responsibility of providing the trainee with the best possible job qualifications, the former essentially through practical training and the latter by securing an adequate level of specific, general and occupation-related basic competency. The word "cooperative" refers to the two parties providing training: the concept "system" means that the two parties do not operate independently of one another, but rather coordinate their efforts.

The guiding principle is that as all parties involved, namely: the industry, the trainees and TVET institutions will gain immediate and long lasting benefit; they will choose it (MoE, 2010:6). This cooperative training**,** as stated above, is a new phenomenon in the Ethiopian TVET system.

In cooperative training, the trainees are expected to spend a certain part of their time in the training institute and most of the time in an enterprise that undertakes tasks related to their occupational training. It is believed that this type of cooperation benefits both the training institution and the enterprise leaving aside the advantages the government and the trainees derive from it. Atchoarena and Delluc (2002:58) state that for the improvement of technical education and vocational training, systems systematically refer to the need to forge closer links between training and the labor market.

This search for a better match between jobs and training is based on a two-horned problem: The labor market today is often considered to be characterized by the acute shortage of skilled labor, as reported by employers. Paradoxically, many economies suffer, at the same time, from rising unemployment, particularly among the young people leaving the education system, as reflected in graduate employment rates.

The pace of technological change requires workers to have new qualifications in order to perform the tasks required in modern jobs and thus to raise competitiveness. Cooperation between technical schools and enterprises can come in several forms, ranging from sandwich training to collaboration in research and development (Atchoarena and delluc, 2002:59).Although there are a few, but significant, exceptions e.g. Botsiwana, SouthAfrica, Zimbabwe, most African countries have very little experience with duel forms of training in technical and vocational education.

Hence, several countries, such as cote divore, Keneya, and Congo,are developing this form of cooperation with business in order to work towards a closer match between the supply and the demand for training. Though dual training appears to be an effective means of familiarizing trainees very early with the conditions of the work environment, there are many difficulties in applying this system in the countries of sub-saharn Africa. One of the reasons for this is it requires first and for most that enterprise be willing to provide training and consider it as a long- term investment in human resource development.

If such training is to give young people a true immersion experience in the company, careful organization of in-firm practical training and supervision of trainees is also required. These conditions, not always met in developed countries, are hardly satisfied in most of sub-Saharan Africa.

Cooperative training is expected to play its role in improving the quality of the current Ethiopian TVET system. Any enterprise who can provide a working place to trainees, machines for training, tools, consumables, materials and which can also assign a training coordinator/supervisor can be a cooperative training partner. As far as occupational activities of the enterprises, in one way or another, if the activities of an enterprise have similarity with occupational training, any enterprise, large or small, can take part in cooperative (MOE,2010:6). Those parties who participate in cooperative training are given each their responsibilities. The enterprise, the TVET institution, the trainer, and the trainee are all responsible for the proper execution of cooperative training. Besides responsibilities, each participant benefits from the process. The following are among the points described in the cooperative training handbook.

Enterprises get competent workforce shaped according to their demand and will be assured of the long-term availability of qualified staff in the labor market. Also they can get new technologies transferred through the trainers and trainees from training institutions. Trainees are more motivated to study, and they learn more easily, since they are aware of what they are training for and how they will apply competency concepts in their practical work. As the practical training shall take place at the enterprises venue, training providers save resources to be spent for purchasing training materials/inputs, environment, and reduce training material need in the training institutions. In addition, the training staff will get exposure to real world of work environment through the interaction with enterprises (MOE, 2010:6).

To make the enterprises and other business organizations cooperate with the TVET institutions, they have to be involved in planning, developing the objectives and strategies, etc. of the system. In Ethiopia, despite the due emphasis given to technical and vocational system by the government, the participation of enterprise in cooperative training program is still very low.

A study conducted by (wanna 1998:61) has come up with the conclusion that though there are some efforts by such TVET institutions as the Addis Ababa Technical school, Entoto vocational/technical school and General Wingate school to create links with enterprises, the status of other institutions is not well documented.

It should be indicated that job placement of vocational/technical programs graduates is one of the indicators of the effective training system. In order to keep current with the state of the art practice, there is a need for collaboration between TVE institutions and enterprises to enable students gain skills and to enable teachers to retool in their own occupations. In this relationship, tangible benefits accrue to both educational institution and the informal/formal sector (UNESCO, 1997:73-74). Here, it has been tried to explain what cooperative training is, the participants in the program, and the benefit derived from the program by each participant. The source and the way cooperative training is expected to be put into practice and the condition of cooperative training, including the major problems being faced, in Ethiopia have been discussed.

The literature review part of the research has tried to further emphasize the objectives of TVET, mention some of the major institutional factors (both human resource related and none human resource related) that influence the training of TVET students. The human resource related factors included TVET management, interpersonal relationships, training staff, and guidance and counseling services. The none human resource related factors, on the other hand, comprised of such things as curriculum content, school facilities, instructional materials related factors, on the other hand, comprised of such things as curriculum content, school facilities, instructional materials, and cooperative training. The recent development in TVET in Africa, particularly Ethiopia has been to some extent raised here and there throughout the chapter. It is in this sense that the researcher tried to investigate the factors that affect the implementation of technical and vocational education and training in selected public institutions of Southern Zone of Tigray by finding proper answer to the basic questions raised at the end of the statement of the problem. Similarly Ethiopian TVET strategy defines cooperative training in TVET as a mode of TVET provided in a partnership between enterprises and TVET institutions. Usually, the bulk of practical training takes place in an enterprise, while theory and initial practical exposure is provided by the TVET institution (M0E.2002).

2.5.1 Benefits of Cooperative Trainings

Cooperative education in one form or another is now a major industry worldwide and is practiced widely, franks & Blomqvist quoted in (Coll, 2007).

Cooperative trainings is something of an intuitive concept; one that appeals to almost anyone engaged in hiring employees or training graduates (Eames ,quoted in Coll ,2007).The principal argument is that all three parties involved in cooperative education (i.e., students ,employers, and companies)stand to benefit (Franks & Blomqvist ,quoted in Coll,2007). Trainees pass -through TVET programs are expected to acquire and develop various skills and knowledge. Concerning this UNESCO described them as 'skill matrix 'covering at least three possibly four conceptually related domains (King, 2010). These are: the Ethiopian TVET strategy MoE, 2008:30) puts the benefits of cooperative training to the trainee as follows: "the major advantage apprenticeship training (and more generally cooperative TVET delivery forms) is its vicinity to the world of work.

Trainees are systematically exposed to the world of work and learn the occupational practice in a real life situation .Experience shows that this lead to significantly better trainings outcome, practical skills, work attitude and theoretical comprehension of the occupational requirements. Furthermore, enterprise get to know the trainees, which often lead to employment after graduation .Through cooperative TVET schemes companies can also contribute to the further development of TVET system. Finally, apprenticeship and other forms cooperative training tend to be more effective than school-based TVET, as TVET institution need not invest in sophisticated machinery and training periods in the institutions will be shorter." In addition, the strategies consider "TVET schemes, notably apprenticeship programs helping to decrease unit cost in TVET." Hence, it makes the system more cost effective .This can be considered as minimum benefit the TVET providers could benefit out of the cooperative training. Employer benefits, as might be expected, are fairly pragmatic in nature and most concern the work readiness of graduates. Overall employer benefits are financial in nature (lower recruitment costs, increase productivity ,etc)but also issues to do with image (E.g. addressing equity in employment ,enhanced public image of major multinational corporate etc). (Braunstein & Loken ,quoted in Coll ,2007).

That is “it can have a positive impact upon the firm as a learning organization and work place experience’’ (Drouhin and Richard, 2000:27). A reported benefit for companies again is fairly pragmatic.

And Include things such as enhanced student recruitment, stakeholder input into program development and enhanced links to industry the letter which often results in ongoing, commercially beneficial, relationships (Weisz and Chapman quoted in coll, 2007).

2.5.2 Measuring or Assessing the Effectiveness of Cooperative Training

In a world of scarce resources, training expenditures have to compete with others, one way or another, it is necessary to decide how much will be offered (Castro, 1995:32). The assessment of co-op learning remains a persistent problem and can be equally problematic in practical science.

In part at least, the sheer diversity of co-op experiences on placement complicate what is already recognized as problematic concept the assessment of what science learning has occurred in a given educational context (Bell and Cowie, quoted in Coll, 2007). Zagwaard(2006), argue that if we know stakeholder expectations of science graduate competencies(i.e. .,what we would conceptualize as science learning outcomes) then we can advise assessment activities or regimes appropriate to the learning outcomes. But if all three parities felt learning inter personal communication skills and showing ability and willingness to learn are important, then how can we assess such things? such issues are of course similar to issues associated with the assessment of practical science classes, viz there are some skills which are inherently difficult to assess (Nakhleh, 2002).

Hence research that sheds light on the assessment of co- op work experience may be useful in informing assessment of related activities like practical science classes .This represents significant advancement on traditional, rather simplistic way of the assessing student learning in co-op (Hodges ; 2004) . As Hodges (2004) point out; the challenge is how to allow for diversity of workplace situations, together with associated differences in learning aims and expectations.

To sum up, if it is feasible to have a clear idea of the results of training, by all means, evaluation should be carried out (Castro, 1995:32). In Ethiopia the goal of the TVET system is to create a competent and adaptable workforce (both male and female)to be the backbone of economic and social development . Moreover it aims to enable an increasing number of citizens to find gainful employment and self- employment in the different economic sector of the country.

In so doing the strategy point out that the system is an outcome –based system. This means that identified competences needed in the labor market will become the final benchmark of teaching , training and learning, such Competence described in national Occupational standards to be which form the benchmark of all quality managements within the TVET system . Output quality of TVET delivery will be measured through a process of learners achieved competence (Moe, 2008). The success of the trainee in this assessment reflects the overall success of the training including cooperative training.

In this study status of CT is assessed by focusing on the basic requirement of CT stipulate in CT guide book : partner establishment, TVET institution with its facilitates, training curriculum, Training plan ,memorandum of agreement (MoE),vocational councilor and Training coordinator .(MoE,2007).

2.6. Experience of selected countries in cooperative Training

2.6.1. Selected European countries Experience comparatively

Education and/or Training beyond the end of compulsory education to age 18 or 19 are now almost universal in the Germany and many other European counters .Apprenticeship is the main vocational route to upper secondary qualification (level 3) in the duel system countries . In other apprentice countries ,Australia ,England, France and Ireland more young people are in full-time vocational courses than in apprenticeship .Sweden offers only full-time vocational courses for 16-19 year olds but plans to introduce some apprenticeship into upper secondary provision in 2011.

Selecting some indicators the experience of this counters summarized as follows .A detail data can be seen(steed man,2010). Apprenticeship is regulated by law in all seven apprentice countries and all have formal structures for involving employers in decision-making on apprenticeship policy and programs. However; employer commitment of time, energy and resources is highest in the dual-system countries where at least half or more of all young people enter apprenticeship. In Switzerland employers claim ownership of all main features of apprenticeship while in Austria employer organization provide statistics and contribute to research.

How long to complete an apprenticeship? In all apprenticeship countries except Australia and England most apprenticeship programs take three years to complete or in the case of Ireland, 4 years. In Austria, traditional apprenticeships last for three years and traineeships last on average for one year .In England the average for all apprenticeships is between one and two years .

Who provides core skills and underpinning knowledge? In the dual-system countries and in Ireland and France core skills and underpinning knowledge are provided off -the-job in publicly-Administered vocational colleges; in France, these are known as apprentice centers and are provided and run by employer organizations. In Australia and England core skills and underpinning knowledge may be acquired either on-the-job or off –the –job, facilitated by providers who may be public or private. How does the apprentice acquire occupational skills? In the dual-system countries, employers must ensure that apprentices acquire the required range of occupational skills on –the-job and on their own premises. In France, skill training is also provided in the employer –run Apprentice centers and in Ireland skills training is also shared between employers and the technical colleges attended off the job by apprentice. In England and Australia, public and private providers take responsibility for ensuring that apprentices acquire the required competences –although employers provide much informal on- the job training. Australia, Austria, Germany and Switzerland have between three and four times as many apprentices as England and Ireland. France has more than England but is still below the leaders. Apprentices in the three dual-system countries are normally all aged below 25 and apprenticeship makes a substantial contribution to easing the transition to the labor market for young people.

In Australia, where around half of all apprentices are over 25 numbers of young people starting apprenticeships are still proportionality higher than England. Australia, England and France all offer apprenticeship at more than one level of skill: most frequently certificate 2 and certificate 3 in Australia, level 2and 3 in England and a range of qualifications in France which start at level 2 and continue to degree level. Of these, England is the only country where apprenticeship at level 2 far outnumber those offered at level 3. In Australia most apprenticeship are at certificate 3 level and in France just under half are at level 2.

In the dual system countries and in Ireland almost all apprenticeship are at level 3.Looking only at the most popular apprentice occupations in each country, service sector occupations dominate in Australia, Austria, England and Switzerland .The service sector and industrial /craft occupations are equally represented in Germany.

In France, construction, process industries and engineering outnumber apprenticeships in the service sector while in Ireland apprenticeships are only offered in construction and industrial occupations. In all apprentice Countries young women are over-represented in the service sector, particularly in the low pay occupations while young men predominate in construction, industrial and craft apprenticeships. Careers guidance: In the dual system countries young people must find their own apprenticeship Places by making a direct application to an employer. To do this, young people must be informed in good time of the factors to be considered in making a choice of occupation. To achieve this, students are offered well-established programs of careers education in schools which examines apprenticeship occupations, the prospects they offer and the type of work involved so that students can make an informed choice of route post-16. Careers education is supported by publicly - funded careers offices and also by employer organizations and individual employers who advertise their apprenticeship opportunities and explain them to applicants. In Australia prospective apprentices are refried to employers through a network of Australian Apprenticeship centers which in turn contact provides or Group Training Organizations. Both France and England suffer from indifference and sometimes hostility towards work- based training in schools and little or no advice is provided.

Demand for apprentices: In England eight percent of employers offered apprenticeship in 2009,the lowest proportion of all the countries reported here .Nearly a third did so in Australia and in the dual system countries around a quarter offered apprenticeships .Very large firms with over 500 employees make an important contribution to demand for apprentices. In Germany almost all such firms took on apprentices in 2005 compared to just 30 percent in England.

In all the apprentices counters demand is still not adequate to provide for all those seeking apprenticeship and government payments to employers are available in all apprentice countries -except for England to encourage demand.

2.6.2 Experience of selected African countries

TVET systems in Africa differ from country to country and are delivered at different levels in different types of institutions, including technical and vocational schools (both public and private), polytechnics, enterprises, and apprenticeship training centers. The nature of apparent ship also varies among African countries (AU, 2007).In West Africa in particular, traditional apprenticeship offers the largest opportunity for the acquisition of employable skills in the informal sector. In Ghana, the informal sector accounts for more than 90 percent of all skills training in the country in all of Sub-Saharan Africa, formal TVET programs are school based. In some countries, training models follow those of the colonial power.

In general however, students enter the vocational education track at the end of primary school, corresponding to 6-8 years of education as in countries like Burkina Faso and Kenya, or at the end of lower or junior secondary school, which corresponds to 9-12 years of what is called basic education in countries like Ghana, Nigeria, Mali and Swaziland. The vocational education track has the unenviable reputation of being of dead end so far as academic progression is concerned and fit for those pupils who are unable to continue to higher education. The duration of school-based technical and vocational education is between three and six years, depending on the country and the model. Some countries begin to utilize dual system of training in the college and industries.

2.6.2.1 Apprenticeship in Ghana

Apprenticeship, as offered in the formal and informal industry, is mainly by private initiative, although some state institutions offer limited apprenticeship schemes (Education Reform Review Committee 2002 quoted in N.A 2007).

The latest labor force data show that in 2000, informal apprenticeship sector contributed over 70% of self –employed among the total labor force of over 7 million and there 207,047 economically active people (15 years and older) in apprenticeship training (Ghana Statistical service 2005). Over three-quarters (76.8%) of the apprentices were aged 15-29 years; 18,006(57%) were males and 89,041(43%) were females.

The males were mainly in auto-mechanics, carpentry, tailoring and driving while the females were primarily in dressmaking, hairdressing and catering. Modalities regarding apprenticeship in the informal sector vary. Entry requirements, if any exist, are generally low and not restricted by age, ethnicity or proof of literacy (ILO, 1988). Depending on the trade, the master and apprentice, apprenticeship may take from months to years. Working hours of apprentices are usually long, typically six days a week with weekly working hours ranging from 50 to 60. Some apprentices pay for their training while others forego income for the work they do. In some instances, they receive free board and lodging or some pocket money or occasional bonus. In some rare cases, apprentices are permitted to sell what they produce in their spare time with the materials and the equipment they find in the workshop.

A characteristic of formal apprentice training in Ghana is the lack of uniformity in training content, duration and certification. These weaknesses in the training system need to be addressed. However, since apprenticeship is mainly private initiative, the Education Review Committee has recommended the formulation of government policy regarding registration of apprenticeship providers and standardization of content, duration of training programs and certification, in collaboration with industry, identifiable trade associations and training providers.

In the white paper Report on Educational Reform Review, the Government has now decided to partner the private sector in a more systematic way to promote apprenticeship programs including assuming full responsibility for the first year of the apprenticeship programs (Ministry of Education Youth and Sports, 2004).

2.6.2.2 Apprenticeship in Tanzania

In Tanzania also there are two modalities of apparent ship training. The provided artisan training in the industrial trades are characterized by two main clienteles, namely, pre-service training to school leavers and in-service training to those who were already employed.

For the school leaver group, a traditional apprenticeship model was adopted with students initially attending VTCs for one year of full time basic theoretical and practical training followed by usually three years of on-the-job training. During this later period, students were to be formally indentured as apprentices to the sponsoring enterprise and, on successful completion of their training, were to receive a Certificate of Apprenticeship. Apprentices and other workers wanting to take trade tests which were administered by NVTD attended evening classes at the VTCs.

It was a formal requirement that the three Trade tests (III to I) had to be taken sequentially (Bennell, 1999). Broadly speaking, this training was confined to a limited range of traditional, male dominated artisan trades and was primarily oriented to meeting the needs of formal sector enterprises, particularly in the manufacturing sector. By early 1998, VETA management had started to make concerted efforts to ensure that training provided by VTCs becomes more demand driven. In particular, labor demand surveys were carried out in all eight regions during 1997 in order to assess training needs of both formal and informal sector enterprises in all sectors. New modular based training is also being slowly introduced that covers both technical/manual and entrepreneurial/commercial skills. There is a clear recognition that traditional long, pre-employment artisan training must be increasingly replaced by short term training that is targeted on training needs of workers already in employment. However, three and a half years after its creation, actual progress made by VETA in reorienting its training provision remains limited. While the reason for this slow progress are not entirely clear, management shortcoming have undoubtedly been a major factor.

2.6.2.3 Apprenticeship in Kenya

Similar to Ethiopia and other African countries apparent ship in Kenya has two wings as formal and in formal apparent ship training. The feature of Kenyan apparent ship /cooperative training/ is summarized as follows. The formal apparent ship program bases on the government legislation in 1973 to formalize the apparent ship training system through compressive national industrial training scheme for the training of craft apprentices.

To encourage the industries to train their workers in accordance with the new training scheme, a levy was introduced herby all medium and large companies would be required to contribute. Those who provided training from their worker would be entitled to a reimbursement at the end of the year. A very small number of youth obtains training through this system (ferje, 2000). During the apparent ship period the learners are required to take trade testes at appropriate level of the program.

The lowest competency level awarded is at grade 3 and grade 1 is the highest level. The informal (apparent ship system in Kenya has its roots in the Indian craftsmen imported in to the country during colonial days, from the construction of railways. After its completion the Indians stayed and formed the basis if the skilled technical manpower in the country mainly for maintaining of the railway. People working with Indians acquired enough trade skills to work as semi skilled and later as skilled workers. There are various characteristics of this sector to date depending on the owner/trainer or idiosyncratic values of the learned and so on. The system is the low regard for formal certification. Most of the learning in apparent ship training takes place on the job. In the case of formal apparent ship training, the industrial training act in Kenya mandates vocational college attendance for about six months in each year. The learning process for the apparent ship involves observing or actually working on tasks. Within the informal sector no time limits are imposed. Apprentice progress at their own pace and can exit whenever they feel they have acquired sufficient skills. As any one expects the Kenyan system of apparent ship training the breadth and depth of the craft masters knowledge and skills as well as those of the other journeymen will to a large extent determine the knowledge and skills the apprentices acquire.

Additionally the social interact between the apprentices and the journey men and other apprentices are also crucial to the overall development of the apprentice. Over the entire contextual factor determines the quality of technical and enterprise skills of the apprentices as well as their entrepreneurial interest (ferje, 2000). In general, as briefly described in the above, countries throughout the world pursues various structures and strategies in designing and implementing TVET in general and cooperative training in particular. The primary lesson that can be drawn from the above survey of experience of selected countries, most of them involves various stakeholders to realize the objectives of cooperative training. Secondly African countries tend to integrate their modern cooperative training system with the existing traditional training practices or formal with the informal sector.

Above all the variety and uniqueness of the practice of cooperative training in the above countries entail the designing and implementation of CT depends on the situation and dynamics of the local context.

Hence, despite the promotion of various popular strategies such as the forming of partnership and involvement of nongovernmental actors in CT, the planning, implementation and assessment of CT should based on the local demand and dynamics.

CHAPTER THREE

Methods

3.1 Research Design

Depending on the nature of the problem under study as well as the purpose of research, descriptive survey design was employed for explaining the practice & challenges of CT in TVET & Companies in Gurage Zone. The method was chosen for its relatively low cost and its suitability to show situations as they currently exits. That means the study determines and describes the way things are (Gay, 2006:275). Similarly Best & Kahan (2003) noted that descriptive research design helps to describe & interpret the current condition (practices, existing challenges & opportunities).

3.2 Source of Data

In order to attain the objective of the study the researcher used both primary and secondary data sources. The primary data were collected from participants of TVET colleges and companies. The participants were trainees, trainers, and college & company management. The sample was including college deans & core process owner, and company owners/expertise that in this study are referred to as college management and company management respectively. Means of data collection were questionnaire, interview and checklist. As to the primary sources, trainees and Trainer were involved questionnaire, managers of TVET &Companies were involved interview and filed observation was used observation checklist. In view of supporting the information gathered through primary sources, secondary data related to cooperative training were collected from official documents of TVET institutes & companies, different published books, journals & articles.

3.3 Sampling Technique and procedure

There are four TVET institutes and 34 companies in Gurage Zone. The researcher selected wolkite poly technique College & Agena TVET institutes from urban and rural areas respectively using random sampling technique and 10 companies that participating in CT were selected randomly. From the sample institutes, there were 82 trainers, 520 trainees, 8 managements of college and 34 company owners. The sample size was taken based on the proportion of the target population in the TVET & Companies (see table1.1). The Trainer & Trainees are selected using stratified random sampling technique as highlighted by Gay (2006:126,138). TVET managers & company owner were selected for interview.

Table 1 population and sample size.

No	Name of TVET college	Top Management of college		Trainers		Trainees		Companies		Total	
		Total	Sample	Total	Sample	Total	Sample	Total	Sample	total	Sample
1	Wolkite	4	3 75%	60	22 36.66 %	426	85 20 %	25	7 28%	515	117 22.7%
2	Agena	4	3 75%	22	8 36.4%	94	17 20%	9	3 33.3%	129	31 24%
Grand total		8	6 75%	82	30 36.6%	520	102 20 %	34	10 29.4%	644	148 23.3%

NB: There is one dean, two core process owners and one supervisor in each TVET institutes.

One dean, one core process owners and one supervisor were taken using availability sampling technique for they are expected to give a better response for the interview. The selection of sample trainers were carry out first by forming categories/strata of trainers based on their area of specialization. After this respondents were selected proportionately from each stratum using random sampling.

Altogether, 30(36.6%) of the trainers were selected to take part in this study. There were a total of 520 second and third year regular trainees (of course, including few trainees from first year so as to ensure the representation of occupational areas) in the two TVET centers. One hundred two (20%) of them were included in the study by way of proportionate sampling. Year 2 and year 3 trainees were chosen with the assumption that they can provide reliable information due to their comparatively longer stay in their respective institutes. In addition, ten company owner/supervisor with longer experience in company were purposively included in the interview as they are expected to have accumulated knowledge of the companies' practices they observed via reports and supervision. Overall, 148 respondents were included in the study. The information obtained from the company owners, deans, the process owners by way of semi-structured interview were used to compare and triangulate the responses given by the trainers and the trainees. The semi-structured interview was employed because it enables to get detailed answers by asking additional question when necessary.

3.4 Data Collection Instruments

The data collection instruments were included questionnaire, interview and checklist of data gathering method which were employed in order to get relevant information from key informants like trainees, trainers, manager of companies & TVET institutes. The trainees & trainer were participating by responding questionnaire & interview was responded by managers of TVET & Companies. The questionnaires were constructed with closed & open ended items. To collect further information the researcher was prepared relevant checklist used for observation and document analysis. The questionnaire was employed as main data collection instrument, because factual information is better secured through the questioner. Moreover, questioner enables to obtain variety of opinions from a large size of population, relatively within a short period of time. The document analyses were mainly used for investigating the number of trainers and trainees in the TVET institutions. To collect relevant & adequate data through the aforementioned source it is necessary to select & train 4 trainers enumerators. The researcher was made close supervision & support during the enumerators collected data.

However, the interview to companies & TVET managers were administer by the researcher himself. How each of the data gathering instruments were use discussed in detail.

A) Questionnaire

The questionnaire is one particular type of survey which asks for responses to a set of questions.

One can involve large numbers of people by using a questionnaire (Hult, 1986:37). Both sets of questionnaires were first prepared in English and the Amharic versions were distributed to the trainees to make them more comprehensible. The questionnaires contained both closed-ended and open-ended items. Most of the closed-ended items were constructed in the form of multiple choice (of course some of them were in the form of rating scale). The open-ended questions were prepared in a form that enables to collect the respondents' suggestions, comments, and recommendations.

B) Interview

An interview is a data collection method in which an interviewer (the researcher or someone working for the researcher) asks questions of an interviewee.

That is, the interviewer collects the data from the interviewee, who provides the data (Johnsen and Christensen, 2008:203). An interview guide was prepared in Amharic so as to get better detailed information from the company owner/supervisor, deans and process owners. The interview was conduct on a face-to-face basis.

C) Document Analysis

To secure facts and figures about the trainees and employees (deans, process owner, and trainers), a number of documents among others, statistical information, reports, employees' lists, etc, were thoroughly and sufficiently investigated. In addition, secondary sources such as official policy and strategy document, guidelines, books, magazines, education statistical abstracts, etc. were referred.

D) Observation checklist.

Since it is important to secure additional facts through observation at the respective sites, an observation checklist comprising pointes regarding the staffing, equipment, facilities, services, and the training process were prepared and employed. This was used to further strengthen the information collected through means of other data gathering instruments. To achieve the objectives of data collection the researcher was arranged convenient time & place for the respondents. The 4 enumerators were given half day training by the researcher and the short orientation was given the selected respondents of Trainees & Trainers concerning the objective of the study.

3.5 Data Collection Procedures

The questionnaires were pilot to maintain reliability and to evaluate the appropriateness before they were administered. Pilot test was administered in wolkite TVET college, among 20 respondents other than the subject for the study. The purpose of the pilot test was to check whether the investigator and the respondents were properly communicating through the instrument and add some value to the reliability and validity of the questioners on the base of the feedback obtained. Based on the results obtained, some questions were modified by incorporating the inputs obtained from the respondents and other concerned individuals. After getting all the corrected items, the questionnaires were distributed and followed up for collection according to the time line. To increase the quality of the responses, the return time was made short through continuous follow up.

The researcher made the purpose of the study simple and clears to all respondents of the questionnaires in order to avoid confusion. Besides these, explanations were provide as required by the respondents. Field observations were carried out according to the time schedule. In all the colleges' machines, training equipment, workshops, class rooms etc and organizational structures were observed by the researcher himself. Documents which are indicated as secondary sources were analyze.

3.6 Method of Data Analysis

To make the collected data ready for analysis, the questionnaire was checked for completeness. The data also classified and tallied carefully. The assembled data were arranged and organized in tables. Both quantitative and qualitative techniques were used to analyze and interpret the obtained data. However, quantitative data analysis method was employed as the major technique since the data was gathered mainly by using questionnaires. From descriptive statistic, percentage and frequency counts were used to analyze the personal characteristics of the respondents. Measure of central tendencies such as mean, standard deviation, and weighted mean scores were used to measure and compare the opinions of respondent groups. One-way ANOVA test was the other statistical tool that is used to check the existence of statistical significant differences in perceptions among the two occupational groups (trainees & trainers) of respondents on the issue under investigation. Qualitative data analysis method was also employed as a supplementary data analysis technique for triangulation and justification purpose. As a result, the data collected through interview, open-ended question, and document review were narrated under quantitative data (items) related to it. Regarding the data obtained through observation, some of the items were analyzed quantitatively under the data collected through questionnaire, and some of them were narrated independently.

CHAPTER FOUR

DATA PRESENTATION, ANALAYSIS AND INTERPRATATION.

This chapter deals with the presentation, analysis, and interpretation of data pertaining to the background information of the sample population and their responses to the items that are see in the instruments.

4.1 Characteristics of the Respondents.

The target population mainly consists of trainers and trainees. Both of them were selected, first, using stratified sampling to be able to include trainer and trainee participants from the departments available. Then, proportionate sampling was employed to roughly ensure the representation of participants. Finally, the ones included in the sample were chosen using simple random sampling method. One hundred two and thirty questionnaires were distributed to the trainees and trainers respectively. One hundred two (100%) and twenty-nine (96.7%) of the questionnaires were completed, returned, and used for the study. one trainer refused to return questionnaire. In sum, out of 132 questioners, 131(99.24%) were used for the study.

Table 2: Sex of the Respondents.

s.no	Items	Trainers.		Trainees.	
		F	Percentage	F	Percentage
Sex	Male	26	90	61	60
	female	3	10	41	40
	Total.	29	100	102	100

The respondents were trainers and trainees. In the first item, among 29 trainers, 26(90%) were males and 3(10%) were females. Of the trainee respondents, 61(60%) and 41(40%) were males and females respectively. This shows that the presence in the training institutions of female trainers is low as compared to that of their male counterparts.

Whereas the number of female trainee population in the institutes is acceptable and encouraging compeered to previous consecutive years enrolment.

Table 3: Qualification and Experience of Trainers.

s.no	Item	Trainers	
1.	Qualification	F	Percentage
	Master's	2	8
	First degree	4	16
	Diploma	19	76
	Certificate.	-	-
	Total	25	100
2.	Experience in year		
	above 15	2	7.4
	11 to 15	-	-
	5 to 10	2	7.4
	Below 5	23	85.2
	Total	27	100

Only 4(16%) of the trainers were first degree holders. They had the right qualification level to train at level III and level IV as indicted in TVET strategy document. The rest 19(76%) were with diploma qualification level. These trainers were assigned to train out of the standard. In addition, most of the diploma holders were recently recruited because the experienced diploma trainers joined Universities to upgrade their qualifications. Training provided by these under qualified and inexperienced trainers may not enable to produce capable graduates that play important roles in the country's economic and social spheres. According to the responses obtained from the interviewees, effort has been exerted by the regional TVET bureau and the TVET colleges to minimize the shortage of trainers. On this issue, one of the interviewees mentioned as follows.

We have shortage of trainers in some field of training like construction management, textile, manufacturing management and surveying. Even the available trainers do not impart the training properly.

They are deficient in both theory and practice. The trainers themselves are graduates of institutions that are not yet efficient. There is a gap between what they were assessed for and what they are training. Currently efforts are being made to enhance their skills by providing them, trainings on pedagogy and their respective occupations. In addition, trainings are conducted by experienced trainers and industrial exposure is being taken as one way of capacity building. In connection to the above stated finding, UNESCO (1997: 71-72) emphasizes that the successful implementation of TVET programs very much depends on the availability of well-trained and experienced TVE teachers. A major constrain to in the vocationalization of curricula in Africa has been due to the lack of such personnel. In several areas, due to low pay, it has not been possible to attract the right teachers to these areas as most qualified TVE professionals often opt for deployment in enterprises or self-employment where incomes are more attractive. Wanna(1998:61) states that good vocational training requires instructors who have technical and pedagogical skills as well as industrial work experience. Such instructors are expensive to train or attract to the teaching profession. Without qualified teachers, training programs could not be effective. Two (7.4%) of the trainers are in the experience range of 5-10 years and twenty-three (85.2%) of the trainers in the experience range of below 5 years. No trainer in the experience range of 11-15 years. Only 2(7.4%) are with experience above 15. Almost all the trainers (85.2%) are in the experience range below 5. This implies that they are less experienced. The prevalence of many inexperienced trainers in an institution might be an indication of the institution’s failure to provide mature training that leads to successful employment and/or self-employment.

Table 4: level, year, age and field of training of trainees.

No	Level of training	F	Percent
	II	17	19
	III	47	52
	IV	16	18
	V	10	11
	Total	90	100
2	Year of training		
	1	21	20.7
	2	45	44.6
	3	35	34.7
	Total	101	100
3	Age		
	15-20	76	78
	21-25	21	22
	26-30	--	-----
	Above-30	------	------
	Total	97	100
4	Field of training	14	14
	Manufacturing	9	9.5
	Automotive	16	16
	Elictrical elctronices	7	7
	Textile and garment	34	35
	Construction	34	35
	ICT	16	16.5
	Hotel tourism	2	2
	Total	97	100

Item one asks about the level of training of trainees. Thirty-six (22.2%) of the trainees were in level III while 47(52%) were enrolled in level IV. This implies that most of the enrollments were in level III and IV. This is against to enrollment of trainees indicated in the national TVET strategy from level 5 to level 1with the ratio of 1:3:24 which is based on the demand of the labor market.

Item 2 is concerned with the year of training. Accordingly, 45(44.6%) and 35(34.7%) of the trainees were in their 2nd and 3rd year respectively. Only 21 (20.7%) were 1st year trainees.

Item 3 related with the age range of trainees. Seventy-six (78%) of the trainees are in the age range 15-20 years. only 21(22%) was in the age range of 21-25 years. Many of the trainees are also in the right age range according to the national age-grade level expectation. This is because trainees are expected to complete grade 10 at the age of 16 if they start schooling at the age of 7, which is the Ethiopian official age for starting primary schooling.

Item 4 is related with the field of study. In the target area studied, majority of the trainees include in construction (35%), ICT (16.5%) and manufacturing (14%). Many of the trainees are in the right field of study according to the need of world market.

4.2 Awareness of Stakeholders on CT.

Table 5: items related to trainers and trainees' view on the level of awareness stakeholders' have on CT.

No	Items	Respondents				WM
		Trainees (n=102)		Trainers (n=29)		
		M	SD	M	SD	
1	Willingness of companies to receive trainees and providing CT.	3	1.205	3.09	.964	3.01
2	Willingness of companies to assigning the trainees in the task appropriate to his/her field of training.	2.38	1.28	2.34	1.208	2.37
3	Willingness of companies to Cooperate in using machineries and materials.	2.93	1.11	2.24	1.10	2.78
4	Willingness of companies to participate trainees on practical activities.	2.9	.996	3.16	.817	2.96
5	Willingness of companies to share their experiences and support the trainees.	2.86	1.234	2.97	.953	2.88
6	Similarity of practical training in TVET and CT offering companies	2.8	1.081	3.62	.956	2.98
7	Awareness of trainers on CT.	3.17	1.175	3.19	.966	3.17
8	Awareness of trainees on CT.	2.83	1.127	2.97	1.071	2.86
9	Awareness of companies on CT.	2.38	1.025	2.63	1.015	2.43
10	Willingness of the trainees to attend CT.	2.38	1.142	3.03	1.208	2.52

*p<.05

Key: WM ≤ 2.50= low awareness, 2.50 <WM ≤ 3.50 = moderately adequate (medium awareness), WM>3.50=high. Av. = ∑Si/n where, S=scales given for response, n=number of scales.

$$\mathbf{WM= \sum f_i x_i / \sum f_i}$$

Where, WM = weighted mean.
$x_i = x_1, x_2$ = Mean of individual items given.
and $f_i = f_1, f_2$ = Frequencies corresponding to the given items

ANOVA

Awareness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.456	1	.456	6.036	.024
Within Groups	1.360	18	.076		
Total	1.816	19			

Table 5: shows trainers' and trainees' views about the level of awareness of stakeholders' on CT. Accordingly willingness of companies to receiving trainees and providing CT, Cooperate in using machineries and materials, participate trainees on practical activities, and share their experiences and support the trainees had weighted mean values of 3.01, 2.78, 2.96 and 2.88 respectively. The awareness of trainer and trainees also have with weighted mean value of 3.16 and 2.86 falling within the medium limit. However, willingness of companies to assigning the trainees in the task appropriate to his/her field of training and awareness of companies on CT had low weighted mean values of 2.37 and 2.43 respectively. The data show trainers and trainees had relatively better awareness than companies so companies do not assign the trainees in the task appropriate to his/her field of training due to the lack of awareness on CT. Thus, from the data one can conclude that the awareness creation so far done in TVET of the study area was not adequate and was not in a place to adequately create awareness about the purpose and benefit of CT.

One way-ANOVA was employed to test if there was statistically significant difference among the respondents' responses. The result from one-way ANOVA test for items revealed that there was statistically significant mean difference in views between the trainers and trainees, (1, 18) =6.036, $p<.05$). Trainers views on awareness of stakeholders about CT (M=3.07) were better than trainees (M=2.77) views.

The critical analysis of the data show that, trainer and trainees have relatively better awareness on CT than companies, it doesn't mean that all trainer and trainees have adequate awareness on the program specially trainees.

The data gathered from interview also conveys similar response with the data from questioner. For instance the interview held with supervisor of TVET and company coordinator expressed idea in the following way: "…… the trainees and trainers have a better awareness about the CT than companies. However, I am not saying that the trainers and trainees have adequate awareness and they are absolutely implementing the program. The recently assigned trainers and trainees have no adequate awareness on the CT implementation process," (respondent 3)

More over company coordinator mentioned that, "the awareness of trainees and company workers are low. We have no understanding of the objective of the program and responsibilities in the implementation process this is due to absence of adequate training given for companies and trainees about CT."

From the above data one can say that there was a gap in arranging and providing trainings for stakeholders to adequately aware them about the program objectives, the implementation process, and their responsibilities and contribution for the effectiveness of the program. Hence, the inadequacy of awareness on CT was resulted from the shortage of training. This could be among the factors that limited the involvement of stakeholders in implementation of the program in the colleges under investigation.

4.3 The Involvement of companies in planning CT.

Table 6: items related to practices/involvement/ of companies in planning CT.

No	Items	Trainers (n=29)M	SD
1	Participation by planning of CT.	2.38	.107
2	Participation by setting criteria to select companies for CT.	3.24	.988
3	Participation in preparation of curriculum	2.63	1.015
4	Participation in setting rules and regulations regarding CT (CT guide line).	2.82	1.018
	Average	2.77	

Key: M <3=below average, M=3 = average, and M > 3 = above average.

Table 6 shows trainers' views about the participation of companies in planning CT. Accordingly; the highest response obtained was 3.24 for participation by setting criteria to select companies for CT: other activities like participation in preparation of curriculum, in setting rules and regulation (CT guide line) and participation by planning were below average value 2.63, 2.82 and 2.38 respectively. All in all, the average point regarding the participation of companies in planning of CT was 2.77 which is below average. In general, the analysis of the data reveals that participation of companies in planning CT was below average. Supporting this analysis, one of the interviews said that "our company is one of cooperative training offering companies; we don't know how our company prepared the CT plan and evaluate the progress of the program.

In general we did not participate in panning of CT." This shows that there was lack of collaboration among stakeholders in planning for CT. This reality seems against what is stressed by MOE (2010:10) that "Before starting a cooperative training program, enterprises and TVET institutions should negotiate and agree on types of occupations in demand and jointly develop a training plan right from the occupational standard or from a curriculum derived from this. A training plan shows topics of the curriculum to be taught either in enterprises or in TVET institutions.

Cooperative training cannot be successful without a training plan." "Planning of cooperative training can also begin at the outset of curriculum development. The curriculum developers/teachers at a TVET institution should invite relevant experts from companies to take part in the process in order to jointly plan topics/competences to train at the TVET institution or at the company/workplace. Accordingly, this training plan forms an integral part of the curriculum, maintained both at the training institutions and companies."

Collaborative planning gives chance for every stakeholder to contribute for the effective implementation of the program. However, the data clearly show that the participation of companies in planning CT for their particular TVET was poor. In general, the analysis of the data reveals that in TVETs of the study area the preparation of CT plan was the responsibility of TVET in which the consideration given to the contributions of companies was low. This shows that there was lack of collaboration among stakeholders in planning for CT.

4.4 The Involvement of Companies in Implementation and Evaluation of CT.

Table 7: items related to practices/involvement/ of companies in implementation and evaluation of CT.

No	Items	Respondents				WM
		Trainees(n=102)		Trainers(n=29)		
		M	SD	M	SD	
1	participation by assigning the appropriate number of trainees for CT.	3.01	.970	2.86	.953	2.97
2	The extent of assigning a capable supervisor to trainees.	2.98	1.070	2.79	1.114	2.94
3	The extent of providing necessary inputs for the trainees.	2.72	1.144	3.04	1.170	2.79
4	The degree of evaluating the performance of the trainees and submit the results to the TVET college properly.	2.96	1.214	3.04	1.201	2.98
5	Participation in the overall implementation of CT.	2.72	1.210	3	.886	2.78
6	Participation by evaluating CT performance.	-	-	2.89	.956	-

ANOVA

participation of companies

	Sum of Squares	Df	Mean Square	F	Sig.		N	Mean
Between Groups	.012	1	.012	.813	.391	Trainers	6	2.9367
Within Groups	.134	9	.015			Trainees	5	2.8700
Total	.146	10				total	11	2.9064

Key: WM ≤ 2.50= low involvement, 2.50 <WM ≤ 3.50 = moderate (medium involvement), WM>3.50=high and M< 3=below average, M> 3= above average.

Table 7 shows trainers' and trainees' views about the participation of companies in the implementation and evaluation of CT.

Accordingly; in all activities like participation by assigning the appropriate number of trainees, assigning capable supervisor to trainees, providing necessary inputs for the trainees, evaluating the performance of the trainees and submit the results to the TVET college properly and over all implementation of CT companies has moderate participation with mean values 2.97, 2.94, 2.79, 2.98 and 2.78 respectively and participation by evaluating CT performance is below average. In general, the analysis of the data reveals that in TVET of the study area the participation of companies in implementation of CT was moderate and the participation by evaluating CT performance was below average. This result is not in line with the guiding principle of CT, "that as all parties involved, namely: the industry, the trainees and TVET institutions will gain immediate and long-lasting benefit; they will choose it" (MOE, 2010:3).

The result from one-way ANOVA test for the items revealed that there was no statistically significant mean difference in views between the trainers and trainees, $F(1, 9) = 0.813$, $p > .05$). Trainers views on participation of companies in implementation and evaluation of CT ($M=2.93$) and trainees ($M=2.87$).

4.5 Factors that Affect the Implementation of CT

Table 8: items related to factors (challenges) that affect the implementation of CT.

No	Items	Respondents				WM
		Trainees(n=102)		Trainers(n=29)		
		M	SD	M	SD	
1	Lack of collaboration between TVET college and the companies to implement CT.	3.30	1.114	2.96	.98	3.22
2	Absence of appropriate criteria to select CT offerings companies.	3.33	.980	3.21	1.101	3.30
3	Inconvenience of CT program/schedule/..	3.02	1.14	3.15	.718	3.04
4	Lack of appropriate materials /machines / for practical training in the TVET college.	3.14	1.178	3	1.195	3.10
5	Mismatch the number of trainees and capacities of companies to absorb them.	3.38	1.017	3.14	.990	3.33
6	Financial problems of trainees.	2.98	1.174	3.1	1.047	3.01
7	Lack of promotion activities about CT in TVET.	3	1.043	3.34	.936	3.07
8	Inadequacy of the time allotted to CT.	2.66	1.137	3.17	.711	2.77
9	Assigning incapable supervisor to trainees in TVET to follow the CT.	2.67	.960	3.32	.819	2.81
10	The limitation of superiors visiting to trainees.	2.27	.753	3.31	1.039	2.50
11	Lack of refreshment training to the stuff related to cooperative training.	-	-	3.14	.817	-
12	Availability of uncovered competency in TVET during CT.	2.30	.749	-	-	-
13	Lack similarities of training instrument/machines in TVET compeered to companies instrument/machines.	2.34	1.030	-	-	-
14	Lack of CT program helping to trainees to be employed.	2.54	.924	-	-	-
15	Lack of similarity activities during CT with the activities in the world of work.	-	-	3.79	.981	-
16	Lack of Subject matter knowledge of the trainers.	-	-	3.03	.718	-
17	Lack of Pedagogical knowledge of the trainers.	3.14	1.109	-	-	-
18	The number of trainees living in rental house during CT.	2.87	.925	-	-	-

ANOVA

Factors

	Sum of Squares	df	Mean Square	F	Sig.		N	Mean
Between Groups	.814	1	.814	8.293	.008 **	Trainers	13	3.2046
Within Groups	2.553	26	.098			Trainees	15	2.8627
Total	3.367	27				Total	28	3.0214

Key: WM ≤ 3=minor cause (factor), 3 <WM ≤ 3.50 = moderate cause (factor), WM>3.50=major cause (factor) and M<3= minor cause (factor), M=3 =moderate cause, M>3 = major cause (factor).

Table 8 shows trainers' and trainees' views about the factors affecting the implementation of CT. As it is indicated in the table, lack of congruence between graduate trainees and the world of work was rated as high with mean scores of 3.79. Hence, it is possible to infer that this factor was the major cause that affected the implementation of CT program. It's supported by one of interviewees view

"The system of training (curriculum) sometimes differs from the actual working environment."

As depicted in table 8 above, respondents replied with weighted mean and mean values of 3.22,3.30,3.04,3.10,3.33,3.01,3.07, 3.14,3.03 and 3.14, cooperation between TVET college and companies, criteria to select CT offerings companies, CT program/schedule/,Appropriateness of training materials /machines / in the TVET college, Mismatch the number of trainees and capacities of companies, financial problem of trainees, Promotion activities, refreshment training to the stuff related to CT, Subject matter and Pedagogical knowledge of the trainers respectively moderately affected the implementation of CT. Hence, from the data one can say that these factors moderately affected the implementation of CT.

On the other hand, as it is indicated in the table, The adequacy of time, the capability of supervisor, limitation of superiors visiting trainees, availability of uncovered competency, similarities of training instrument/machines in TVET and companies, CT program helping trainees to be employed and trainees living in rental house during CT were rated 'low' with the weighted mean values of 2.77, 2.81, 2.5, 2.3, 2.34, 2.54 and 2.87 respectively.

This data clearly shows that these factors were the least causes for the low implementation of the program. The result from one-way ANOVA test for items revealed that there was statistically significant mean difference in views between the trainers and trainees $F(1, 26) = 8.293$, $p < .05$). Trainers views on factors that affected CT ($M = 3.20$) and trainees views on factors that affected CT ($M = 2.86$).

4.6 - **Availability, capability and readiness of companies to provide CT.**

Table 9: descriptive statistics on items related to availability, capability and readiness of companies to provide CT.

No	Items	Respondents				WM
		Trainees(n=102)		Trainers(29)		
		M	SD	M	SD	
1	Availability of manufacturing companies that can provide CT in your localities (surroundings).	2.38	1.061	2.66	1.010	2.44
2	Availability of service companies for CT.	2.16	.752	2.48	1.214	2.23
3	Availability of trade companies.	2.79	.952	2.53	1.358	2.73
4	Availability of manpower to organize CT.	3.01	1.102	2.67	.758	2.93
5	Availability of capital budget.	2.56	.868	3.43	1.223	2.75
6	Availability of appropriate materials / machines /in the CT offering companies.	2.38	.850	2.13	1.279	2.32
7	Availability and applicability of CT guideline.	2.38	.804	3.2	1.095	2.56
8	Overall capacities of companies to implement CT.	2.81	1.098	2.4	.932	2.71
9	Readiness of companies to implement CT.	2.54	.958	2.77	1.135	2.59

ANOVA

avaliblity and capability

	Sum of Squares	Df	Mean Square	F	Sig.		N	Mean
Between Groups	.088	1	.088	.760	.396	Trainers	9	2.6967
Within Groups	1.858	16	.116			Trainees	9	2.5567
Total	1.946	17				total	18	2.6267

Key: WM ≤ 2.50= low, 2.50 <WM ≤ 3.50 = moderate (medium), WM>3.50=high.

Table 8 shows trainers' and trainees' views about the availability, capability and readiness of companies. As it is indicated in the table, availability of manufacturing companies, service companies and appropriate materials / machines /in the CT offering companies was rated as low with the weighted mean of 2.44, 2.33 and 2.32 respectively. From the data one can deduce that availability of manufacturing companies, service companies and appropriate materials / machines /in the CT offering companies were low. Analysis supported by one of interviewees view…

"The CT program is offered based on competencies completed on the curriculum. All occupations are supplemented with CT as much as possible. However, there are some occupations and/or competences where there is no company or enterprise to select as a venue for the CT such as IEMDT, Database, AEE, etc." The second interviewees view…

"There is a shortage of appropriate companies for the CT program. Due to this reason it is common to see a cooperative trainees engaged in another occupational positions in the companies. Example could be hardware & networking trainees may be assigned to work on secretarial activities."

As depicted in table 8 above, respondents replied with weighted mean values of 2.73, 2.93,2.75,2.56,2.71 and 2.59, availability of trade companies, manpower to organize CT, capital budget, and applicability of CT guideline, capacity of companies and readiness of companies to implement CT respectively were moderate.

Hence, from the data one can say that availability, capability and readiness of companies were moderate for the implementation of CT.

The result from one-way ANOVA test for items revealed that there was not statistically significant mean difference in views between the trainers and trainees, $f(1, 16) = .760$, $p > .05$). Trainers views on availability and capability of companies ($M = 2.69$) and trainees ($M = 2.55$).

4.6.1 Availability of Training Materials and Facilities.

Training materials and facilities including workshop, equipments, and access of internet are among the materials useful for training to be carried. Thus, based on the data obtained from observation in sample colleges, workshops are available but they are not comfortable by size and quality. Only in 1(50%) of the sample colleges were available with adequate number of equipments and access of internet. Therefore, it is possible to infer that lack of comfortable workshop, training equipments and access of internet might be among the factors impeded the achievement of CT

Effective teaching program in a college depends on a well organized library. However, the data from the observation reveled that reference materials are inadequately available both in kind and in number. This implies that there was shortage of reference books and libraries were not organized as it could help students to carry out different learning tasks and to satisfy their interest to read.

4.7 Motivating Factors during CT.

Table 10: items related to Motivating factors during CT.

No	Items	Respondents				WM
		Trainees(n=102)		Trainers (n=29)		
		M	SD	M	SD	
1	The payment(fee) for the trainees during CT.	2.82	1.003	2.76	1.154	2.81
2	Giving thank you latter/certificate of participation/ to companies that participated in CT.	2.66	1.103	2.77	1.194	2.68
3	Insurance agreement for possible damages of the trainees.	2.72	.897	2.6	.932	2.69
4	Insurance agreement for possible damages of the companies' machinery.	3.19	1.006	2.37	.999	3.00
5	delivery of transportation services in TVET for the trainees during CT.	2.13	.698	2.70	1.088	2.26
6	Giving invitations to CT offering companies to attend ceremonies (e.g. graduation)	3.06	.993	3.17	.950	3.08
7	Subsidizing recurrent cost for CT offering companies.	2.63	.947	2.37	1.326	2.57
8	Giving per dime to trainers during CT.	-	-	2.8	1.27	

ANOVA

Motivation

	Sum of Squares	Df	Mean Square	F	Sig.		N	Mean
Between Groups	.010	1	.010	.111	.744	Trainers	8	2.6925
Within groups	1.169	13	.090			Trainees	7	2.7443
Total.	1.179	14				Total	15	2.7167

Key: WM ≤ 2.50= low motivation, 2.50 <WM ≤ 3.50 = moderate (medium motivation), WM>3.50=high.

As can be seen from item 5 of Table 10, delivery of transportation services in TVET for the trainees during CT was rated as low with weighted mean values of 2.26. Therefore, from the data it can be conclude that the trainees had low motivation on delivery of transportation services in TVET. This implies that it has high power of motivation on trainees for successful implementation of CT when the problem of service delivery is solved. The data from observation reveled that there is no vehicle for CT services in 2(100%) of colleges.

As it is shown in Table 10 above, payment(fee) to trainees and giving per dime to trainers during CT, subsidizing recurrent cost for CT offering companies, giving thank you latter/certificate of participation/ to companies that participated in CT, Giving invitations to CT offering companies to attend ceremonies (e.g. graduation), Insurance agreement for possible damages of the trainees and Insurance agreement for possible damages of the companies' machinery were rated as 'medium' with weighted mean value of 2.81, 2.8, 2.57,2.68,3.08,2.69 and 3.00 respectively. This implies that majority of the activities related to motivation factors were moderate to motivate the stack holders for implementation of CT.

The result from one-way ANOVA test for items revealed that there was no statistically significant mean difference in views between the trainers and trainees, f(1, 13) =0.111, p>.05. Trainers views on motivating factors with mean (M=2.69) and trainees with mean (M=2.74).

CHAPTER FIVE

Summary, Conclusions, and Recommendations

5.1 Summary

The main purpose of this study was to reveal the Practices and Challenges of Cooperative Training in TVET Institutes and Companies in Gurage Zone.

Two among the four TVET institutions located in the zone were taken from rural and urban areas of Gurage zone. By so doing, the study tried to answer the following basic questions.

1. To what extent the enterprises/companies are involved in Planning, implementing and evaluating cooperative training?
2. What are the factors that adversely affect cooperative training?
3. What are the state of availability, capability and readiness of companies to provide cooperative training?
4. Are there any motivating factors during cooperative training?
5. What planning, organizing, coordinating and evaluating mechanisms help CT program to become effective?

A descriptive survey method was used. The data gathering instruments were questionnaires, interview, observation checklist, and document analysis. The data were gathered from the records of TVET institutions, trainers, trainees, management of companies, training institute Coordinators and TVET institute core process owners and deans. One hundred two and thirty Questionnaires were distributed to trainees and trainers respectively. One hundred two out of the 102 and 29 out of the 30 were properly filled, returned, and used.

Finally, the data were analyzed using frequency, percentage, mean, weighted mean and ANOVA test; whereas the data collected through interview and observation were analyzed in narration.

Based on the analysis and interpretation of the data, the following major findings were found out.

1) The findings of the study revealed that only 4(16%) and 2(8%) of the trainers were first and second degree holders respectively. They had the right qualification level to train at level III and level IV. The rest 19(76%) were with diploma qualification level. These trainers were assigned in jobs that are beyond their qualification.
2) The experience of trainers, two (7.4%) of the trainers are in the experience range of 5-10 years and twenty-three (85.2%) of the trainers in the experience range of below 5 years. No trainer in experience range of 11-15 years. Only 2(7.4%) are with experience above 15. Almost all the trainers (85.2%) are in the experience range below 5. This implies that the number of trainers with less experienced were high.
3) Thirty-six (22.2%) of the trainees were in level III while 47(52%) were enrolled in level IV. This implies that most of the trainees' enrollment was in level III and IV.
4) The level of awareness of stakeholders' on CT. Accordingly willingness of companies to receiving trainees and providing CT, Cooperate in using machineries and materials, participate trainees on practical activities, and share their experiences and support the trainees as medium with weighted mean value of 3.01, 2.78, 2.96 and 2.88. The awareness of trainer and trainees also as medium with weighted mean value of 3.16 and 2.86.However, willingness of companies to assigning the trainees in the task appropriate to his/her field of training and awareness of companies on CT as low weighted mean values of 2.37 and 2.43 respectively. This data shows trainers and trainees had better awareness than companies so companies do not assigned the trainees in the task appropriate to his/her field of training due to the lack of awareness on CT.
5) Regarding participation of companies in planning CT, the highest response obtained was 3.24 for participation by setting criteria to select companies for CT: other activities like participation in preparation of curriculum, in setting rules and regulation (CT guide line) and over all participation of planning were below average value 2.63, 2.82 and 2.38 respectively.

All in all, the average point regarding the participation of companies in planning of CT was 2.77 which is below average.

In general, the analysis of the data reveals that in TVET of the study area the participation of companies in planning CT was below average. Supporting this analysis, one of the interviews said that "our company is one of cooperative training offering companies; we don't know how our company prepared the CT plan and evaluate the progress of the program. In general we are not participated in panning of CT." This shows that there was lack of collaboration among stakeholders in planning CT.

6) Regarding participation of companies in implementation and evaluation of CT, all most all activities like participation by assigning the appropriate number of trainees, assigning capable supervisor to trainees, providing necessary inputs for the trainees, evaluating the performance of the trainees and submit the results to the TVET college properly and over all implementation of CT were moderate participation with value 2.97,2.94,2.79,2.98 and 2.78 respectively and participation by evaluating CT performance is below average. In general, the critical analysis of the data reveals that in TVET of the study area the participation of companies in implementation of CT was moderate and the participation by evaluating CT performance was below average.
7) In the study, it was observed that lack of similarity activities during CT with the activities in the world of work was rated as high with mean scores of 3.79. Hence, it is possible to infer that this factor was the major causes that affect the implementation of CT program or there is lack of curriculum relevancy.
8) concerning factors that challenged the effective implementation of CT, most of respondents replied with weighted mean and mean values of 3.22,3.30,3.04,3.10,3.33,3.01,3.07, 3.14,3.03 and 3.14, cooperation between TVET college and companies, criteria to select CT offerings companies, CT program/schedule/,Appropriateness of training materials /machines / in the TVET college, Mismatch the number of trainees and capacities of companies, financial problem of trainees, Promotion activities, refreshment training to the stuff related to CT, Subject matter and Pedagogical knowledge of the trainers respectively were moderately affected the implementation of CT.

Hence, from the data one can say that these factors moderately affected the effective implementation of CT. On the other hand, The adequacy of time, the capability of supervisor, limitation of superiors visiting to trainees, Availability of uncovered competency, similarities of training instrument/machines in TVET and companies, CT program helping trainees to be employed and trainees living in rental house during CT were rated 'low' with the weighted mean score of 2.77, 2.81, 2.5, 2.3, 2.34, 2.54 and 2.87 respectively. This data clearly shows that these factors were the minor causes of the low implementation of the program.

9) regarding availability, capability and readiness of companies, all most all respondents on availability of manufacturing companies, service companies and appropriate materials / machines /in the CT offering companies was rated as low with the weighted mean of 2.44, 2.33 and 2.32 respectively. From the data one can deduce that availability of manufacturing companies, service companies and appropriate materials / machines /in the CT offering companies were low. Respondents replied with weighted mean values of 2.73, 2.93,2.75,2.56,2.71 and 2.59, availability of trade companies, manpower to organize CT, capital budget, and applicability of CT guideline, capacity of companies and readiness of companies to implement CT respectively were moderate.
10) In the study, it was observed that delivery of transportation services in TVET for the trainees during CT was rated as low with weighted mean values of 2.26. Therefore, from the data it can be conclude that the trainees had low motivation on delivery of transportation services in TVET. This implies that it has high power of motivation on trainees for successful implementation of CT when the problem of service delivery is solved. payment(fee) to trainees and giving per dime to trainers during CT, subsidizing recurrent cost for CT offering companies, giving thank you latter/certificate of participation/ to companies that participated in CT, Giving invitations to CT offering companies to attend ceremonies (e.g. graduation), Insurance agreement for possible damages of the trainees and Insurance agreement for possible damages of the companies' machinery were rated as 'medium' with weighted mean value of 2.81, 2.8, 2.57,2.68,3.08,2.69 and 3.00 respectively. This implies that majority of the activities related to motivation factors were moderate to motivate the stack holders for implementation of CT.

11) some of the major suggestions forwarded by majority of respondents as possible solutions to solve the implementation problem of CT in TVET of the study area are: providing adequate training for stakeholders, encouraging and giving companies opportunity to involve in planning, implementation, evaluating the outcomes of the implementation of the program and forwarding possible recovery for the observed implementation problems, arranging discussions for stakeholders on the progress of the program and assigning competent and facilitate the transportation services for trainees.

5.2 Conclusions

Based on the findings, the following conclusions have been drawn.

- ✓ The availability of experienced and skilled teachers/trainers is a key element for the Provisions of quality training. Contrary to its importance, the study revealed that colleges under study area less qualified teachers/trainers with practical skill. Besides, it was identified that more teachers/trainers had less experience in Colleges. It is obvious that less technical skill and experience affect the quality of training greatly, the trainers may not have the needed confidence to train in those levels and overall performances of the colleges become weaker. Training provided by these under qualified and inexperienced trainers may not enable to produce capable graduates that play important roles in the country's economic and social spheres.
- ✓ .To enhance the quality of training and implementation of TVET strategy, the current practices of the Colleges should be providing training in collaboration with enterprises/industries and giving training from level 5 to level 1 with the ratio of 1:3:24 which is indicated in the strategy . In the contrary, as revealed in the study cooperative training is not implemented effectively in collaboration. In all training programs most of the trainees are enrolled in level 3 and level 4 .Therefore, with respect to the national TVET strategy, the current practices of these TVET colleges in the zone seem to be doubtful.

- ✓ Creating awareness about CT, the training so far arranged and given for stakeholders was not in a position to help them to have adequate awareness on the CT. Consequently, stakeholders have not acquired adequate awareness on the purposes and advantage of CT and their responsibilities in implementing processes of the program. Therefore, shortage of training was among the major factors that limited the involvement of stakeholders in the planning and implementation process of CT.
- ✓ although CT plans were prepared, the participation of companies in the planning, implementation and evaluation process of CT was not satisfactory, this reveals that stakeholders had no significance contribution in the preparation, implementation and evaluation of the plans and there was lack of strong collaboration among stakeholders in planning for CT. Moreover, the TVETs' targets were not equally understood by stakeholders due to the less effort for TVET leaders exerted to disclose the purpose, advantage and responsibility of stakeholders.
- ✓ Activities during CT with the activities in the world of work was not similar. Hence, it is possible to conclude that this factor was the major causes that affect the implementation of CT program. Cooperation between TVET college and companies, CT program/schedule/,appropriateness of training materials /machines / in the TVET college, mismatch between the number of trainees and capacities of companies, financial problem of trainees, Promotion activities, refreshment training to the staff related to CT, Subject matter and Pedagogical knowledge of the trainers respectively were moderately affected the implementation of CT. Enhanced flexibility and relevance of the TVET curricula increases the probability of producing graduates that can better fit to the labor market. This, in turn, increases the importance and acceptability of TVET training. Regarding availability, capability and readiness of companies, there was shortage of manufacturing and service companies, materials / machines /in the CT offering companies was not appropriate. Availability of trade companies, manpower to organize CT, capital budget, and applicability of CT guideline, capacity of companies and readiness of companies to implement CT respectively were moderate.

Facilities and materials are not adequate. Hence, trainees are not grasping the necessary Knowledge and skills as per their expectations and the expectations of stakeholders.

Trainees trained using sub-standard materials, facilities, and services in the end may not be active participants in improving their economic status and building the nation.

- ✓ In the study, it was observed that delivery of transportation services in TVET for the trainees during CT is challenging. Therefore, from the data it can be concluded that the trainees had low motivation on delivery of transportation services in TVET. This implies that it has high power of motivation on trainees for successful implementation of CT when the problem of service delivery is solved. payment (fee) to trainees and giving per dim to trainers during CT, subsidizing recurrent cost for CT offering companies, giving thank you letter/certificate of participation/ to companies that participated in CT, giving invitations to CT offering companies to attend ceremonies (e.g. graduation), Insurance agreement for possible damages of the trainees and Insurance agreement for possible damages of the companies' machinery were rated as medium. This implies that majority of the activities related to motivation factors were at moderate level to motivate the stakeholders for implementation of CT.
- ✓ Issues related to cooperative training are all rated as moderate or low by the trainers and trainees. This may imply that cooperative training is not being carried out properly. Failure to carry out such a TVET cornerstone activity due to various reasons might harm the training process to a larger extent resulting in shortage of skilled labor force.

5.3 Recommendations

Based on the findings and conclusions mentioned so far, the following are recommended.

1) Most of the trainers were assigned in jobs beyond their qualifications. So, it is good if the regional TVET bureau together with the Ministry of Education strives to attract and retain qualified and competent trainers besides strengthening the present capacity building activities using short-term and long-term trainings. However, the knowledge has to not only be sustained but also updated from time to time depending on the changes observed on the ground.

2) TVET colleges strive to implement enrollment of trainees indicated in the national TVET strategy from level 5 to level 1with the ratio of 1:3:24 which is based on the demand of the labor market.

3) It is advisable for the TVET colleges to undertake continuous awareness creation activities to enhance the knowledge, interest, and commitment of the stakeholder on CT. So providing adequate training for stakeholders, encouraging and giving companies opportunity to involve in planning, implementing, evaluating the outcomes of the implementation of the program and forwarding possible recovery for the observed implementation problems, arranging discussions for stakeholders on the progress of the program. This could be done by TVET colleges in the study area.

4) Facilities such as workshops, classrooms, libraries, vehicles, machines, etc. and materials are not adequate. Training in the absence of suitable facilities and materials is against the objectives of TVET. Thus, it is advisable for the National Regional Government of SNNPR to allocate the utmost budget available to fulfill the necessary facilities. Furthermore, it is better if it can manage to encourage the involvement of the various stakeholders in the expansion and proper running of TVET activities. In connection to this, the colleges should give due attention to the designing of convincing project proposals to get fund from different sources.

5) The TVET will strives to make training similar with world of work(labor market) by giving opportunities for companies to participate during designing occupational standard (OS) and curriculum. Besides, it is important to conduct further study on relevance of TVET curriculum.

6) It is important TVET colleges cooperate with stakeholders, and perform promotion activities and universities giving pedagogical training for the trainers before coming to train CT candidate effectively.

7) It is important to regularly follow-up the performances of companies to improve CT. Therefore, it is recommended that the TVET colleges have to work hard in conducting continuous and thorough supervision that provides timely responses to the respective companies and monitor the progress.

8) To increases the availability and capacity of company encourage the companies by delivering working area and facilitating recurrent cost in Business Company. This could be done by collaboration between TVET colleges and trade and industry office.

9) Cooperative training seems not to be carried out according to the expectation. There are various reasons for this. Thus, it is better for the regional TVETB and the colleges to work in close collaboration with the various companies by preparing and signing Memorandum of Understanding early in the training period. Still they are advised to involve companies of varied sizes in discussions and activities related to CT. In addition, it is recommended that they have to show their concern about the success of the CT, as much as possible, by helping them in solving the technical problems they face.

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Appendix-A

ADDIS ABABA UNIVERSTY

School of Graduate studies

Institute of Educational Research

Interview guide for members of management of the TVET colleges (Deans and core process owner) .The purpose of this interview guide is to gather additional information for the study "practices and challenges of cooperative training in TVET institutes and companies in gurage zone".

Name of institution you are working _____

Your position_____

Your task in relation to cooperative training (CT)_____ Work experience_____

1. How do you describe the practice of CT in your college?

2. Why formal agreement (memorandum of understanding) is needed to CT?
3. Why do you assign supervisors for CT?
4. How trainees get benefit from CT?
5. How do you explain the availability of companies around your college for CT?
6. How your institutes cooperate with companies during planning, implementing and assessing cooperative training?
7. In what way both TVET institution and companies get benefit from CT?
8. Do you think, CT is viable in TVET strategy?
9. Do trainees' get appropriate position with their occupation during CT?
10. What role do you play for the success of CT?
11. How do you rate awareness of companies, trainers and trainees on CT?
12. Are there any incentives given to companies offering CT?
13. Would you please the major problems you faced during CT?
14. What solutions do you suggest to mitigate these problems?

Appendix-B

Addis Ababa University

School of graduate studies

Institute of educational research

Interview guide for management of companies on cooperative training partners.

The purpose of this interview guide is to gather additional information for the study "practices and challenges of cooperative training in TVET institutes and companies in gurage zone".

- Name of the companies you are working for_____
- You position_____
- Your task in relation cooperative training _____Work experience----------

1. How many trainees you receive annually for CT?
2. Do you think that, memorandum of understanding is necessary for CT?
3. Do you think trainees get benefit out of the training in your companies? Could you mention them?
4. In what way do trainees contribute for the success of your company?
5. Do you assign supervisor for the trainees according to their occupation?
6. For how long did TVET trainees attend co-operative training in your companies ?
7. From your experience, have you ever participated in planning, implementing and evaluating cooperative training delivery with TVET colleges?
8. How both TEVT institutes and companies get benefits from cooperative training?
9. Do you think that, cooperative training is viable in TVET strategy?
10. Do trainees get appropriate position with their occupation during CT?
11. How do you level the awareness of CT by stakeholders?
12. Is their CT guideline in your company?
13. In what way do trainees sign agreement with your company?
14. What are incentives given to your company by TVET College?
15. How do you rate the interest of your company to offer CT in the future?
16. What role could you play for the successes of CT?
17. Would you please the major problems you faced during CT?
18. What solution do you suggest to mitigate these problems

Appendix-c

Addis Ababa University

School of graduate studies

Institute of educational research

Questionnaire for TVET trainers

The main purpose of this questionnaire is to collect information about cooperative training in Gurage Zone. Please note that your input is very important to this study, so please try to answer all the questions (without skipping any)

The study is meant for impartial fulfillment of MA Degree in Educational Research and evaluation.

General Direction:

1. Please do not write your name

2. Please encircle wherever there are alternatives.

3. Write your opinion briefly for the open ended question.

Thank you in advance for your cooperation.

Part. I .Back ground of the Respondent

1. Name of the TVET Institution_____ town----------
2. Field of study _____
3. Educational qualification A. certificate. B. Diploma c ./BA/BeD/BSC d. MA/MED/**MSC**
4. sex A) male B) female
5. Marital status A. married B. single C. divorced/separated. D. widow/er
6. experience in years A. below 5 B.5 to10 C 11to 15 D above 15

Part II: items related to respondents' view on the level of awareness of stakeholders' have on CT

Direction: the following items are related to awareness of stockholders' on CT'. Kindly indicate your response by using an "X" mark on the box placed each item.

	gness of companies to receive trainees and providing CT.					
	gness of companies to assigning the trainees in the task riate to his/her field of training.					
	ness of companies to Cooperate in using machineries and ls.					
	ness of companies to participate trainees on practical es.					
	gness of companies to share their experiences and support the .					
	ity of practical training in TVET and CT offering company					
	ness of trainers on CT.					
	ness of trainees on CT.					
	ness of companies on CT.					
	gness of the trainees to attend CT.					

5= very high 4= high 3= medium 2= low 1= very low

Part III: The current practices of enterprises/companies/ in planning, implementing and evaluating cooperative training.

Direction: the following items are related to activities/practices of enterprises/companies in planning, implementing and evaluating cooperative training. Kindly indicate your response by using an "X" mark on the box placed each item.

5= very high 4= high 3= medium 2= low 1= very low

	ent/degree of participation of enterprises/companies in the following tasks of					
	ation by planning of CT.					
	ation by implementation of CT.					
	ation by evaluating CT performance.					
	pation by assigning the appropriate number of trainees for CT.					
	ation by setting criteria to select companies for CT.					
	nce of companies to receive trainees and providing CT.					
	nce of companies to assigning the trainees in the task appropriate to his/her training.					
	ent of assigning a capable supervisor to trainees.					
	ent of providing necessary inputs for the trainees.					
	gree of evaluating the performance of the trainees and submit the results to ET college properly.					
	ation in preparation of curriculum.					
	ation in using machineries and materials.					
	ation in setting rules and regulations regarding CT.					
	ation in the overall implementation of CT.					

Part III: factors that adversely affect cooperative training.

Direction: - the following items are related to challenges of CT. kindly indicate your response by using <X> mark on the box placed each item.

		Scales				
						1
	Lack of cooperation between TVET college and the companies to implement CT.					
	Absence of appropriate criteria to select CT offerings companies.					
	In convenience of CT program/schedule/..					
	Reluctance of the trainees to attend CT.					
	Lack of appropriate materials /machines / for practical training in the TVET college.					
	Mismatch the number of trainees and capacities of companies to absorb them.					
	Financial problems of trainees.					
	Lack of Promotion activities about CT.					
	Inadequacy of the time allotted to CT.					
	Assigning incapable supervisors in TVET collage to follow up the CT.					
	The limitation of superiors visiting to trainees.					
	Lack of refreshment training to the stuff related to cooperative training.					

Part IV: - Availability, capability and readiness of companies to provide CT.

Direction: - the following items related to availability, capability and readiness of companies to provide CT. kindly indicate your response by using <X> mark on the box placed each item.

		Scales				
	Availability of manufacturing companies that can provide CT in your localities (surroundings).					
	Availability of service companies for CT.					
	Availability of trade companies.					
	Availability of manpower to organize CT.					
	Availability of capital budget.					
	Availability of appropriate materials / machines /in the CT offering companies.					
	Availability and applicability of CT guideline.					
	Overall capacities of companies to implement CT.					
	Readiness of companies to implement CT.					

Part v: Motivating factors during CT.

Direction: the following are items related to motivating factors during cooperative training. Kindly indicate your response by using "X" mark on the box placed each item.

		Scales			
	yment(fee) for the trainees during CT.				
	thank you latter/certificate of participation/ to companies that participated in CT.				
	ce agreement for possible damages of the trainees.				
	ce agreement for possible damages of the companies' machinery.				

	y of transportation in TVET for the trainees during CT.				
	invitations to CT offering companies to attend ceremonies (e.g. graduation)				
	zing recurrent cost for CT offering companies.				
	per dime to trainers during CT.				

VI. Please write your opinion for the following questions

1. What are the major problems related to cooperative Training in your college and companies?

_____

_____

_____

_____

2. What could be the possible solution for the above suggested problems?

_____

_____

3. What is the role of the following stake holders for successful accomplishment of cooperative training?

A) Colleges_____.

B) Companies _____.

D) Trainers _____.

D) Trainees _____. Thank you!

Appendix-d

Addis Ababa University

School of graduate studies

Institute of educational research

Questionnaire for TVET trainees.

The main purpose of this questionnaire is to collect information about cooperative training in Gurage Zone. Please note that your input is very important to this study, so please try to answer all the questions (without skipping any)

The study is meant for impartial fulfillment of MA Degree in Educational Research and evaluation.

General Direction:

1. Please do not write your name

2. Please encircle wherever there are alternatives.

3. Write your opinion briefly for the open ended question.

Thank you in advance for your cooperation.

Part I .Back ground of the Respondent

1. Name of the TVET Institution_____ town----------
2. Field of training _____
3. In which year are you now? A. First year. B. Second year c. third year
4. Sex A. male B. female
5. The training program you attend A. level-II B. level-III C. level-IV D. Level-V
6. Age A. 15-20 B. 21-25 C. 26-30 D. above 30
7. Family income a. farming. b. governmental/nongovernmental c. trade d. other.

Part II: items related to respondents' view on the level of awareness stakeholders' have on CT.

Direction: the following items are related to awareness of stockholders' on CT'. Kindly indicate your response by using an "X" mark on the box placed each item.

5= very high 4= high 3= medium 2= low 1= very low

	gness of companies to receive trainees and providing CT.					
	gness of companies to assigning the trainees in the task riate to his/her field of training.					
	ness of companies to Cooperate in using machineries and ls.					
	ness of companies to participate trainees on practical activities.					
	gness of companies to share their experiences and support the .					
	ity of practical training in TVET and CT offering companies					
	ness of trainers on CT.					
	ness of trainees on CT.					
	ness of companies on CT.					
	gness of the trainees to attend CT.					

Part III: The current practices of enterprises/companies/ in planning, implementing and evaluating cooperative training.

Direction: the following items are related to activities/practices of enterprises/companies in planning, implementing and evaluating cooperative training. Kindly indicate your response by using an "X" mark on the box placed each item.

5=very high 4=high 3=medium 2=low 1=very-low

	ent/degree of participation of enterprises/companies in the following tasks of CT.					
	pation by assigning the appropriate number of trainees for CT.					
	ness of companies to receive trainees and providing CT.					
	ent of assigning the trainees in the task appropriate to his/her field of training.					
	ent of assigning a capable supervisor to trainees.					
	ent of providing necessary inputs for the trainees.					
	gree of evaluating the performance of the trainees and submit the results to the TVET properly.					
	pation in the overall implementation of CT.					
	ness of companies to participate trainees on practical activities.					
	nce of companies to share their experiences and support the trainees.					
	rity of practical training in TVET and CT offering companies.					

Part Iv: factor that adversely affect cooperative training.

Direction: - the following items are related to challenges of CT. kindly indicate your response by using <X> mark on the box placed each item.

		Scales				
	f cooperation between TVET college and companies to implement CT.					
	e of appropriate criteria to select CT offerings companies.					
	enience of the CT program/schedule/.					
	nce of the trainees to attend CT.					
	f appropriate of materials /machines / for practical training in the TVET college.					
	ch the number of trainees and capacities of companies to absorb them.					
	al problems of trainees.					
	f Promotion activities about CT.					
	uacy of the time allotted to CT.					
	f supervisors assigning to companies to follow up the CT.					
	bility of uncovered competency in TVET during CT.					
	imilarities of training instrument/machines in TVET compeered to companies ent/machines.					
	f CT program helping to trainees to be employed.					
	f similarity activities during CT with the activities in the world of work.					
	f Subject matter knowledge of the trainers.					
	f Pedagogical knowledge of the trainers.					
	mber of students living in rental house during CT.					

Part V: - Availability, capability and readiness of companies to provide CT.

Direction: - the following items related to availability, capability and readiness of companies to provide CT. kindly indicate your response by using <X> mark on the box placed each item.

		Scales				
	ɔility of manufacturing companies that can provide CT in your localities ndings).					
	ɔility of service companies for CT.					
	ɔility of trade companies.					
	ɔility of manpower to organize CT.					
	ɔility of recurrent budget.					
	ɔility appropriate of materials / machines /in the CT offering companies.					
	ɔility and applicability of CT guideline.					
	capacities of companies to implement CT.					
	ess of companies to implement CT.					

Part v: Motivating factors during CT.

Direction: the following are items related to motivating factors during cooperative training. Kindly indicate your response by using "X" mark on the box placed each item.

		Scales			
	yment(fee) for the trainees during CT.				
	thank you latter/certificate of participation/ to companies that participated in CT.				
	ce agreement for possible damages of the trainees.				
	ce agreement for possible damages of the companies' machinery.				
	y of transportation for the trainees during CT.				
	invitations to CT offering companies to attend ceremonies (e.g. graduation)				
	zing recurrent cost for CT offering companies.				

Part VI. Please write your opinion for the following questions

1. What are the major problems related to cooperative Training in your college and companies?

_____

_____

_____

_____

2. What could be the possible solution for the above suggested problems?

_____

_____

___

3. What is the role of the following stake holders for successful accomplishment of cooperative training?

A. colleges.

_____

_____

_____

B.Companies/industries.

_____

C.Trainers.

_____

_____

D.trainees

_____

_____

_____

___

Thank you

Appendix-E

Addis Ababa University

School of Graduate Studies

Institute of educational research and evaluation

Observation checklist.

Purpose- the purpose of this checklist is to gather facts about the availability and appropriateness of staff, instructional materials/machines, facilities, services, etc. through observation at the training shop and offices.

1. Name of the TVET institute ----------
2. Geographical setting: zone ----------woreda----------town----------
   ----
3. Year of establishment as TVET institute----------
4. Number of classrooms ----------
5. Staff population: academic staff TVET: male-------female------total---------

   Administrative staff TVET: male ----------female --------- total------
   ---

6. Field of study in the TVET institute

	study	of training				

7. Number of training staff for each field of study and their educational qualifications

	specialization				onal qualification		
					a		

8. Number of trainees in each field of study

	study	of trainees							
		I			'				

9. Facilities and services

	s and services	le	ilable	s
	upply			
	ity			
	or staff			
	or boys			
	or girls			
	elds			
	sor			
	a for staff			
	s offices			
	strative offices			
	nent offices			
	m			

	ting room			
	a for trainees			
	; hall			
	op			
	for co-curricular activities			

10. Condition of the training institute

	on of facilities' and training materials.		
	mpound is attractive.		
	re adequate seats and blackboards.		
	ss rooms are clean and ventilated.		
	of trainees for each field of study is appropriate.		
	re adequate reference books in the library.		
	chines available are sufficient in quality and quantity.		
	re adequate computers for major courses and common courses		
	deline		
	rtation		
	CT		
	ion document of CT		
	ndum of understanding		
	List of companies around the TVET college		
	Profile of companies		

Appendix-F

Addis Ababa University

School of Graduate Studies

Institute of educational research and evaluation

Observation checklist.

Purpose- the purpose of this checklist is to gather facts about the availability and appropriateness of staff, instructional materials/machines, facilities, services, etc. through observation at the work shop of companies.

.

1. Name of the companies ----------
2. Geographical setting: zone ----------woreda----------town----------
3. Year of establishment as companies ----------
4. Number of workshop ----------
5. Staff male ----------female --------- total----------
6. Number of staff for each field of study and their educational qualifications

	specialization				onal qualification		
					a		

7. Facilities and services

	s and services	le	ilable	s
	upply			
	ity			
	or staff			
	or boys			
	or girls			
	sor			

	a for staff			
	strative offices			
	ting room			
	a for trainees			
	hall			
	ories			

8. Condition of the companies.

	on of facilities' and training materials.		
	mpound is attractive.		
	rkshops are clean and ventilated.		
	of trainees for CT is appropriate.		
	chines available are sufficient in quality and quantity.		
	re adequate computers for CT.		
	deline		
	rtation		
	CT		
	ion document of CT		
	ndum of understanding		
11.	List of companies around the TVET college		
12.	Profile of companies		

Declaration

This thesis is my original work and has not been presented for a degree in any other university, and that all sources of material used for the thesis have been acknowledged.

*Name:*_____

*Signature:*_____

*Date of Submission:*_____

Advisor's Approval

This thesis has been submitted for examination with my approval as a university advisor.

*Name:*_____

*Signature:*_____

*Date:*_____