ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

# A STUDY ON THE FACTORS AFFECTING THE EXTERNAL EFFICIENCY OF TVET COLLEGES OF ADDIS ABABA

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# Table of Contents

Pages

## List of tables Page

## List of Figures Page

## Acronyms

| | |
|---|---|
| ANOVA | Analysis of Variance |
| COMEDAF | Conference of Ministers of Education of the African Union |
| ESAURP | Eastern and Southern African Universities Research Programme |
| ESDP | Educational Sector Development Programme |
| FMECG | Federal Ministry of Economic Cooperation of Germany |
| FNG | Federal Negarit Gazeta |
| ICT | Information and Communication Technologies |
| IIEP | International Institute for Educational Planning |
| ILO | International Labour Organisation |
| ISCED | International Standard Classification of Education |
| MOE | Ministry of Education |
| NGOs | Non-Governmental Organizations |
| TGE | Transitional Government of Ethiopia |
| TVET | Technical and Vocational Education and Training |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNESCO - UNEVOC | UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training |

# Abstract

*Training of technicians in Ethiopia is targeted at offering the industry a competent workforce that is able to perform the various tasks bestowed upon it within the development of industry. This paper discusses the training acquired by these technicians from Technical Vocational Educational Training (TVET) Institutions/colleges vis-à-vis the requirements of the industry and the general employment prospect of the graduates. Areas considered are the technicians' performance at work; what they learn and what is required of them; and the teaching and learning materials used to train them. Data was collected through questionnaires, interviews and direct observation at TVET colleges, Apprenticeship offering organizations, Regional educational bureaus, Ministry of Education and The Central Statistics Agency. Respondents were technicians who had undergone the training, and Instructors in TVET institutions/colleges, Trainees in TVET institutions, Deans of TVET colleges and heads of HRM department of key stake holder organizations. The statistical tools used for data analysis frequency percentage and the Analysis of Variance (ANOVA). Arguably, the findings reveal that the requirement of the external efficiency TVET institutions/colleges is not in phase with the expected. In technicians performance at work, more is required of them than what they learn; the teaching and learning materials used need to be upgraded to simulate what is expected in the industry and finally proper collaboration between the industry and TVET institutions in the face of changing technological trends is recommended.*

# CHAPTER ONE

## INTRODUCTION

Under this chapter, background of the study, statements of the problems, objectives, significance, delimitation, limitation, definition of terms and organization of the study are treated.

### 1.1 Background of the Problem

Developing human resource is one of the major factors that determine the social, political and economic growth of a nation, which is possible by education and training. Researchers indicate that economic growth is strongly linked with educational level of the working population. Education and training for and through the work place is the "master key that can alleviate poverty, promote peace, conserve with the environment, improve the quality of life for all and help achieve sustainable development". (UNESCO, 2004)

The technical achievement in space science in the mid 1950s encouraged the idea that the promotion of science and technology could lead to innovation in industry as well, thus accelerating economic growth. The catalysts here are, of course, engineers and technicians rather than secondary school graduates of the general curriculum type.

From this point of view, countries around the world are seeking to satisfy their skilled work force need to enhance economical and social development by providing efficient and effective technical and vocational trainings in various skills and at different levels.

Accordingly, Ethiopia considers Technical and Vocational Educational and Training (TVET) as a vital for development. As to MoE (2006:50), TVET is

aimed at creating a competent, motivated and adaptable work force that has a prominent contribution to poverty reduction social and economic development. This is done through facilitating demand driven, high quality TVET relevant to all sectors of the economic at all level and to all people in need of skills development.

The technical and vocational education and training programs are arranged in three different packages (FNG, 2004)

a) Basic vocational training programs – intended to provide training which prepares citizens for gain full employment.
b) Junior technical & vocational training program – With the main aim of training the youth who have completed primary education.
c) Middle level technical and vocational education and training ( TVET) programs – aimed at producing middle level technical work force of various trades from those youth who have completed general secondary education ( Grade10) and have the inclination and the will to be educated and trained.

The middle level TVET programs are further subdivided in to 10+1,10+2 and 10+3 programs which eventually lead to a certificate level I, certificate level II and college diploma respectively (FNG, 2004). The subdivision of the middle level TVET program is now (this Ethiopian academic year, 2008/9) changed as Level III, Level IV and Level V.

Vocational education was originated outside the formal school system, and a large part of it takes place today in the form of apprenticeship on the shop floor. Many youth take up apprenticeships in the informal sector where they work with the experienced technicians, artisans and craftsmen before venturing into their own self employment. Today the training is given in the formal, non-formal and informal way.

People who have the relevant skills not only make capital equipment more productive but also make effective use of machines and equipment they work with. This enables firms to invest more on sophisticated materials and productive machines, but without a work force that is continually acquiring skills, it is difficult to reap most of the returns from the current technological progress. Researchers observe that the work place has changed and there is a mismatch between available human resources and the type of employment available in the world of work.

Technical and Vocational Educational and Training (TVET) programs serve the individual by imparting knowledge, skills and attitude that will be used to produce gainful employment (Kerre, 1997). With increasing technological development and liberalized world markets, any country's technical and vocational training system will increasingly become decisive in determining the competitive strength and level of development of its economy. As not every one can be trained for top level jobs vocational education and training provide much needed middle level technicians. (Psacharopouos, 1997)

Though countries are striving to expand TVET to their youth, on the other hand there are evidences which show that the need to expand TVET should come from the demand of the economic activity. Psacharopouos (1982) writes that the evidence that a high correlation between technical education and economic development does not necessarily mean the former caused the latter, which dampened the initial enthusiasm for technical education. In fact, the direction of causation might have been from economic development toward increased enrollments in vocational schools.

In support to this idea Yekunoamlak (2000: 2) also noted that "unless there is a concomitant growth in the economy, which facilitates job opportunities, the labor market can not absorb all the graduates of

vocational schools and training centers" which reinforces the above statement.

According to Martin Carnoy (1982) the overall employment (and unemployment) and the division of labor (including who is unemployed) are not a function of the level of education in the labor force but rather of economic and social factors. In other words, raising the level of education in the labor force will not be a particularly important factor in reducing the level of unemployment, even though it may increase the employability of labor when and if the economy develops.

Similar research from Ethiopia, Wanna (1996:302) identified a number of factors challenging technical and vocational education and trainings to be successful. One of this is "a small modern and near stagnant employment market" which is indeed from the economic perspective of the country.

Some economists point out the distortion in the labor markets, such as minimum-wage legislation, labor unions, and governments imposed hiring-firing constraints as a reason for unemployment. Others consider unemployment to be the result of development polices which concentrate on maximizing the return to capital rather than maximizing the employment of labor and very few economists, however, consider that a major cause of unemployment is the mismatch of skills produced by the educational system with the requirement of the labor market.

In support of the ideas above, Wanna (1996:302) lists additional challenging constraints to the success of Technical and Vocational Education and Trainings. Some of these include training programs based on anticipated employment demand rather than on planned labor need, training institutions with little or no linkage with enterprises or employers, Financial constraints and weak implementation capacity, Rigid

curriculum in the face of changing economic circumstances, Lack of access to employment relevant training in the modern and informal sector of the economy prevents most of the TVET graduates from making full use of the existing potential in the production and service sector. Therefore, dealing with the factors affecting to the employment problem with TVET graduates is very important and timely.

## 1.2. Statement of the Problem

Young people leaving school and looking for work face problems, particularly in an area of high unemployment (M. Stafford and R. Jackson, 1980). The Ethiopian case is not an exception to this fact. A high level of un - and underemployment is one of the critical socio-economic problems facing Ethiopia.

The factors those contribute for growing mismatch between the world of work and the world of education are many. The education system, which gives more emphasis for theoretical aspect, contributes for increment of unemployed graduates. The education system of Ethiopia has been criticized on the ground that it was too much academic and theoretical (MoE 2003:15). In Ethiopia, it is evident that until recently there were few TVET institutes.

To tackle the challenge, the Ethiopian government is revising the educational policies. Technical and Vocational Training is considered as one of the main strategy in the Education and Training Policy of Ethiopia (1994 : 6) stating "parallel to general education, diversified Technical and Vocational Training will be provided for those who leave school from any level of education".

Since then the Ethiopian government has put much effort to expand technical and vocational education and training across the nation. As it is depicted in the TVET strategy, draft discussion issued the Ethiopian Government embarked on a massive expansion of formal TVET some years ago. Between 1996/7 and 2004/5, the number of TVET schools providing formal non-agriculture TVET increased from 17 to 199; and enrolment from 3,000 to 106,300 in governmental and non-governmental TVET institutions, (MoE 2006: 8)

However, experiences show us that the mere expansion of TVET alone does not solve the problems of unemployment and low productivity of the economy in Ethiopia due to different socio-economical problem.

On a survey study of Urban Employment and Unemployment for the year 2006, the employment to population ratio that is calculated as a percentage of total employed persons to that of the working age population aged 10 years and over of the urban parts of the country is reported to be 48.8%. Region wise the highest 57.5% is from Benshangul-Gumuz and the lowest employment to population ratio is of Somali region and Addis Ababa 44.7%, (CSA, 2006). Another statistical data from the same source, Unemployment rate, computed as the proportion of the unemployed person out of the economically active ( all persons aged 10 years and over who were productively engaged or available to be engaged) for different age groups shows unemployment to be higher for the younger group: 23.1% and 26.1% for age group 15-19 and 20-24 respectively while the average i.e. for all age group is 16.7% and the unemployment rate as a function of educational level shows 37.1%, 9%and 19.5% for Diploma or Degree not completed, Diploma or above and Certificate to which the majority of TVET graduates belongs respectively.

Unless appropriate intervention is made to solve the problem of swelling unemployment of graduates, the endeavor made to expand TVET Education could result in naive. In fact the intended development would not be achieved.

Recognizing the formidable nature of ensuring external efficiency of TVET, which is particularly, manifested in the level of employment, policy makers in particular and the Ethiopian government are seeking remedies to redress the problems.

The study is guided by the following basic questions

1. How effectively is the training in these training institutions/Colleges conducted from the point of view of trainers qualification and experience, trainees academic competency, curriculum and availability of tools, equipments and materials?
2. Do the Institution/ College make a thorough need assessment study to the current and future labour market needs and adjust their training programs accordingly?
3. Does adequate follow up and support given when TVET Trainees are in their apprenticeship training?
4. Are there convenient conditions available to the TVET graduates to start their own business?
5. Do the economic activities have the capacity to absorb the TVET graduates?
6. To what extent do different stakeholders participate to support TVET graduates?

## 1.3. Objective of the study

### 1.3.1 General Objective

The general objective of this study is to investigate some factors that influence the employability of Technical and Vocational Educational and Training [TVET] Institutes/ Colleges graduates and suggest some practical steps to be taken in the future to improve the situation.

### 1.3.2 Specific Objective

The specific objectives are to:

1 Indicate the major determinants of the external efficiency of TVETs
2 Find out the major hindrance for self-employment of TVET graduates
3 Describe the major training areas that are relevant to the localities in relation to self and wage employment.
4 Measure how different stakeholders (education sector, the labour market, industry, micro and small enterprises sectors and public administration) interact and integrate in supporting TVET institutes/ Colleges.
5 Indicate how the management is organized and the leaders perform in effecting TVETs.
6 Indicate alternative strategies to be used and measure to be taken to improve the external efficiency of TVETs

## 1.4. Significance of the Study

The significance of the study focuses on whether the types and quality of middle level professional graduated from TVET related with the exiting employment opportunities of the labour market and (or) giving practical

recommendation (if any) before wastage of resource due to poor external efficiency of TVET. Therefore, the study believed to have the following significance.

1. It could renders information for the policy maker and top-level management about the quality and efficiency of TVET institution to take corrective action.
2. Since research done in the field is not sufficient this research can push the frontier of ignorance and can be used as starting point for other researchers who want to undertake further investigation.
3. The study come up with practical ideas to give suggestion for TVET institution, industry, micro and small enterprise sectors on how to use the most out of graduates.
4. It also provides TVET institution with the opportunity of decreasing the human of graduates who have less saleable profession and to increase those who are highly demanded in the labour market.
5. Finally, it helps to widen the knowledge of practitioner by supplementing the existing literature of external efficiency of TVET.

## 1.5. Delimitation of the Study

The scope of the study was delimited to Governmental Technical and Vocational education and Training College of Addis Ababa for it would be impractical to study nation wide due to limitedness of different resource to gather data. However, the governments TVET college of Addis Ababa City Administration are currently having the highest number of trainees at different fields of study to show the real picture of the relevancy between the type and quality of training to the world of work and market demand.

Among the five government TVET colleges of Addis Ababa City Government, three are selected randomly for the study because of the lack of resource to gather data.

## 1.6 Limitation of the study

The main problems that the researcher faced in carrying out this study were the constraints that the scarcity of electricity and shortage of empirical works in Ethiopian context. Since improvement program is being started implementing recently, it is hardly backed up by local research. These problems, the researcher feels, can contribute to the limitation of the study. Attempt was made to overcome the problems by translating available local school improvement guidelines. In the second place shortage of financial resource had its own constitution in preventing the researcher to carry out the activity at easy.

## 1.7 Operational Definition of Terms

**Employment:** a condition in which people are working for others at wages and salaries or are working for themselves in their own enterprise. (Haile, 2002:271)

**External Efficiency:** An educational system's external efficiency is the relationship between the cost of producing learning results (outputs) in a particular period, and the cumulative benefits that subsequently accrue from these learning results over a longer period. Coombs and Hallak (1987:10)

**General education:** programme designed mainly to lead pupils to a deeper understanding of a subject or group of subjects, especially, but not necessarily, with a view to preparing pupils for further education at the same or a higher level. These programmes are typically school-based and may or may not contain vocational elements. (UNESCO, 2006)

**Innovation:** using knowledge to invent and introduce a new product, process, or service in to the market place. (Mary E. Edwards, 2007)

**Internal Efficiency:** a comparison of the costs of education inputs and the out puts of the education system

**Key stakeholders:** All role-players in the TVET system, including TVET providers, trainers/instructors, students/trainees employers, parents, policy makers, NGOs, donors, etc. (MoE, 2006)

**Labour force:** Comprises those people holding and seeking jobs i.e. those who are employed and unemployed. (Ibid,217)

**Outputs:** include all the acquired learning, skills, insights, attitudes, and styles of thinking that students carry away from the education system beyond what they brought to it.

**Pre-vocational education:** education that is mainly designed to introduce participants to the world of work and to prepare them for entry into further vocational or technical education programmes. (UNESCO, 2006)

**Program:** all the courses in one field of study such as business, industrial trades organized to fulfill the same general objectives and conduct along similar lines. (Good, 1973)

**Technical and Vocational Education and Training:** a comprehensive term referring to the educational process when it involves, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills and knowledge related to occupations in various sectors of economic and social life, (UNESCO, 1984).

**Technology**: set of ideas combined with "physical settings" used in production. (Mary E. Edwards, 2007)

## 1.8. Organization of the Study

The study has got five chapters. The first chapters' deals with the problem and its approach while chapter two treat review of related literature. Chapter three covers methodology and procedure of the study. Finally chapter four and chapter five deal with presentation and analysis of data; and summary, conclusion and recommendation respectively.

# CHAPTER TWO

## Review of Related Literature

### 2.1 Overview of TVET

As economic, social and technological change happens rapidly, people everywhere need to develop their knowledge and skills, on a continuous basis, so that they can live and work meaningfully in the knowledge society. Education and training contribute to an individual's personal development, increase her/his productivity and incomes at work, and facilitate everybody's participation in economic and social life. It follows that education and training can also help individuals to escape poverty by providing them with the skills and knowledge to raise their output and generate income. Investing in education and training is therefore an investment in the future (ILO and UNESCO, 2001:2).

Theodore Schultz who first introduced the concept of human capital in 1963 observed that people not only purchase goods for current consumption, but they also invest in them selves to receive future monetary and non-monetary compensation (Mary Edwards, 2007: 223). Formal schooling, along with on-the-job training, promotes economic growth because it continuously enriches human capital and consequently the stock of society's knowledge.

The link between formal education and the labor productivity is no clearer than in the area of technical training. Here individuals are trained in specific skills to enable them to perform specific tasks. It is one form of learning where the uses and means of training are very intimately linked (ESAURP, 1993).

Technical and vocational education and training (TVET) refers to a range of learning experiences which are relevant to the world of work and which may occur in a variety of learning contexts, including educational institutions and the workplace. It includes learning designed to develop the skills for practicing particular occupations, as well as learning designed to prepare for entry or re-entry into the world of work in general (UNESCO, 2006:15).

The 2001 UNESCO and ILO Revised Recommendation concerning Technical and Vocational Education use "technical and vocational education" as:

> A comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life.

Training refers to all those activities associated with the instruction and discipline and also as preparing oneself by performing a set of instructions, so as to draw in a desired manner and bring one's body and knowledge a high pitch of efficiency. To train a person is to provide him or her with the know-how or the ability to perform certain actions from a variety of perspectives. (Jones and Hendry, 1994, Barrow and Milburn 1990). Training as a process entails both the mastery of manual endeavors and the conception development of the mind in line with the tasks to be performed. In the wider context training is the preparation of oneself through the performance of a set of instructions, which are later recalled at the workplace.

In a 1997 document on the revision of the International Standard Classification of Education (ISCED), UNESCO (2006) defines three categories of secondary education: General Education, Pre-Vocational Education and Vocational and Technical Education. In that it defines

Vocational and technical education as: Education which is mainly designed to lead participants to acquire the practical skills, know-how and understanding necessary for employment in a particular occupation, trade or group of occupations or trades. Successful completion of such programmes leads to a labour market relevant vocational qualification recognized by the competent authorities of the country in which it is obtained.

Throughout the courses of History various terms have been used to describe elements of the field that are now conceived as comprising of TVET. These include: Technical and Vocational Education (TVE), Vocational Education and Training (VET), Technical Education (TE), Vocational Education (VE) (Atchoarena and Andre, 2002: 16). Several of these terms are commonly used in specific geographic areas. Participants at the world congress on TVET, held in Seoul in 1999 decided that the best most comprehensive term to use is Technical and vocational education and training (TVET).

## 2.2 The Role of TVET

In recent years, many countries are devoting more and more attention to the role of TVET to meet their development needs. Indeed, political leaders, economic planners and educators appear to consider the development of TVET as the key stone of an education system best adapted to the individual, industry, economy and society as a whole (UNESCO, 1978: 9). To this effect many countries undertake the tremendous tasks of restructuring and reorienting their education system. In this regard, currently, progress has been made at making education more responsive to social and economic developments and expanding TVET to meet the skilled human power demand. Countries engaged in this education reform process are seeking the means to remove obstacles most rapidly and effectively (Sims, Hayes and Kaufman, 1997: 189)

Technical and vocational education and training is an essential, if not sufficient, condition for the economy and society. It is used to resolve the problem of unemployment by training young people and adults for various skilled and service occupations (FMECG, 1992:3)

Although the individual country can set the general principles, guidelines and objectives of TVET based on its socio-economic demand and available resources, the general objective of TVET are:

(a) Contribute to the achievement of the societal goals of greater democratization and social, cultural and economic development, while at the same time developing the potential of all individuals, both men and women, for active participation in the establishment and implementation of these goals, regardless of religion, race and age;
(b) Lead to an understanding of the scientific and technological aspects of contemporary civilization in such a way that people comprehend their environment and are capable of acting upon it.
(c) Empower people to contribute to environmentally sound sustainable development through their occupations and other areas of their lives. The Bonn Declaration on Learning for Work Citizenship and Sustainability argues that: technical and vocational education and training (TVET) must be the master key that can alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and help achieve sustainable development.

Supporting this, Atchoarena and Andre (2002: 37) stated, "the primary objective of technical and vocational education and training is to train a skilled labour force that can adapt to the requirement of the labour market". Nowadays, the major objective of the technical and vocational

education and training is not simply to bring economic development but also to enhance the over all social development. It helps to fight against poverty and to integrate young people in to the world of work. Thus, training for self-employment and to raise the productivity of different sectors are the major objectives, which must be pursued in planning and implementing the TVET programs.

## 2.3 Efficiency of an Education System

Education is one of the sectors that require a substantial investment. Educational investments are done in the hope of an economic growth through the development of human capital. Human capital, according to Adams (2002:20) is one of the components that are determinants for economic growth by contributing to the improvement in the quality of labour force. Besides, it is believed that it brings high literacy and numeracy, which are fundamental requirements for "creating a competitive workforce and a nation of effective parents and active citizens" (UNESCO, 1998: 5). For such reasons, countries have consistently allocated a huge amount of financial as well as human resources to this sector.

But the high rate of investment in education was not able to bring about the expected outcomes due to the problems of efficiency in the system. The term efficiency, which is commonly used in economics, is used to describe the relationship between the inputs allocated to an education system and the output that results from the use of such inputs (Psacharopoulos & Woodhall, 1985; Simmons, 1980).

According to Burkhead, and others (1967: 4), "an educational system may be said to be efficient if the quantity and/or quality of educational outputs are at a maximum from the use at a given volume Level of inputs". The quantity refers to the rate of enrollment while the quality

refers to the standard of educational provision, which enables the students gain appropriate skills, knowledge and attitudes.

When the concept of efficiency is applied to the education system, it would be necessary to use the term production function to analyze the relationship between inputs and outputs. It is only by comparing inputs and the expected outputs that we can measure the economic feasibility of the whole education system. The production function, in an education system, is used to relate educational outputs (such as student achievement) to the different types of inputs used by the education system like student characteristics, family background and school related factors, to mention some. The problems of measuring efficiency in education, however, are considerably difficult. This arises mainly from difficulties in measuring educational output, as well as from quantifying the relationship between inputs and outputs. How educational output is measured depends, of course, on the nature of the objectives of the educational system (Tsang, 2002:5).

Efficiency can be seen from two perspectives: internal and external efficiency. Internal efficiency of education is concerned with the provision of more education to produce a given output by using less input of resources (Tsang, 2002:5). Internal efficiency of an education system is concerned with the relationship between the inputs and outputs of an education system. Coombs and Hallak (1987:9) elaborate the definition of internal efficiency as follows:

> It refers to the relationship between a system's (or subsystem's) outputs (learning achievements) and the corresponding inputs that went in to creating them. ....
> Internal efficiency may be judged in terms of its cost effectiveness, with effectiveness measured in this context by the systems immediate outputs as distinct from its ultimate benefits.

Inputs are the various elements that enable the education system properly function. Inputs include the human resources which include teachers, educational managers, students and non-human resources like: educational materials, buildings, different machineries and equipment that are required for the normal function of a teaching - learning process that takes place in a school. Education output, on the other hand, refers to the expected results of the objectives of the system mainly student achievement. The knowledge, skills, attitudes and exposures the students acquire from the schools are indicators of the output of an education system (Coombs & Hallak, 1987: 7-8, Psacharopoulos & Loxley, 1985: 68).

On the other hand, external efficiency refers to the attainment of social goals or objectives. It measures, as mentioned above, not the immediate output but the ultimate benefits' that are gained by passing through the system External efficiency of an educational system is realized through the relevance of education to socio-economic conditions of a country. The ability of graduates to enter the labor market following the completion of education can be seen as an indicator of educational efficiency (Tsang, 2002: 9). Different from internal efficiency, external efficiency measures not the output but outcome of an education system. Here outcome of an education system refers to the "external effects of outputs, the ability of people to be socially and economically productive"(Psacharopoulos and Woodhall, 1985: 205). Since the objective of this research is to study the external efficiency of TVET colleges, the major emphasis will be given to the problems of the external efficiency of the education system.

## 2.4 Overview of External Efficiency

The ultimate purpose of any educational system is not simply to produce immediate educational outputs and value-added in the sense just described, but to generate longer term benefits accruing from the actual use of these immediate learning results.

External productivity is related to internal efficiency, the main difference between them hinging on the distinction made earlier between immediate outputs and ultimate benefits (Coombs & Hallak, 1987:10). External efficiency of the educational system can be realized through relevance of education to the socio-economic conditions of the country. The ability of graduates to enter the labour market following the completion of education can be seen as an indicator of educational efficiency.

Coombs and Hallak (1987:10) defines external efficiency as:

> An educational system's external efficiency is the relationship between the cost of producing learning results (outputs) in a particular period, and the cumulative benefits that subsequently accrue from these learning results over a longer period.

The benefits take many forms, economic and non-economic, individual and social.

Individuals, for example, may benefit by getting better jobs and higher life time earnings, by having more satisfying family lives, by adding richer cultural and civic dimensions to their existence, and by a greater sense of participation in the surrounding world. The non-monetary gains out of education are rather psychological, namely the immediate satisfaction the person gets while she / he is at school and the satisfaction she/he derives in lifetime and work experience. The life of an educated person is largely led by rational thought, awareness and deliberate choice (Getachew Yoseph, 1999: 88).

(Getachew Yoseph, 1999: 89) also states that the society at large may benefit from the education and training of an individual. It is the school system which creates individuals who devote full-time in search of new knowledge i.e. innovation, technology and means of production from which the society benefits. Higher production and better living standards, from an enlarged supply of effective leadership at every level, and from the enrichment of its culture through the release of greater creativity in more people also goes to be a benefit to the society. People have a better understanding of other people and society. This is in fact one of the bases for the argument that society should bear the bulk of the cost of education.

If the society or the individuals were not reasonably confident of obtaining substantial benefits such as these, they would be foolish indeed to spend so much time, effort, and money on the educational system. What the benefits actually turn out to be, of course, depends not only on what the educational system produces, but also on how effectively the economy and society use these learning outputs (Getachew Yoseph, 1999: 89)

In the case of formal schooling, such future benefits are often taken for granted, whether justifiably or not, but most nonformal education programs are put to a more rigorous test by their voluntary participants. If the participants conclude that what they are getting from the program is not worth the effort involved, they will simply stop coming. If enough people vote against it in this manner, the program will collapse. This explains, for example, the demise of so many rural adult literacy programs, especially in villages where participants have nothing available to read after they have made a major effort to learn how (Getachew Yoseph, 1999: 89).

## 2.5 Factors that Affect External Efficiency

In most countries, TVET has become a very important aspect of human resource development. Within the framework of national training and education strategies it is meant to: contribute to develop scientific and technological culture, facilitate graduates translation from school to work and provide citizens basic training which prepares them for employment, and enhance the living standard of individuals and promotion of professional skills so as to improve status, (Atchoarena, 1994: 1).

However, the success of such strategies is by large dependent on the existence of employment opportunities and the ability of TVET institutions to discover and provide appropriate skills. In this regard, TVET systems in most African countries have contributed little to solving the prevailing employment problems. Numerous criticisms have been articulated over the past decades, such as poor quality, training not well-matched to actual socio-economic realties, inattention to the informal sector needs, the labour market and of the escalation of unemployment rate among graduates. (Atchoarena and Andre, 2002: 38; Wanna in Amare and others, 1998: 60; 2000: 65)

On the other hand, conceptions of TVET planning often highlight the conception of human resource development and their desired out comes. These outcomes include enhanced earning and employment of trainees. To achieve this, the process of establishing a training programme often involves identifying employment opportunities, identifying the competencies necessary for jobs, planning the teaching learning process and providing the necessary resources. Often, when the results of evaluations conclude that a programme has worked poorly, they mean that, one or another of these was not carefully planned; somewhere in the process something was left out. This eventually leads to the wrong type

of training (Bloom in Norton, 1999: 17). From the above discussions, therefore; one can possibly conclude that TVET trainees' employment prospect is dependent on the quality of the training, relevance of the training and availability of the job market. Each of these elements are separately discussed as follows.

### 2.5.1. Quality of the Training Program

Every country to maintain its competitive advantage in manpower resources, it should produce workers who are endowed with the requisite skill, knowledge, the right attitudes and work values. To achieve this, improving the TVET system, standards and quality of TVET Programs shall be pursued.

The question of quality is an important issue in TVET programs. Often, access to jobs that training provides depends on the nature and qualities of training; and job performance of graduates depends on the right kinds of skills acquired. Such quality of a programme is usually affected by a number of factors. The information required to specify the important dimensions of quality may be extensive. The contents of some dimensions of quality are also unsettled and disputed (Lauglo, 1993:3-4, Norton, 1999: 26). However, according to Wanna in Amare and others (1998:62), Lauglo (1993:4) and Prokhorof (1997: 1 0), the quality of vocational and technical institution can be affected by inadequately trained staff and instructors, poor curriculum, poor training materials and inadequate supplies, inadequate financing, inadequate recruitment of suitable trainees and high management complexes. In light of these elements, one may take a critical look at present trends in the quality of TVET. According to UNESCO and ILO (2002: 16), in order to ensure appropriate quality of training, national authorities should establish standards and criteria to be applied to all aspects of TVET.

The capabilities of the TVET institutions shall be continually improved through better facilities, training materials development and even faculty enhancement. Efforts on training the trainers, installation of top of the line training equipment and development of training aids and materials shall be prioritized to the extent possible. The TVET managers and administrators should be trained and exposed to new trends, concepts, practices and systems of TVET governance

### 2.5.1.1. Qualification of Teaching Staff

The quality of teachers or teaching staff is the most important element in raising the standards of education. The teacher or instructor is at the center of the educative process and all the talks about the teaching techniques and the practical activities in the workshops (ESAURP, 1999:122).

Good TVET requires teachers with technical skills, industrial experience, and good pedagogical skills. The capacity of the future technologically capable skilled man power can only be measured against (a) availability of teachers (b) qualification and training of teachers (UNESCO, 1996: 34). Various survey reports have pointed to the need to improve technical and pedagogical competence of TVET teachers and ensure adequate industrial experience prior to and during teaching service. In fact, these requirements are considerably higher than general education teachers and are quite expensive to develop or attract. A review of TVET intuitions in many countries discovered that inadequate qualification of teachers has negatively affected the quality of training. (Middleton, 1993:195-196; World Bank, 1993: 143). And it is difficult to recruit, train and keep competent teachers with relevant industrial or trade experience especially in low income country (Lauglo, 1993: 5).

For TVET trainers to impart quality training to their students, continuous capacity development is needed to work on their craft. Industry

immersion would be a key initiative for the trainers to be kept abreast with the latest trends in systems and technological processes.

In general, limited supply of top quality TVET teachers will considerably restrict attempts to expand provision and improve quality of training. To ensure high quality TVET, priority should be given to the recruitment and prior preparation of adequate and well-qualified teachers, administrators and guidance and counseling staff. This should be accomplished through continuous provision of professional up grading through out their career, and other kinds of facilities to make them effective (UNESCO,1996:113; UNESCO & ILO, 2002: 41).

Quality can also be maintained through some standardization to provide reliability, consistency and definition of what TVET teachers' qualification encompasses in terms of technical skill and teaching competence, (World Bank, 1993: 142; Middleton, 1993:196). In fact it might be entirely difficult to quantify and specify staff development requirements exactly. Nonetheless, various reports and observations highlight some useful indicators. These include: refreshing industrial or work place experience, improving technical and academic competencies, pedagogical, management and leadership training (World Bank, 1993: 142).

In conformity with the above, the Ethiopian TVET strategy stipulates the following requirements with regard to trainers, counselors and administrators. These include: a minimum of Bachelor degree for trainers, diploma assistant trainer, first degree holder principal, first degree holder vocational counselor and administrative and financial department with sufficient personnel (MoE, 2002: 51-52 ). Besides, Every TVET institution shall have a principal, trainers and technical support staff (Negarit Gazeta, Proc. No. 391/2004: 2552)

However, according to Wanna in Amare and others (1998:61), the qualification of TVET instructors in Ethiopian does not meet such

stipulation. Besides, in low-income countries it is often difficult to recruit teachers with relevant industrial experience (Lauglo, 1993:4). Yet, designing industrial attachment programmes will be an effective method in attempting to pass on the latest experiences from industry to both trainees and staff of TVET institutions. To this end, individual institutions have to establish closer link with enterprises and make arrangements which suit their time schedules and types of programmes (UNESCO, 1996:30; Middleton, 1993: 250).

### 2.5.1.2. Study Facilities

The quality of technical education can not depend on proper teaching method alone. Good education also requires relevant learning and teaching aids like books and journals and laboratory and workshop equipments (ESAURP, 1999:119-120).

The extremely high cost of facilities makes it difficult to easily secure the latest technology. It should be noted, moreover, that text books, practice materials for workshops, are very essential to effective training as is effective maintenance of facilities and equipment. These elements contribute significantly to high recurrent costs typical of good quality vocational programmes (Middlton, 1993: 210: Lauglo, 1993: 5).

Materials development in a given institution may be expensive due to the rapidly changing nature of present day occupations. However, such materials for modern sector occupations can be easily adapted from models used in industrially developed countries. To facilitate such adaptation, maintaining close cooperation with enterprises (employers) is relevant to adapt existing materials and familiarize with new and rapidly changing occupations. On the other hand, if business and industry no larger to take such responsibilities, workshops should be

setup ,as much as possible ,in training establishments so that students will have the best opportunity to be familiarized with the practical side of their future job or new occupations. But, in a real sense, no school can create such work shops covering all fields of technical and vocational education, nor can it afford to provide costly equipment and machinery. As a result, workshops use out dated equipment purchased on the cheap or given to them as donation by donors or leaving workshops without adequate supplies. In consequence, the students training as well as its quality suffer considerably (Prokhorof, 1997: 11 Middleton, 1993: 211).Similarly, World Bank (1993: 141) confirmed that inadequate supply of equipment, very poor basic equipments lack of laboratories, unserviceable or out of date equipment, lack of surrogating and maintenance will make effective teaching impossible.

Moreover, advanced programs will not be practical because of such shortage of adequate establishments, equipments and auxiliary services. Finical shortcomings will even make it difficult for public TVET institution to provide up-to-date equipment consistent with the requirements of the modern occupations. Recent World Bank survey of TVET on this critical issue recommended a possible solution based on links with business and industry (dual training arrangements).

With regard to teaching materials, textbooks and manuals, efforts should be made to update them so that students may be trained with equipments identical to that which they will subsequently use on the job. Training materials for self employment also must be developed to incorporate skills that are specific to local products and technologies and that include business management skills that fit the local regulatory and market environment (Prokhorof, 1997: 11: Middleton, 1993: 211).

There is substantial evidence that the availability of books, teaching materials, equipment, and other educational resources would noticeably improve the quality of education. Scarcity and less expenditure on them will adversely affect the potential for improving quality. Adequate budget must be allocated for this purpose (World Bank, 1993: 139).

The assessment of training institutions and colleges capacity necessarily includes an assessment of the institution's infrastructure. A relationship is considered to exist between student enrollment capacity, the teaching methodology and quality of programmes, on the one side, and on the other, the supply, nature, size and adequacy of the existing physical plant which includes: classrooms, laboratories, workshops, libraries, recreation centers etc (ESAURP, 1999: 66-67).

### 2.5.1.3. Selection and Admission Criteria

The term "admission" refers broadly to "the process from when a potential student develops an interest in entry to higher education until enrollment in a particular institution and course takes place" (Harman 1994, 318).

Effective student selection is important in any higher education system because the quality of students affects the quality and internal efficiency of the educational programs offered. According to a recent World Bank report, to educate their students effectively, institutions should be able to enroll only as many applicants as they can responsibly teach, and to accept only students who possess the knowledge and ability to fully benefit from their studies. Selectivity should help ensure that enrolment growth is related to instructional capacity and, if selection criteria have good predictive validity, that opportunities for further study will be allocated to those who are most likely to benefit academically. Students

perform best when they follow courses of study that match their abilities and interests (Higher Education: Issues and Options for Reform 1993, p. 32).

TVET institution and colleges should admit only those students who apply for admission having deep interest for vocational and technical training. In this connection, Gollie in Desalegn (1996:72) forwarded that the selection of students for new programmes should be based on their interest in a particular field of specialization and on a predicted reasonable chance of successfully completing the program. In line with the above, Ethiopian TVET strategy (Negarit Gazeta, Proclamation No. 391/2004: 255) stipulates criteria for admission for middle level TVET programs.

Students qualifying to be admitted to this level of program are required to complete general secondary education and shall have inclination and the will to be so trained. Moreover, persons who have completed Junior TVET programmes and obtained a certificate are required to have two years of work experience and manageable evidence that they can fulfill the profile of completion general secondary education or have passed entrance examination, theoretical and practical, prepared for that purpose are suitable to be admitted to the Middle Level TVET programs.

### 2.5.1.4. Financial Resources

An examination of financial resources of Technical and Vocational Education and Training Institutions/Colleges needs be considered to reflect the fact that the financial resources made available to training institutions/colleges have an important bearing, not only on their smooth running, but also on the quantity and quality of their output (ESAURP, 1999: 50-51).

According to UNESCO (1996: 21) TVET programs usually require tremendous amount of budget to run compared to general secondary education. It has been estimated that the cost of one technical school is equivalent to two or three schools offering general education. This high cost of the TVET is mainly due to smaller class size and the needs for expensive equipments, facilities and teaching materials. Without such equipment any vocational or technical training yields poor results and graduates are unable to find jobs. Like wise, in periods of tight government budgetary policies, the quality of training will fall and graduates encounter difficulties in securing employment opportunities (Lauglo, 1993:5; Wanna in Amare and others, 1998: 60; UNESCO, 1996: 20-21).

The budgets of training institutions/colleges are financed from two sources: national and foreign. The national sources include government grants and subventions, student tuition fees, and other sources such as support by local non-governmental organizations and funds earned from services provided by the training institutions/colleges. The foreign sources of revenue are principally derived from a number of international donor agencies.

To alleviate or solve budgetary constraints, financial mechanisms have a central role to play in achieving the overall objective including maintaining quality. In this regard, a reconsideration of governments' dominant role in financing and provision of training at public training institutions is required. This implies that, in national training systems where public training budgets are constrained, it is customarily to seek alternative or additional finding mechanisms for public training. This is often referred to as funding diversification. This funding mechanism

takes different forms: cost sharing, institutional in come generation, greater cost recovery, levy-grant and voucher systems, student loan, etc. These mechanisms are also forwarded by MoE (2003:22). However, these diversification options are not alternatives. All means of securing finance can be explored simultaneously. Such matters, in fact remains to be policy issues; that must be settled with in the contexts of country conditions. (Ziderman, 2003: 13, 26-27; Lauglo, 1993: 6; World Bank 1993: 150).

According to Atchoarena and Andre (2002: 47), in order to find alternative sources of finance and reducing the burden of government spending on TVET institutions, it has been recommended that closer relationship between enterprises and institutions, e.g. through company internships and sandwich training. Moreover, the funding of this type of education and training could be diversified by turning the private source of finance. In deed, essential financing measures include government reallocation of budget to increase spending on maintenance, equipment, and staff development through economies throughout the world. Such steps, undoubtedly, improve quality of training, (World Bank, 1993: 148).

### 2.5.1.5. Administration and Management

Maintaining effective and efficient management in training institution is often challenging. A number of preconditions must be fulfilled. Expensive and complex facilities and equipment must be fully maintained. Instruction should be delivered in class rooms, workshops, laboratories and during apprenticeship programs, in enterprises. To do so, intuitional cooperation with business/industry must be established. Tracer study and job placement tasks are also highly needed; curriculum and materials must be constantly adjusted and upgraded,

and the most effective institutions are likely to use flexible and innovative instructional systems that require a high level of planning and managerial attention, (Middleton, 1993: 200).

Similarly, when resources are allocated for a particular TVET program, it usually requires effective managerial control and supervision to generate a program with particular characteristics. In this connection, the implementation stage is decisive because there may be many ways in which resources intended for training may fail to result in a well established programme. The funds may be misspent or may be spent on initial planning and administrative costs without recruiting instructors who are the heart of the training program; or a program may be started by failing to attract any trainee. Alternatively, a program may be initiated, but its characteristics may be different from those intended, etc. (Norton, 1999: 13). These all call for enhanced managerial responsibilities.

Attracting and training effective managers is not entirely an easy task for weakly financed training systems. Management training is not often provident. This inability of TVET institutions to attract qualified managers and staff has combined with centralization in many countries to restrict the autonomy of individual institutions. This is manifested in centralized curriculum decisions, regulations that hinder entrepreneurship in revenue generation, and adherence to government rules and regulations and salary scales in teachers' recruitment and compensation (Middleton, 1993: 201).

Autonomous institutions have significant level of part time enrollment; a number of revenue earning programs and advanced management and vocational guidance and counseling system. In contrast, institutions under more direct government ministry control show fewer of these

positive features. For example, when administrations and instructions want to be more flexible and to improve quality, those traditions and centralized regulations greatly restrict their ability to do so. This can cause considerable inefficiency in terms of resource utilization ;as long as it doesn't confer a large degree of autonomy and independent boards of management to reallocate budget, adjust programs, plan for staff development, etc. (World Bank, 1993: 143).

On the other hand, public institutions would benefits from a higher degree of autonomy to be able to adjust programs and financing quickly in response to changing demands. Besides, when the board of management comprises various community leaders including business and industry representatives, it will pave the way for the possible involvement of industry in the management of the institution ensure relevance in training programmes and continued collaboration in training as well as improve links with the economy (UNESCO, 1996: 29; World Bank, 1993: 143). However, substantial, institutional autonomy would need to be complemented by appropriate monitoring and inspection system; including feed back on institutional performance from employers of public and private sector (World Bank: 1993: 143).

In sum, the achievement of the overall policy objective of TVET developing effective, efficient, competitive, flexible and responsive training system should be supported through parallel policies for decentralization of public sector which provides greater institutional autonomy to help them maintain effective management system (Ziderman, 2003: 24-25),in addition to this, improving efficiency in TVET institutions with out comprising quality may be achieved through measures aimed at increasing capacity utilization and improved management performance .To the contrary, lack of improved

management results in under utilization of training capacities, costly and bureaucratic financial procedures ( in particular regarding to the procurement of consumable training materials and spare parts); which altogether severely affect the quality of TVET institutions(MoE, 2003: 24).

### 2.5.2. Relevance of Training

Debate about the criteria of relevance in training is inevitably linked to the way the demand for training is conceived, and what the most suitable mechanisms to identify. This is the source of a lot of the tension in vocational training at the moment. There is tension between the present situation of production and the labor market on the one hand, and the future situation on the other (what is urgent versus what is strategically advisable), between the symptoms from the world of production and symptoms of a social kind, and between the differing perspectives and interests of the various economic and social actors involved.

There are two dimensions to relevance and they are equally important. The first is how vocational training can respond efficaciously, efficiently and opportunely to the problems, demands and needs of the productive, technological, labour and socio-cultural environment, and also how it can promote links between trainees and that environment. The second dimension is that training also has to be relevant as regards the characteristics, conditions, needs and expectations of the trainees themselves, and as regards how these are considered in curricular design, preparing didactic materials, adapting pedagogic approaches, and adjusting the functional and management systems of the training institutions (ILO, 2005: 10).

Regardless of whether we are talking about people, enterprises, sectors, productive chains, or specific regions, the client has to be catered to with good quality processes and results, and with systems that are geared not only to demand and need but also to the client's characteristics and conditions. That is to say, vocational training must be relevant. Besides this, an equity approach is needed when tackling obstacles and overcoming problems that lead to inequality of opportunities and inequitable treatment between men and women, young people and adults, urban and rural sectors, ethnic groups, and between enterprises and workers in the formal as well as in the informal economy.

Training can only be relevant if it achieves to equip people with the right skills for any type of employment, i.e. skills in demand and help improving economic productivity. Relevance of a given training has a significant role to play with regard to external efficiency of TVET graduates; which describes the relationship between the output of the training system(graduates) and economic and social success ,e.g. employment and productivity (MoE,2003: 22)

According to ILO (1997:11) a number of factors seek devoted attention to make TVET programs more and more relevant. These includes: need assessment or situation analysis using LMIS, employment opportunities, etc., occupational analysis to single out skill levels of graduates, functional linkage (strong partnership) amongst Government, industry, business and training providers, and monitoring and evaluation mechanisms.

Assessment of TVET systems in most developing countries in the 1990s have revealed the prevalence of imbalance between skills provided by

the training programmes and the requirements of the labour market. This has occurred due to economic constraints and rising costs of training equipments and materials which have made it even more challenging for African TVET systems to offer quality and relevant programs (UNESCO, 1996:28).

A host of other reasons for this irrelevancy are also cited in ILO in Yekunoamlak (2000, 18) and ESDP-II (2002: 29). These include: wrong assumptions about labour market or employment opportunities, which are the consequences of inadequate need assessment, lack of strong partnership between institutions and enterprises, over dependence on exogenous models, staff and institutional resistance and reluctance to changing skilled and labour market needs, lack of flexible or up-to-date curricula and inadequate capacity to undertake tracer study and regular monitoring activities. For enhanced articulation between training and subsequent application of acquired skill, attitude and knowledge in the world of work, more specifically in securing employment, therefore, the economic relevance of the training systems should deserve serious attention.

Work-based initial vocational training which mainly refers to apprentice training increases the relevance of the training. In many countries, however, apprenticeship systems are less organized and regulated (UNESCO, 2006: 16). In African countries the informal apprenticeship system is not well developed and the master craftsmen who do the training may themselves have very limited skills (ILO, 2001: 38). Forming Partnerships with the Private Sector as a Mechanism for Delivery of Vocational and Technical Education provide a way to share the cost while (potentially) increasing the relevance of the training.

### 2.5.2.1. Curriculum Relevance

Successful employment or self-employment of TVET programs usually give a great deal of emphasis to a relevance of the curriculum to the labour market and sensitivity to the regularly changing nature of it (Wanna in Amare and others, 1998: 61).In this regard, TVET programs relevancy can be judged in terms of content as well as training .The relevancy of any training curriculum, according to TGE (1994: 2-3) is determined heavily by the extent it meets the ultimate education and training objectives and the degree it gears towards the socio-economic needs of the country. It encompasses all aspects of appropriateness, purposefulness, sustainability and realism of training in achieving predetermined goals of a given program.

A major curricular issue, as regards this, is whether the present curriculum in TVET institutions is adequate and relevant to the needs of the modern world of work which constantly changing. There is a growing concern over the relevance of traditional trade subjects such as wood work, metal work, electricity and auto mechanics, etc offered in the curriculum in preparing the youth of today for the 21st century scientific and technological society. (UNESCO. 1996: 33-34).

The main concern is that the curriculum is regularly updated, that it is abreast with the latest research within the academy and the professions, that it is responsive to the needs of industry, the professions and the community, that it is aware of its audiences/clients (including the multicultural student body), and is flexible enough to change and modify its content and its modes of delivery and assessment in response to these contextual factors.

Hence according to Wanna in Amare and others (1998, 62-63) skills

development in TVET programs must correspond with the needs of the prevailing labour market. To enhance such provision, curriculum used for training in schools must be based on comprehensive occupational analysis outcomes. This is to mean that jobs that are available in present labour market must be identified and analyzed to develop relevant curricula. Otherwise, the consequence will be devastating. That is, if graduates leave schools without having any employable or salable skill they will undoubtedly join the army of the unemployed. Relevance of the curriculum will be interpreted in different ways by different groups within the institution/college: Student, Academics, Professions, Community and the institution/college

### 2.5.2.2. Labour Market Information system

A Labour Market Information System (LMIS) can provide useful information for formulating development plans and employment policies and programmes and for providing direction to developments in TVET. Labour Market Information can be defined as any qualitative or quantitative information concerning the size and composition of the Labour Market, or any part of it, the way it functions, its problems, the opportunities which may be available to it, and the employment related situations, intentions or aspirations of those who are part of it (ILO, 2001)

Responsive training policy requires more often accurate, regular and update labour market information and socio-economic trend analysis .Systems to develop information on labour markets and to monitor training are necessary to adjust instantly to changes in skills demand. Often, however, such systems are not well developed at national levels and are even weaker at regional and local levels (Middleton, 1993: 198; World Bank, 1993: 144).

The LMIS is of specific relevance to TVET since it can provide information on a range of issues such as:

-the demographic and socio-economic characteristics of the labour force, and the composition of employment, unemployment and under- employment;

-the occupation/industrial structure of the employed/ unemployed (last job held) labour force;

-the basic framework in which projections about future employment and labour force trends can be made;

-estimation of training needs by occupation and education/training qualifications and projections for the future.

However, TVET systems in many countries have not yet established sustainable institutional set-up required by LMIS. Systems for this kind of data collection (labour market data collection), and analysis are weak and there is an extreme dependence on external agencies to carryout these functions. TVET institutions in these countries, hence, will not be flexible in adjusting to short-term and long term changes in demands for training.

A common feature, in this regard, is insufficient discussion with private sector employers, with the result that many of the training needs analyses are based on man power forecasts derived exclusively from demographic trends and public employment policy. In countries where the private sector is increasingly growing responsiveness to their immediate needs to be a priority. Hence, greater use of studies of graduates' employment, wages by skill level, institutional capacity usage, the ratio of admissions to applications, and tracer studies would improve forecasting .Therefore, to be effective and to make skills offered by TVET institutions relevant and meet the demand of the labour

market, capacity should be centralized in a single government ministry or agency, often with adequate resources. Moreover, TVET institutions as well as government need to utilize a wide range of labour market analysis techniques, particularly regular vacancy studies, wage rate analysis and tracer studies (World Bank, 1993: 134,144-145).

The system has two components: demand and supply. It has five essential features. It should be comprehensive, up-to-date, economical, linked with major producers and consumers of LMI, and established within an adequate institutional framework. The level of detail, efficiency and accuracy required will be determined by each Member State. Existing data collection activities in various sectors can be used in establishing the system.

### 2.5.3. Employment Opportunities

Governments increasingly view skills development as an important factor in the drive to enhance productivity, stimulate economic competitiveness and raise people out of poverty. The ultimate aim of vocational training is employment. TVET programmes therefore have to be linked to the job market. In this way, the socio-economic relevance of TVET can be enhanced. The need to link training to employment (either self or paid employment) is at the root of all the best practices and strategies observed world-wide (COMEDAF II, 2007: 7).

Employment opportunities or the labour market is the mechanisms up on which the effect of TVET programs on the trainees to be judged. In light of this, TVET is feasible when occupations related to the training exist in the labour market ( Phels, Bishop and Suk in Yekunoamlak, 2000:18; Norton, 1999: 17).

There is at present an international problem which most governments around the world are faced with; it is the crisis of youth unemployment, and the concern is about the policies, strategies, and practices that governments should have in place to deal with this problem. As to Wanna (1996: 302) among the factors creating these problems are:

1 the stagnant situations for employment in the public sector
2 the changing requirements of the labour market
3 the irrelevance of the school curriculum to the world of work and to further education and training (in particular, the secondary education curriculum).
4 the lack of adequate public investment in Technical and Vocational Education and Training (TVET).

In general, these trends can be generalized in to two: demographic and macroeconomic factors.

### 2.5.3.1 Economic Growth

The development of modern sector of the economy is on the top of the economic growth agenda .If there are abundant resources and the means to exploit them, if the modern sector of the economy is relatively large and rapidly growing, there will be satisfactory economic growth and, consequently, promising employment prospect. To the contrary, countries with small and stagnating modern sector have the greatest difficulties in making the most out of the resources they endow .This would mean that, construction of more factories, power stations, transport and communication systems ,etc., for the growing labour force will not be realized in the context of low level of modern sector development .For example, in some Latin American countries: Brazil and Columbia while their economic growth has been inconsistent, modern sector of employment was relatively large and absorbed substantial

number of TVET graduates due to perceived growth in this sector of the economy ( Middleton, 1993: 48,74).

On the other hand, particular economic crisis will have considerable negative impact on GDP and consequently, raises unemployment rate. In this regard the state of TVET and the world of work in Africa are generally regarded as discouraging (UNESCO, 1996: 32-33; Middleton, 1993:47). This has happened due to low GDP record of many nations in the continent recently. In the late 1980s , many of them recorded annual economic growth rate of 3.5 per cent and some positive results on poverty frontage - an increase of 1 per cent per capita income annually .However such economic growth was not adequately enough to overturn long term crisis and misfortune . This economic out put remained weakened and its annual growth was below 5 percent - a level required to prevent an increase in the number of poor people (World Bank, IMF, in Atchoarena and Andre, 2002: 25). Indeed, this symbolizes the failure of many development efforts and obviously present challenges for TVET policies.

When we see the case with Ethiopia many young people with technical skills are becoming unemployed. As Wanna (2001) pointed out the modern sector of the economy employs less than 15% of the available work force which shows low efficiency the youth with technical skills. Hence educated unemployment is a pervasive problem in many developing countries including Ethiopia (Combos, 1985; Bishop, 1989; Psacharopoulos & woodhall, 1985) in Wanna. Paradoxically there are unique problem: rapid economic growth without improvement of employment situations which is plaguing India today.

Today's world is one of rapid change in virtually all dimensions of life. The globalization of trade means that decisions in one country may

have an impact on employment opportunities in another country where values and priorities are very different. Globalization of the labour market means that workers have greater mobility across borders, yet opportunities are not uniform from one country to another or in different segments of society within a given country (UNESCO, 2002: 13)

### 2.5.3.2 Demographic Factor

The workplace is also being affected by demographic and social trends. For many years the economy functioned with a labour surplus -too many people chasing too few jobs. Massive demographic and employment problems are shared by many developing nations (UNESCO, 2002:104)

Population dynamics or population growth trends ,if not controlled, inevitably lead to increased labour market vulnerability and unemployment .Thus , there will be a tendency of more skilled or qualified people to join the army of the unemployed as total unemployment mounts. As a matter of fact, the proportion of the work force with appi6ciated level of educational qualification has shown escalating trend in the recent past. (Ahier, 1999: 1 09; Atachoarena, 1994: 11).In the same vein, population growth at national, regional and local level, influences the supply of middle and higher level skilled manpower on the labour market and the enrollment rate of new trainees in the TVET system. Hence, the expansion of training and education opportunities in recent years resulted in the production of substantially large number of qualified young workers for whom demand may well decline over the coming years due to various reasons (UNESCO, 1994:4; Cantor, 1989: 114).

# CHAPTER THREE

## Methodology and Procedure of the Study

This chapter deals with methodology, source of data, sample and sampling techniques, data gathering tools, development procedure of questionnaire, methods of data analysis as well as organization of the study. To carry out the study the following methodology and procedures were used.

### 3.1 Design and Methodology of the Study

Design and methodology of the research is based on the purpose of the study. This research involved in describing the present condition of TVET Colleges/ Institutes of Addis Ababa city administration. Thus in this study, descriptive survey was employed as a relevant methodology with the assumption that the method is particularly important for the study since it is intended to make detailed description and analysis of factors that can affect employment and its prospect. Seyoum and Ayalew (1989) have indicated the relevance of the descriptive method for such purpose. Therefore, descriptive survey method was found to have been relevant and appropriate.

The study incorporated different stages. At the initial stage of the research; a review of related literature was made with the intent of developing and introducing theoretical background and to develop instruments for data collection. In the second place the selection of sampled TVET colleges was made. Based on the review of literature, instruments were developed and pilot-test was made in one non sample TVET college.

## 3.2 The Source of Data

The data for the study was collected from primary and secondary sources. In the secondary data: relevant books, journals and legal documents, various statistical evidence together with government regulation, documents in TVET Colleges/ Institutions and Educational bureaus, available sources from NGOs like GTZ who support the TVET sector of the region were reviewed.

To get first hand information, primary data was collected from the following respondents.

1 Deans of TVET college
2 Instructors of TVET college
3 Trainees of TVET college
4 Heads of Human Resource Management (HRM) Department of enterprises who provide Apprenticeship training and also employ TVET graduates.
5 TVET graduate employees of the respective institution.

## 3.3 Sample and Sampling Techniques

In Addis Ababa City Administration, there are five TVET colleges. Among these five government TVET colleges three (60%) of TVET colleges namely General Winget, Entoto, and Misrak TVET Colleges are selected using simple random sampling for the study. Simple random sampling was used for it gives equal chance of being selected for all five TVET Colleges. In addition from the apprenticeship training providers and employing enterprises, three institutions namely Legehar Ethiopian Telecommunication (ETC) branch, Ethiopian Electric Power Corporation (EEPCo) west branch and Addis Ababa City Administration Micro and small enterprise sectors were selected using purposive sampling techniques. These enterprises were included in the study for they are key

stakeholders in employing and giving apprenticeship training for the graduates of TVET colleges. Hence, these institutions are the source of purposive, relevant and pertinent data for the study.

After sample institutions were identified using simple random and purposive sampling techniques, the informant were grouped into deans, instructors and trainees from the college and TVET graduate employees in the institution and Head of Human resource Management (HRM) Department of the respective institution.

The respondents were selected using simple random, purposive and availability sampling techniques as follows: the heads HRM in Legehar ETC, EEPCo West district, Addis Ababa Micro and small enterprise and deans of the TVET Colleges were selected using purposive sampling techniques. 90 instructors out of 385 instructors were drawn using simple random sampling and 90 trainees from each TVET Colleges total 270 respondents were selected using simple random sampling techniques.

The employees from each apprenticeship training providers and employing institutions were selected using availability sampling techniques. All the heads of HRM, dean of the TVET Colleges and employees in the sample stakeholder institutions were included in the study for their numbers are manageable.

The sample TVET colleges, apprenticeship training provider and employing institutions population and sample of the study are summarized in the following table.

Table - 1 Respondents Category by Types of Institution

| | | | | Respondents through questionnaire | | | | Total sample |
|---|---|---|---|---|---|---|---|---|
| | | Dean | | | | | | |
| | | Population | Sample | Pop | Sample | Pop | Sample | |
| | G. Winget | 1 | 1 | | 90 | 140 | 30 | 121 |
| | Entoto | 1 | 1 | | 90 | 145 | 30 | 121 |
| | Misrak | 1 | 1 | | 90 | 100 | 30 | 121 |
| | Sub total | 3 | 3 | | 270 | 385 | 90 | 363 |
| | | Head of HRM Dept. TVET Graduate employee of sample stakeholder institution | | TVET Graduates employed on the sample stakeholder institutions | | | | |
| | | Pop | Sample | | | Pop | Sample | |
| | Legehar ETC | 1 | 1 | | | | 10 | 11 |
| | EEPCo West district | 1 | 1 | | | | 10 | 11 |
| | A.A City Adm. Micro and small enterprise | 1 | 1 | | | | 10 | 11 |
| | **Sub total** | 3 | 3 | | | | 30 | 33 |
| | **Grand total** | 6 | 6 | | 270 | 385 | 120 | 396 |

## 3.4 Data Gathering Tools

Three different kinds of data gathering tools were used in this study as follows:

### 3.4.1 Questionnaires

Open ended and closed ended questionnaire were used to collect data from instructors, TVET Graduates employed on the sample stakeholder institutions and trainees. Questionnaire was used for it is used to collect

different forms of views and opinions from a large number of respondents within a short span of time.

To collect the data, three types of questionnaire in that for instructors, TVET Graduates employed on the sample stakeholder institutions and trainees were prepared. The questionnaires for TVET Graduates employed on the sample stakeholder institutions and trainees were translated into Amharic version from their English equivalent to get the necessary data at ease. From preparing the questionnaire to collecting data, the following procedure was followed.

### 3.4.1.1. Development of questionnaire

Development of valid and reliable questionnaire is necessary. Much effort had been put to reduce measurement error during the development stage. To this end, the questionnaire was distributed to various field experts. Based on the comments collected from field experts, questionnaire was prepared by avoiding unnecessary statements and obscure ideas. Then the questionnaire was made ready for pilot test.

### 3.4.1.2. Pilot-Test

Once the draft questionnaire was prepared it was administered to respondents in one randomly selected TVET college from the non-sample TVET colleges. The pilot test was held on 3 instructors and 20 trainees. Then based on the pilot test, clarity of language, idea and content of the instruments were reviewed cautiously to avoid errors and to include some important but left out items. After the necessary amendments were made, the final copies were administered to respondents by the researcher and his assistance to collect the data. This gave an opportunity for the researcher to clarify certain unclear instruction and to have a high return rate of questionnaire above 70% which is very good in research (Best 1990:313).

### 3.4.2 Interview

Two types of Interview questions were prepared for the interview session that was held with TVET Deans and HRM heads of apprenticeship offering companies of the sample stakeholder institutions. Interview was used to elicit depth idea from the respondents in line with basic questions namely Physical facilities of the respective TVET Colleges, the quality of Academic Staff and of trainees, Curriculum/ Syllabus relevance and Overall administration

The interview session was stayed 15-20 minute to interview one respondent. For the validity and reliability of the data, after an interview had been held, subsequently the data was being coded to avoid distortion of the data due to long lapse of time.

### 3.4.3 Document Analysis

Documents regarding TVET colleges and employment prospect of graduates were reviewed to see the efficiency of the sample colleges.

## 3.5 Procedure of Data Collection

Among the tools used for collecting data were questionnaires and interviews. As most of the respondents expected have good knowledge of Amharic language, both the questionnaire and interview were translated into Amharic. Convenient time for both respondents through questionnaire and interview was arranged. The researcher made the objectives of the study clear to all of the sample respondents in order to avoid confusion and facilitate ease of administration. The questionnaires then were administered in a hall with a close follow up in order to give immediate correction whenever problems arise during the filling in of questionnaires. After collecting relevant information, data processing and analysis was made using SPSS.

## 3.6 Method of Data Analysis

The data collected through different instruments were analyzed through appropriate statistical methods based on the question. The statistical tools which were used in analyzing the data are:

1 Percentages and frequencies counts were employed to analyze the data gathered. These statistical tools help to determine the relative standing characteristics such as age, sex, academic qualification and field of specialization.

2 One way ANOVA was also employed, for example to see differences in perception of respondents in relation to the availability of facilities, resources, and employment opportunities.

# CHAPTER FOUR

## 4. Presentation and Analysis of Data

This chapter deal with presentation, analysis and interpretation of data gathered on Factors Affecting the External Efficiency of TVET Colleges of Addis Ababa from Technical and Vocational Education and Training (TVET) College Instructors, Trainees, TVET graduate employees, Deans of TVET colleges and Heads of the Department of Human Resource Management (HRM) of enterprises who provide Apprenticeship training and employ TVET graduates. Data were collected through questionnaire and through interview. Furthermore, related documents were consulted. 90 questionnaires were distributed to Instructors, 30 to TVET graduate employees and 270 to trainees and all were filled and returned.

The data obtained through questionnaires, Interviews, and documentary analysis were analyzed and interpreted in view of the basic questions raised in chapter one.

### 4.1. Characteristics of Respondents

The general characteristics of respondents are shown in figures 1 to 3 here under.

#### 4.1.1. Sex Profile of Respondents

As can be seen from figure 1 here under except student respondents, the number of female respondents was by far less than male in TVET instructors and employed TVET Graduates.

**Table 1 Sex profile of respondents**

| | Type of Respondents | | | | | |
|---|---|---|---|---|---|---|
| | Trainees | | Employed TVET Graduates | | TVET Instructors | |
| | Gender of Respondents | | Gender of Respondents | | Gender of Respondents | |
| Sex | Count | % | Count | % | Count | % |
| Male | 176 | 65.2% | 24 | 80.0% | 65 | 72.2% |
| female | 94 | 34.8% | 6 | 20.0% | 25 | 27.8% |

**Figure 1 Graphic Representation of Respondents Sex profile.**

## 4.1.2. Age Profile of Respondents

**Table 2 Age Profile of Respondents**

| | Type of Respondents | | | | | |
|---|---|---|---|---|---|---|
| | Trainees | | Employed TVET Graduates | | TVET Instructors | |
| | Age of Respondents. | | Age of Respondents | | Age of Respondents | |
| Age | Count | % | Count | % | Count | % |
| Below 20 | 255 | 94.4% | 1 | 3.3% | 6 | 6.7% |
| 21 - 30 | 11 | 4.1% | 27 | 90.0% | 27 | 30.0% |
| 31 to 40 years | 4 | 1.5% | 1 | 3.3% | 5 | 5.6% |
| 41 and above | | | 1 | 3.3% | 52 | 57.8% |

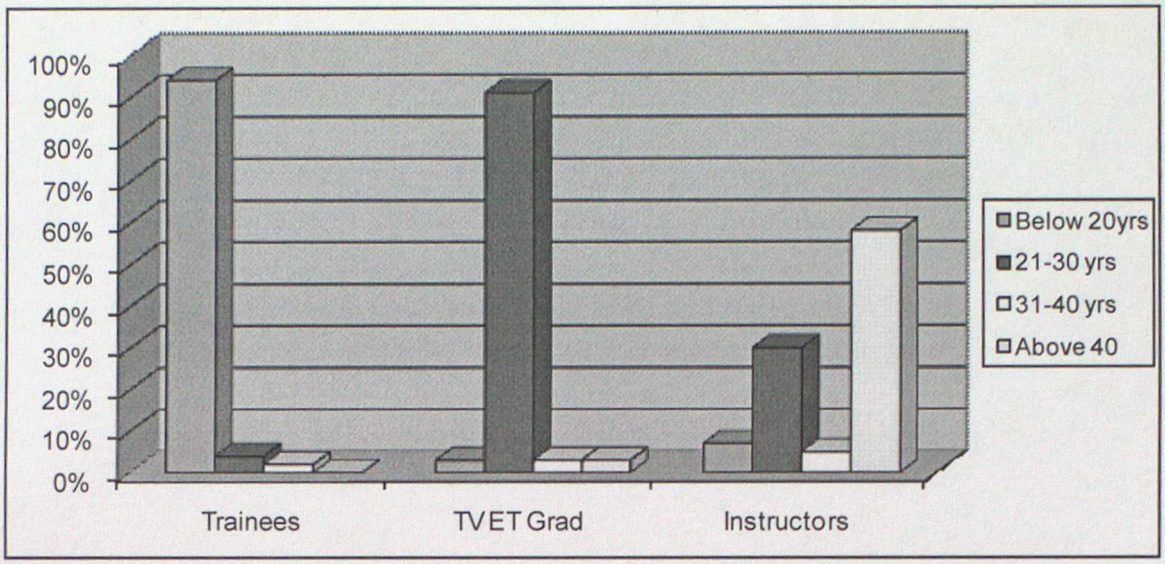


**Fig. 1 Graphic Representation of Respondent Age Profile**

As can be seen from Table 2 considerable number of trainers (57.8%), were aged 41 or above. From the discussion, it may be possible for one to recognize that TVET colleges' academic staff are in their middle ages and, hence, can wisely perform their duties and responsibilities. About 36.7% trainers were below 30 and it will be good for them to share experiences with seniors. Concerning students age distribution, most 255 (94.4%) were below 20 years and 90.0% of Employed TVET Graduates were in the age ranges between 21 and 30 years.

### 4.1.3. Field of Study of the Respondents

As it is presented in Table 3 here under when the field of study is seen across the age the business area show a little age difference while the two fields that is, the industrial technology and the construction were more or less the same.

**Table 3 Field of Study Profile of Respondents**

| | Respondents field of study | | | | | |
|---|---|---|---|---|---|---|
| | Industrial | | Construction | | Business | |
| | Age of Respondents | | Age of Respondents | | Age of Respondents | |
| | Count | % | Count | % | Count | % |
| Below 20 | 79 | 62.7% | 118 | 78.7% | 65 | 57.0% |
| 21 - 30 | 30 | 23.8% | 19 | 12.7% | 16 | 14.0% |
| 31 to 40 years | 4 | 3.2% | 4 | 2.7% | 2 | 1.8% |
| 41 and above | 13 | 10.3% | 9 | 6.0% | 31 | 27.2% |

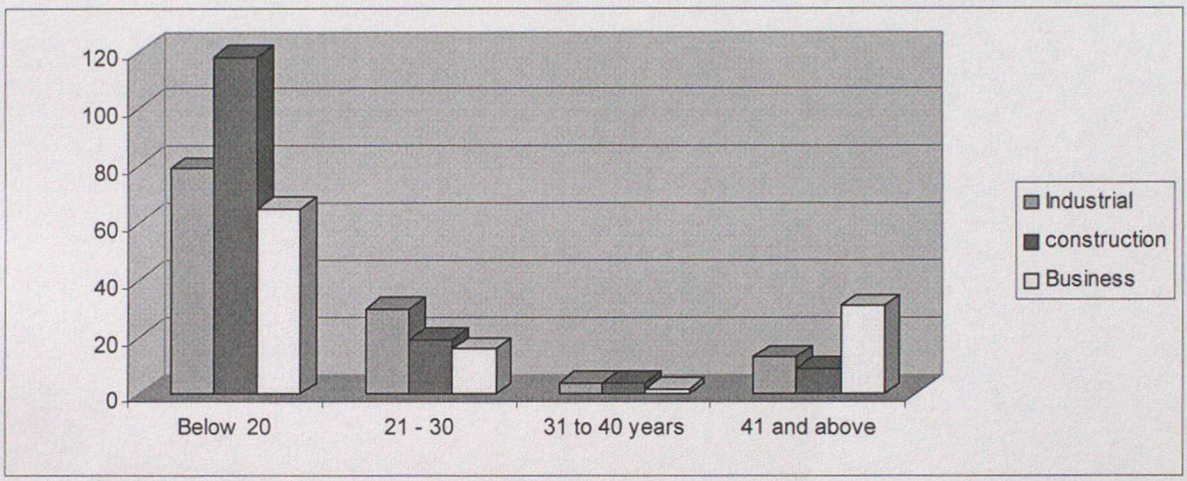


**Fig. 2 Graphic Representation of Field of studies of Respondents**

## 4.2. Quality of the training from the point of view of trainers, trainees and tools availability.

This part of the thesis presents the analysis of the data obtained through questionnaire, interview and document analysis. The analysis focuses on how effectively is the training in these training institutions/colleges conducted from the point of view of trainers' qualification and experience, trainees' academic competency and availability of tools, equipments and materials.

### 4.2.1. Trainees selection, academic competency and attitude

As it is presented in Table 4 here-under, Instructors, trainees and employed TVET graduates were asked to respond through questionnaire. Deans of TVET colleges and Heads of Human Resource Management (HRM) Department of enterprises who provide Apprenticeship training and employ TVET graduates were also interviewed. The view from instructors, employed TVET graduates and the trainees themselves was given in Table 4 below.

**Table 4 Frequency Percentage Distributions of Respondents on Selection, Placement and Attitude of Trainees**

| | | Type of Respondent | | | | | |
|---|---|---|---|---|---|---|---|
| | | Trainees | | Employed TVET Graduates | | TVET Instructors | |
| | | Count | Col % | Count | Col % | Count | Col % |
| Responsible body for the selection of trainees | College it self | 68 | 25.2% | 11 | 36.7% | 6 | 6.7% |
| | Zone education Bur | 35 | 13.0% | 3 | 10.0% | 6 | 6.7% |
| | A. A education Bur | 154 | 57.0% | 16 | 53.3% | 72 | 80.0% |
| | Other | 13 | 4.8% | | | 6 | 6.7% |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% |
| Basic admission criteria | ESLCE/EGELCE result | 217 | 80.4% | 26 | 86.7% | 78 | 86.7% |
| | Entrance Exam | 14 | 5.2% | | | 9 | 10.0% |
| | Aptitude Test | 29 | 10.7% | | | | |
| | Vocational exp | 2 | .7% | 4 | 13.3% | 3 | 3.3% |
| | Inclination | 8 | 3.0% | | | | |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% |
| Proportion of trainees placed on interest | All | 5 | 1.9% | | | 3 | 3.3% |
| | nearly half | 55 | 20.4% | 10 | 33.3% | 45 | 50.0% |
| | Few | 96 | 35.6% | 14 | 46.7% | 24 | 26.7% |
| | Very few | 114 | 42.2% | 6 | 20.0% | 18 | 20.0% |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% |
| Academic competency of trainees | Highly competent | | | | | 3 | 3.3% |
| | Competent | | | | | 48 | 53.3% |
| | Incompetent | | | | | 39 | 43.3% |
| Total | | | | | | 90 | 100.0% |

As the data in Table 4 shows, majority of respondents (77.8% of trainees and 66.7% of TVET graduates) replied that there has been low opportunities for trainees to choose their field of study according to their interest. Other groups of respondents, 46.7% trainers replied the same to that of trainers and TVET graduates while 50% agree that nearly half of the trainees joined their field of study in accordance of their interest.

As depicted in Table 4 second item the great majority of the total respondents indicated in their responses that ESLCE/EGELCE result of trainees is the most frequently used method of selection and placement of trainees in TVET institutions/colleges. But the Ethiopian TVET strategy stipulated completion of secondary education, inclination and will of students to join the training programme as a basic admission criterion.

TVET Instructors were also asked to respond on the Trainees competency and considerable number of trainers 39 (43.3%) replied that the trainees are incompetent. This implies that need of pre-vocational education while the students are at secondary school. The response of most apprenticeship offering organization and TVET Deans during the interview seems to support the response of majority of trainees, trainers and TVET graduates.

### 4.2.2. Adequacy, Qualification and Experience of Trainers.

Of all the resource required for TVET program, trainers are the major components that play the most important role in successfully achieving the objective of the training. The development of any educational level presupposes the availability of trainers in sufficient number, the training and securing of well-qualified trainers. Moreover, according to Middleton (1993:195-196) and World Bank (1993:143), good TVET

requires trainers with adequate industrial, pedagogical experience and technical skills. The teacher/instructor is then at the center of educative process and all the talk about teaching techniques. Practical activities in workshops were meaningless unless there were enough trainers'.

It is presumed that the quality of training programme will, to a large extent, depend on the academic and/or professional qualifications of the staff, extent and relevancy of training experiences and institutional support facilities. The quality of the teaching members of staff was examined in order to access the quality of training. The findings are summarized in Table 5 below.

**Table 5 Frequency and Percentage Distribution of Respondents on Availability, Qualification and Experience of Trainers'.**

| Item | | Type of respondent | | | | | |
|---|---|---|---|---|---|---|---|
| | | Trainees | | Employed TVET Graduates | | TVET Instructors | |
| | | Count | Col % | Count | Col % | Count | Col % |
| Adequacy of trainers' | Very adequate | 42 | 15.6% | 6 | 20.0% | 6 | 6.7% |
| | adequate | 111 | 41.1% | 10 | 33.3% | 60 | 66.7% |
| | In adequate | 87 | 32.2% | 11 | 36.7% | 24 | 26.7% |
| | very inadequate | 30 | 11.1% | 3 | 10.0% | | |
| **Total** | | **270** | **100.0%** | **30** | **100.0%** | **90** | **100.0%** |
| Qualification of trainers' | Very high | 39 | 14.4% | 3 | 10.0% | 6 | 6.7% |
| | High | 101 | 37.4% | 10 | 33.3% | 66 | 73.3% |
| | Low | 116 | 43.0% | 17 | 56.7% | 18 | 20.0% |
| | very low | 14 | 5.2% | | | | |
| **Total** | | **270** | **100.0%** | **30** | **100.0%** | **90** | **100.0%** |
| Industrial experience of trainers' | Very high | 45 | 16.7% | 3 | 10.0% | 3 | 3.3% |
| | High | 102 | 37.8% | 9 | 30.0% | 45 | 50.0% |
| | Low | 95 | 35.2% | 14 | 46.7% | 36 | 40.0% |
| | very low | 28 | 10.4% | 4 | 13.3% | 6 | 6.7% |
| **Total** | | **270** | **100.0%** | **30** | **100.0%** | **90** | **100.0%** |

As it could be seen from Table 5 a question was presented to respondents in order they could indicate whether TVET institutions have trainers in adequate number and about their qualification and

experience. With regard to the adequacy of trainers only about 50% of trainees and TVET graduates answered adequate and very adequate while the other nearly 50% respond less than adequate. Here the instructors respond differently that 66.7% and 6.7% adequate and very adequate respectively. This could mean that the trainees', employed TVET graduates and to some extent trainers' also felt that additional instructors should be employed.

As one could see from the table there was the intention to know whether TVET trainers were academically competent and also if they were industrially experienced or not. With item 3 of Table 5, the aim was to identify the extent of industrial experience of trainers. The responses of a considerable proportion of trainers (40%) in this regard show that TVET trainers have low industrial experience and 6.7% very low industrial experience. The trainees and the TVET graduates respond nearly similar to that of the trainers.

This result shows us that the trainers' tends to be more of theoreticians. In fact, this is opposed to the TVET strategy in which the training should be 70% practical and 30% theory.

### 4.2.3. Availability of Tools, Equipments and Materials.

The quality of technical education cannot depend on proper teaching method alone. Good education also requires relevant learning and teaching aids like books and journals and laboratory and workshop equipments (ESAURP, 1999:119-120). Workshop qualities are by and large key components in any technical training programme, as they reflect the quality of the practical part of the programme. This being the case, it was important to access the adequacy of these facilities.

**Teaching Materials and Educational Technology Table (see Appendix)**

As it is presented in the Appendix; regarding the various equipments and teaching material that should be available in TVET College different respondents through the questionnaire give responses. More than half of the trainers respond the availability for the majority of equipments and materials is in adequate while the majority of trainees and employed TVET graduates respond adequate. When we see item by item 50% of the trainers respond very adequate and adequate for machine tools and 60% for hand tools for the rest ten items listed more than half of the trainers respond inadequate and very inadequate. Especially when we see the response given for the item spare parts, accessories and references the response from trainers is so discouraging which is 16.6%, 26.7% and 20% respectively responding adequate.

For most of the items listed, the trainees and graduates from TVET respond differently to that of the trainers while for the items listed consumable materials and spare parts more than 50% of members of these groups respond less than adequate which mean the same response as trainers. The response of most apprenticeship offering organization and TVET Deans during the interview supports the response of trainers.

The ANOVA test also shows that there is a significance difference for most of the items listed on the perception of the availability of the equipments and materials listed (see Appendix A). But taking the response of the trainers' as they are experienced and also supported from the responses of the interviewee, it is possible to say that these TVET colleges lack the budget to fulfill the necessary materials and equipments for the training.

## 4.3. Need assessment study of the current and future labour market

As mentioned in the literature, systems to develop information on labor markets and to monitor training are fundamentally essential to adjust instantly to changes in skills demand. Such systems are, moreover appropriate instruments to identify skills, knowledge and, there by, design and provide suitable training programs. Therefore, seen from this view point, TVET institution to be effective and to make the skill offered by them relevant and meet the demand of the labour market are required to employ a wide range of labour market analysis techniques to the extent possible. To be able to explore information on the issue, thus, question item was presented to respondents requesting them to indicate the availability of labour market information system. The response to this item are summarized and presented in the upcoming tables and followed by discussion.

### 4.3.1 Relevance of Programs of study in TVET institutions

The types of skills given through training is required to match with that of skills needed in the actual world work .Respondents were asked to respond with this regard

**Table 6 Frequency and Percentage Distribution of Respondents on Relevance of the program**

| Item | | Type of respondent | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|
| | | Trainees | | Employed TVET Graduates | | TVET Instructors | | | |
| | | Count | % | Count | % | Count | % | | |
| Relevancy of Study prog. in TVET colleges to actual skill needed | Highly relevant | 126 | 46.7% | 9 | 30.0% | 29 | 32.2% | 164 | 42.1% |
| | relevant | 94 | 34.8% | 15 | 50.0% | 48 | 53.3% | 157 | 40.3% |
| | irrelevant | 44 | 16.3% | 2 | 6.7% | 13 | 14.4% | 59 | 15.1% |
| | highly irrelevant | 6 | 2.2% | 4 | 13.3% | | | 10 | 2.6% |
| **Total** | | **270** | **100.0 %** | **30** | **100.0%** | **90** | **100.0%** | **390** | **100.0 %** |

About 46.7% of trainees, 30.0% employed TVET graduates and 32.2% of trainers indicated in their responses that the fields of study in TVET institution were highly relevant. Similarly, 34.8% trainees, 50.0% employed TVET graduates and 53.3% of trainers rated that the fields were relevant to the world of work. The response TVET College Deans and apprenticeship offering organization during the interview also support the response given by trainees, employed TVET graduates and trainers.

Though the majority respond that the training was relevant and highly relevant still 18.5% of student, 20.0% of employed TVET graduates and 14.4% of trainers reported the irrelevance of the fields.

### 4.3.2 Availability of Labor Market Information System in TVET Institutions

As it is believed that only the trainers have the information about the Availability of Labor Market Information System in TVET Institutions the questionnaire is forwarded only for trainers.

**Table 7 Availability of LMIS**

| Item | | Type of respondent | |
|---|---|---|---|
| | | TVET Instructors | |
| | | Count | % |
| Availability of LMIS | Yes | 17 | 18.9% |
| | No | 73 | 81.1% |
| Total | | 90 | 100.0% |

The result from Table 7 show the great majority of respondents indicated in their responses that no study of labour market information system is carried out by TVET Colleges formally.

The response of most apprenticeship offering organization and TVET Deans during the interview supports the response of trainers'. The interview conducted with them remarkably noted that, TVET institution did not have labor market information system. The interviewees contend that one of the major problems in relation to technical and vocational training provision is lack of need assessment, due to this, they said, institutions offer the same course each year. Even in some cases the number of students in each department would never vary. If they were to have information on the labour market, they argued, they would have offered marketable courses and the number of trainees in each field of study would have varied. Obviously, TVET institutions have not yet established institutional set up required by LMIS. They are induced by the federal or regional bureaus to provide the training. With regard to this, the researcher also found in his observation that, in all TVET colleges he couldn't practically get information on employment status of graduates. They didn't know how many of their graduates are employed or unemployed. This happened, due to the fact that as all deans pointed out no TVET institution so far conducted tracer study.

Hence, notwithstanding the responses of those groups of respondents who reported the availability of LMIS, seen in the light of the experience of TVET Colleges in their very few years of development and many other factors, it may be difficult to conclude that TVET Colleges have labour market information system yet which can provide information on a range of issues such as estimation of training needs by occupation and training qualifications hence projection about future employment and labour force needs.

## 4.4. Analysis of Data Gathered on the Apprenticeship training

An important condition of success, in achieving the ultimate goals of TVET, is continuous and institutionalized interaction among employers, TVET institutions and the government. This, undoubtedly, provides favorable environment for mutual understanding & stability in TVET developments. In this regard, responsiveness of employers, among others, is logically notable.

In relation to this, with the intention to examine the Adequacy of Apprenticeship Offerings organization the extent of readiness and willingness of both private and government organizations and the resource capacity to provide apprenticeship training, respondents were asked to point out. The responses were summarized and presented in the upcoming sections

### 4.4.1 Adequacy of Apprenticeship Offerings Organization

**Table 8 Availability of apprenticeship**

| Item | | Type of Respondent | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|
| | | Trainees | | Employed TVET Graduates | | TVET Instructors | | | |
| | | Count | % | Count | % | Count | % | | |
| Government apprenticeship offering organizations | Very adequate | 48 | 17.8% | 12 | 40.0% | 37 | 41.1% | 97 | 24.9% |
| | Adequate | 131 | 48.5% | 11 | 36.7% | 27 | 30.0% | 169 | 43.3% |
| | Inadequate | 61 | 22.6% | 6 | 20.0% | 19 | 21.1% | 86 | 22.1% |
| | Very inadequate | 30 | 11.1% | 1 | 3.3% | 7 | 7.8% | 38 | 9.7% |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% | 390 | 100.0% |
| Private apprenticeship offering organizations | Very adequate | 21 | 7.8% | 4 | 13.3% | 3 | 3.3% | 28 | 7.2% |
| | Adequate | 86 | 31.9% | 19 | 63.3% | 30 | 33.3% | 135 | 34.6% |
| | Inadequate | 83 | 30.7% | 3 | 10.0% | 33 | 36.7% | 119 | 30.5% |
| | Very inadequate | 79 | 29.3% | 4 | 13.3% | 15 | 16.7% | 98 | 25.1% |
| | Not Available | 1 | .4% | | | 9 | 10.0% | 10 | 2.6% |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% | 390 | 100.0% |

The data presented in Table 8 indicates that quite a large numbers of trainees (33.7%), employed TVET graduates (23.3%) and trainers (28.9) reported that the number of governmental apprenticeship offering organizations are not adequate. The case becomes worsen with private apprenticeship offering organizations which shows (60.4%) of trainees, (23.3%) of Employed TVET Graduates and (58.2) of trainers responding not adequate. The response of most apprenticeship offering organization and TVET Deans during the interview supports the response of trainees', trainers and employed TVET graduates.

The result revealed that most TVET trainees lack to get the necessary skills from apprenticeship training.

### 4.4.2 Willingness and Capacity of Apprenticeship Offering Organizations.

As most of the available literature indicate, it is clear that trainees in order to get on the job training (internship or apprenticeship) and be acquainted with the relevant skills and attitudes, which enable them to integrate easily into the world of work, apprenticeship offering organizations must be resourceful and should have the desired material, financial and human capability to provide on the job training. The extent of readiness and willingness of these organizations to provide apprenticeship training is also equally important. Respondents, trainers and employed TVET graduates were asked to point out the degree of willingness of these organizations and their resource capacity and, there by, can provide appropriate training. The responses were summarized and presented in the Tables below.

**Table 9 Willingness and Capacity of governmental apprenticeship Offering Organizations**

| Item | | Type of Respondent | | | | Total | |
|---|---|---|---|---|---|---|---|
| | | Employed TVET Graduates | | TVET Instructors | | | |
| | | Count | Col % | Count | Col % | | |
| Willingness of government organizations to give apprenticeship training | Highly Satisfactory | 9 | 30.0% | 3 | 3.3% | 12 | 10.0% |
| | Satisfactory | 9 | 30.0% | 36 | 40.0% | 45 | 37.5% |
| | Undecided | 12 | 40.0% | 30 | 33.3% | 42 | 35.0% |
| | Unsatisfactory | | | 18 | 20.0% | 18 | 15.0% |
| | Highly Unsatisfactory | | | 3 | 3.3% | 3 | 2.5% |
| Willingness of government organizations to give apprenticeship training | Highly Satisfactory | 11 | 36.7% | 9 | 10.0% | 20 | 16.7% |
| | Satisfactory | 10 | 33.3% | 33 | 36.7% | 43 | 35.8% |
| | Undecided | 8 | 26.7% | 30 | 33.3% | 38 | 31.7% |
| | Unsatisfactory | 1 | 3.3% | 12 | 13.3% | 13 | 10.8% |
| | Highly Unsatisfactory | | | 6 | 6.7% | 6 | 5.0% |
| Willingness of government organizations to give apprenticeship training | Highly Satisfactory | 6 | 20.0% | 9 | 10.0% | 15 | 12.5% |
| | Satisfactory | 5 | 16.7% | 30 | 33.3% | 35 | 29.2% |
| | Undecided | 12 | 40.0% | 30 | 33.3% | 42 | 35.0% |
| | Unsatisfactory | 7 | 23.3% | 15 | 16.7% | 22 | 18.3% |
| | Highly Unsatisfactory | | | 6 | 6.7% | 6 | 5.0% |
| Willingness of government organizations to give apprenticeship training | Highly Satisfactory | 6 | 20.0% | 6 | 6.7% | 12 | 10.0% |
| | Satisfactory | 11 | 36.7% | 33 | 36.7% | 44 | 36.7% |
| | Undecided | 1 | 3.3% | 33 | 36.7% | 34 | 28.3% |
| | Unsatisfactory | 11 | 36.7% | 12 | 13.3% | 23 | 19.2% |
| | Highly Unsatisfactory | 1 | 3.3% | 6 | 6.7% | 7 | 5.8% |

As it can be seen in Table 9 above, (40%) of TVET graduates and (56.6%) of trainers indicated that most governmental enterprises didn't wholeheartedly support the request for apprenticeship training for it entails problems as well as material and financial loss. Even apprenticeship offering organizations during the interview conducted with them reacts the same to that of the response from trainers and TVET graduates.

Here the researcher wants to state the response from the head of HRM department of ETC Legehar branch. In that, the apprentices even from Engineering Faculties of Universities, in most cases result in damage of equipments. But with positive attitude towards business stream, they are not associated with much of the equipments and consumable materials at the same time they easily adapt to the work conditions.

TVET graduates and trainers while writing to an open-ended question in relation to other problems reacted that apprenticeship offering organizations, government as well as private, were not in favor of providing work place training. This unwillingness, according to the respondents, has different manifestation, for instance, assigning trainees out of their field of study, making these trainees idle and worthlessly spend their time in certain offices, refusing to give legally determined pocket money for trainees and so on. The response of TVET graduates on the man power, financial and material resource capacity of these governmental apprenticeship offering organizations is (40%), (63.3%) and (43.3%) unsatisfied respectively and of trainers (53.3%), (56.7%), (56.7%) unsatisfied respectively. On the other hand, cooperative efforts of some apprenticeship offering organization also exist.

As it is shown in Table 10 below the case is more or less similar with private apprenticeship offering organization

**Table 10 Willingness and Capacity of private apprenticeship Offering Organizations**

| Item | | Type of Respondent | |
|---|---|---|---|
| | | Employed TVET Graduates | TVET Instructors |
| | | Col % | Col % |
| Willingness of government organizations to give apprenticeship training | Highly Satisfactory | 23.3% | 10.0% |
| | Satisfactory | 13.3% | 26.7% |
| | Undecided | 36.7% | 16.7% |
| | Unsatisfactory | 26.7% | 40.0% |
| | Highly Unsatisfactory | | 6.7% |
| Willingness of government organizations to give apprenticeship training | Highly Satisfactory | 10.0% | 3.3% |
| | Satisfactory | 33.3% | 50.0% |
| | Undecided | 30.0% | 30.0% |
| | Unsatisfactory | 26.7% | 13.3% |
| | Highly Unsatisfactory | | 3.3% |
| Willingness of government organizations to give apprenticeship training | Highly Satisfactory | 23.3% | 3.3% |
| | Satisfactory | 33.3% | 36.7% |
| | Undecided | 43.3% | 46.7% |
| | Unsatisfactory | | 10.0% |
| | Highly Unsatisfactory | | 3.3% |
| Willingness of government organizations to give apprenticeship training | Highly Satisfactory | 30.0% | |
| | Satisfactory | 33.3% | 46.7% |
| | Undecided | 36.7% | 36.7% |
| | Unsatisfactory | | 13.3% |
| | Highly Unsatisfactory | | 3.3% |

As the views of the two groups of respondents with regard to private apprenticeship offering organization (63.4%) of TVET graduates and (63.4%) of trainers indicated that most private enterprises didn't wholeheartedly support the request for apprenticeship training for it entails problems as well as material and financial loss. The response of TVET graduates on the man power, financial and material resource capacity of these private apprenticeship offering organizations is (56.7%), (43.3%) and (36.7.3%) unsatisfied respectively and of trainers (46.6%), (60.0%), (53.3 %) unsatisfied respectively.

Most government and private organizations which offers apprenticeship to TVET trainees' lacks the willingness and resource capacity to offer this apprenticeship training which is essential to have the necessary skills which helps trainees' smooth transition from school to world of work.

### 4.4.3 Roles of TVET Colleges and Organizations in the Apprenticeship training

The performance of TVET colleges in effecting Apprenticeship program is shown in Table 11 below.

**Table 11 performance of TVET colleges in apprenticeship training**

| Item | | Type of Respondent | | Total |
|---|---|---|---|---|
| | | Employed TVET Graduates | TVET Instructors | |
| Performance of TVET's considering Grades | High | 66.7% | 30.0% | 39.2% |
| | Medium | 30.0% | 46.7% | 42.5% |
| | Low | 3.3% | 23.3% | 18.3% |
| Assigning personnel | High | 6.7% | 10.0% | 9.2% |
| | Medium | 30.0% | 56.7% | 50.0% |
| | Low | 63.3% | 33.3% | 40.8% |
| Preparing guidelines | High | 3.3% | 10.0% | 8.3% |
| | Medium | 46.7% | 63.3% | 59.2% |
| | Low | 50.0% | 26.7% | 32.5% |
| Planning appropriately | High | 6.7% | 10.0% | 9.2% |
| | Medium | 26.7% | 56.7% | 49.2% |
| | Low | 66.7% | 33.3% | 41.7% |
| Training In-Plant trainer | High | 3.3% | 6.7% | 5.8% |
| | Medium | 50.0% | 63.3% | 60.0% |
| | Low | 46.7% | 30.0% | 34.2% |
| Sensitizing org | High | 3.3% | 6.7% | 5.8% |
| | Medium | 43.3% | 53.3% | 50.8% |
| | Low | 53.3% | 40.0% | 43.3% |
| Working in collaboration | High | 6.7% | 10.0% | 9.2% |
| | Medium | 53.3% | 33.3% | 38.3% |
| | Low | 40.0% | 56.7% | 52.5% |

With the 7 listed Items it was intended to examine the state of efforts made by TVET colleges to help effective implementation of apprenticeship training in each organization. Obviously, the above tasks or activities listed in the table are duties and responsibilities of TVET institutions. As could be seen from responses to item number 1 of Table 11 majority of TVET graduates (96.7 %) and trainers(76.7%) indicated that TVET colleges recognize results of apprenticeship training by using it as a major component of criteria for certification that is used as a testimony for the successful completion of middle level TVET program. Only (6.7 %) of TVET graduates and (10.0%) trainers respond high on the assignment of personnel who follows up the progress of apprentices. The great majority responds low and medium.

The response from the apprenticeship offering organization through interview is also same. Most organizations offering apprenticeship training remarkably noted that no one, from TVET institutions would come to visit apprentices and see the progress while they are taking on-the-job training. The same result for item number 3 from the respondents which is only (3.3 %) of TVET graduates and (10.0%) trainers accept the guidelines used for the apprenticeship.

Here the response from the apprenticeship offering organization was very impressive in that the evaluation paper that is send from the respective TVET College of the apprentice to be filled by the apprenticeship offering organizations are in many cases out of the trainings that the organization gives to the trainees. Here the researcher wants to express the view of the HRM head of EEPCo stating that most of the time we give training for the apprentices in electrical installation but the evaluation list that comes from the college includes like maintenance of Refrigerators, house hold appliances and the likes. This is in part

because both parties TVET colleges and enterprises offering apprenticeship did not show efforts to plan the program mutually.

Furthermore, the responses of most organizations offering apprenticeship training during the interview support the responses of the TVET graduates and trainers. That is, they tried to reveal that their relationship didn't go beyond sending a piece of letter ones in a bloom.

As regards the role of TVET institutions in providing training for in-plant trainers free of any charge, still majority of TVET graduates (46%) and trainers (30%) asserted that the status of TVET institutions of providing training for work place supervisors or trainees was low.

Trainers while they wrote to an open ended question, replied that there was no enterprise who come with the request to TVET colleges to get it's work place trainer be trained free of charge in TVET institutions. Furthermore, the interviewees emphasized that there were lack of supportive work, place supervisors in enterprises offering apprenticeship training. Thus, based on the above discussion, one could say that the existing TVET institutions did not provide training opportunities for in-plant trainers for a number of reasons.

The performance of apprenticeship offering organizations with respect to implementation of the program is shown in Table 12 below.

**Table 12 Performance Organizations in Apprenticeship Training**

| Item | | Type of Respondent | | Total |
|---|---|---|---|---|
| | | Employed TVET Graduates | TVET Instructors | |
| Performance of org accept trainees | High | 33.3% | 16.7% | 20.8% |
| | Medium | 60.0% | 63.3% | 62.5% |
| | Low | 6.7% | 20.0% | 16.7% |
| Assigning places | High | 13.3% | 10.0% | 10.8% |
| | Medium | 13.3% | 50.0% | 40.8% |
| | Low | 73.3% | 40.0% | 48.3% |
| Assigning trainer | High | 3.3% | 10.0% | 8.3% |
| | Medium | 43.3% | 43.3% | 43.3% |
| | Low | 53.3% | 46.7% | 48.3% |
| Show work methods | High | 13.3% | 6.7% | 8.3% |
| | Medium | 50.0% | 50.0% | 50.0% |
| | Low | 36.7% | 43.3% | 41.7% |
| Provide inputs | High | 6.7% | 3.3% | 4.2% |
| | Medium | 33.3% | 40.0% | 38.3% |
| | Low | 60.0% | 56.7% | 57.5% |
| Evaluating | High | 23.3% | 16.7% | 18.3% |
| | Medium | 56.7% | 50.0% | 51.7% |
| | Low | 20.0% | 33.3% | 30.0% |
| Working in collaboration | High | 10.0% | 10.0% | 10.0% |
| | Medium | 50.0% | 43.3% | 45.0% |
| | Low | 40.0% | 46.7% | 45.0% |

The critical issue in this regard, however, is to what extent organizations offering apprenticeship training are committed, and able to meet this challenge. In relation to this, with the intention to investigate the extent to which enterprises meet the crucial responsibilities necessary to realize the objectives of apprenticeship training, respondents were asked to rate the degree of accomplishment of tasks assigned to organizations offering on-the-job training. Accordingly, considerable majority of respondents (93.3% of employed TVET graduates and 80% trainers) ascertained that majority of enterprises accepted trainees for in company training (item 1). Similarly 83.3% of employed TVET graduates and 66.7% trainers agree on the evaluation given by those organizations

offering apprenticeship training (items 6). The document analysis by the researcher shows that for the majority, the result given by the apprenticeship offering organizations to apprentices was extremely high.

As the data further revealed, on the other hand, the endeavor made by enterprises to assign apprentices in places appropriate to their trade was rated low by the majority of employed TVET graduates 73.3% and trainers 40.0 %( item 2). The same low result was rated for item 3 in which TVET graduates 53.3% and trainers 46.7 % gives the response low. The lowest of all is in the case of inputs provided to apprentices during their training which is rated low by 60.0% of employed TVET graduates and 56.7% trainers. The data also disclosed that the status of enterprises to acquaint apprentices with work methods of organizations was rated average 63.3% of employed TVET graduates and 56.7% trainers respond medium and high.

In view of trainers and employed TVET graduates the organization lacks to assign apprentices in proper places, assign in plant trainer and providing input for the training.

Opposed to trainees and employed TVET graduates, the responses of apprenticeship offering organization, during the interview conducted with them, one can recognize that there were efforts, more or less, exerted by these enterprises to help apprentices comprehend valuable working methods of organizations-business, service rendering and factories. According to the interviewees, apprentices were usually assigned to work together with members (workers) of different departments (sections). Due to this, trainees would easily find individuals to help them learn at work. Hence, one could possibly

conclude that, based on the majority respondents and interview responses, nowadays most organizations (both government and private) are contributing a lot in shaping trainees with profound working habits. From the preceding explanation, therefore, on could reasonably conclude that, enterprises offering apprenticeship-training performance with regard to full-filling their respective responsibilities are encouraging and satisfactory.

**Table 13 Incentives Given to Apprenticeship Offering Organizations**

| Item | | TVET Instructors | |
|---|---|---|---|
| | | Count | Col % |
| Incentive given to organizations offering apparent. | Yes | 6 | 6.7% |
| | No | 84 | 93.3% |
| Type of the incentive given | Free training for their employees. | 1 | 16.7% |
| | Recognizing their contribution on graduation days | 3 | 50.0% |
| | other | 2 | 33.3% |

From the result above it is seen that 93.3% TVET Instructors responds that no incentive is given to these organizations that offer apprenticeship-training this can be one of the reason that makes apprenticeship offering organizations to be reluctant. During the interview again the HRM head of EEPCo states that we got no incentive from the government and/or the TVET College rather we pay pocket fees for the Apprentices.

## 4.5. Analysis of Data Gathered on the Economic Activities Capacity to Absorb the TVET Graduates

As the available literatures indicate, it is clear that the particular economic circumstances in a county significantly determines to what extent successful are new labour market entrants in obtaining jobs. In

the same way, TVET graduates as member of labour entrants; fate of employability highly correlates with the vitality of a given economy. Similarly, investment in countries, like Ethiopia, is targeted among others, as stepping up the momentum of economic development, enhancing the role of private sector and, thereby, creation of wide employment opportunities. Thus, with the aim to examine whether the investment created job opportunities or not, respondents were requested to indicate.

### 4.5.1. The Investment Potential in Creating Employment Opportunities

**Table 14 employment Opportunities in government, private organizations and for self employment**

| Item | | Type of Respondent | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|
| | | Trainees | | Employed TVET Graduates | | TVET Instructors | | Count | Col % |
| | | Count | Col % | Count | Col % | Count | Col % | | |
| Employment in Government organizations | High | 68 | 25.2% | 1 | 3.3% | 12 | 13.3% | 81 | 20.8% |
| | Medium | 106 | 39.3% | 16 | 53.3% | 48 | 53.3% | 170 | 43.6% |
| | Low | 92 | 34.1% | 13 | 43.3% | 27 | 30.0% | 132 | 33.8% |
| | No opportunity | 4 | 1.4% | | | 3 | 3.3% | 7 | 1.8% |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% | 390 | 100.0% |
| Employment in Private org | High | 58 | 21.5% | 5 | 16.7% | 9 | 10.0% | 72 | 18.5% |
| | Medium | 158 | 58.5% | 14 | 46.7% | 42 | 46.7% | 214 | 54.9% |
| | Low | 54 | 20.0% | 11 | 36.7% | 39 | 43.3% | 104 | 26.7% |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% | 390 | 100.0% |
| Self employment | High | 46 | 17.0% | 3 | 10.0% | 3 | 3.3% | 52 | 13.3% |
| | Medium | 102 | 37.8% | 21 | 70.0% | 30 | 33.3% | 153 | 39.2% |
| | Low | 122 | 45.2% | 6 | 20.0% | 48 | 53.3% | 176 | 45.1% |
| | No opportunity | | | | | 9 | 10.0% | 9 | 2.3% |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% | 390 | 100.0% |

From Table 14 above it is possible for one to see that majority of respondents in all Cases (item 1-3) disclosed that there was an average investment potential in the region to creating job opportunities for TVET graduates. As regards employment opportunities in government organizations created as a result of investment in the region, 45% of trainees, 3.3% of TVET graduates and 13.3% of trainers indicated that the investment potential in creating employment Opportunities is high and, 39.3% of trainees, 53.3% of TVET graduates and 53.3% of trainers respond medium. The condition with private organization is also similar. When considering the other side of respondents' still large part respond that the existing investment potential in creating employment Opportunities is low that the private investors and the government should do lot in intensifying the investment and focusing on labour intensive investments than capital intensive investments.

The response of most apprenticeship offering organization and TVET Deans during the interview supports the response of trainees', trainers and Employed TVET Graduates.

### 4.5.2 Availability of Self-Employment Opportunities

The lack of modern sector employment opportunities has obliged individuals in many countries to resort to the benefits of the in-formal sector to make a living. This has lead consequently, to the rapid growth of the sector and accounts for a significant per cent of urban employment opportunities. However, a complex set of social and economic challenges are often associated with productive self employment and development of small scale enterprises such as lack of access to credit and raw materials, lack of concentrated markets for

products, lack of transport, lack of proper administrative support, etc. like wise in this study, an attempt was made to identify whether or not there were favorable conditions for TVET graduates to join the informal sector when wage employment opportunities in the modern sector are quite limited. To do so, a question item consisting of a list of a set of economic and social prerequisite elements was presented to respondents. The response is summarized in Table given on the Appendix.

**Table on social and economic challenges for self employment (see Appendix).**

As one can see from the data in the Appendix; 36 %of trainees, 66.6% of TVET graduates and 43.3% of trainers, asserted that there was problem in having access to credit so as to create jobs. Similarly, 56.7 %of trainees, 70.0% of TVET graduates and 56.7% of trainers, pointed out that there was lack of Access to raw material. The response of most apprenticeship offering organization and TVET Deans during the interview supports the idea indicating that still there were problems in obtaining adequate raw materials in order to run their own business. In view of the open ended responses from TVET graduates they are discontent at the bureaucratic red tape they faced and the inability of officials to keep their promises in providing sufficient credit and recognizing self employed TVET graduates as legal businessmen.

The majority of the respondents show that they have no problem with access to market if preconditions were fulfilled to start their own business. They also show positive result towards their entrepreneurial skills, parents and their own willingness.

### 4.5.3 Determining factors for the employability of TVET Graduates

With the intention to know how trainees, employed TVET graduates and trainers view the relationship between employment and a set of factors which were assumed to either directly or indirectly affect it, respondents were requested to rate to what extent each element (factor) could affect trainees' employability.

**Table 15 Factors for the Employability of TVET Graduates**

| | | Type of Respondent | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|
| | | Trainees | | Employed TVET Graduates | | TVET Instructors | | Count | Col % |
| | | Count | Col % | Count | Col % | Count | Col % | | |
| Strong r/n shi b/n TVET intuitions and enterprises | High | 35 | 13.0% | 8 | 26.7% | 18 | 20.0% | 53 | 13.6% |
| | Medium | 68 | 25.2% | 4 | 13.3% | 30 | 33.3% | 102 | 26.2% |
| | Low | 77 | 28.5% | 18 | 60.0% | 30 | 33.3% | 115 | 29.5% |
| | No opportunity | 90 | 33.3% | | | 12 | 13.4% | 120 | 30.8% |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% | 390 | 100.0% |
| Academic and administrative capacities of TVET institutions | High | 36 | 13.3% | 8 | 26.7% | 32 | 35.6% | 68 | 17.4% |
| | Medium | 76 | 28.1% | 8 | 26.7% | 28 | 31.1% | 112 | 28.7% |
| | Low | 87 | 32.2% | 14 | 46.7% | 24 | 26.7% | 119 | 30.5% |
| | No opportunity | 71 | 26.3% | | | 6 | 6.7% | 91 | 23.3% |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% | 390 | 100.0% |
| Wage or self employment opportunities | High | 71 | 26.3% | 9 | 30.0% | 18 | 20.0% | 89 | 22.8% |
| | Medium | 59 | 21.9% | 17 | 56.7% | 33 | 36.7% | 101 | 25.9% |
| | Low | 86 | 31.9% | 4 | 13.3% | 30 | 33.3% | 133 | 34.1% |
| | No opportunity | 54 | 20.0% | | | 9 | 10% | 67 | 17% |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% | 390 | 100.0% |
| Improving admission criteria to TVET institutions | High | 73 | 27.0% | 5 | 16.7% | 27 | 30.0% | 105 | 26.9% |
| | Medium | 88 | 32.6% | 8 | 26.7% | 36 | 40.0% | 132 | 33.8% |
| | Low | 79 | 29.3% | 8 | 26.7% | 24 | 26.7% | 111 | 28.5% |
| | No opportunity | 30 | 11.1% | 9 | 30.0% | 3 | 3.3% | 42 | 10.8% |
| Total | | 270 | 100.0% | 30 | 100.0% | 90 | 100.0% | 390 | 100.0% |

As it is indicated in Table 16 above consequently, majority of respondents, in their responses to all items, point out that the relationship between employment

and the elements listed '(items 1-5) were average or high. Specifically put, 38.2%of trainees, 40% of TVET graduates and 53.3% of trainers revealed that establishing strong relationship between enterprises and TVET intuitions could highly improve employability of TVET trainees.

Academic and administrative potentials of colleges were also indicated to be major determinants of employability by 41.2%of trainees, 53.4% of TVET graduates and 66.7% of trainers. What is more, improving admission criteria was also reported to have highly significant influence by 59.6%of trainees, 43.4% of TVET graduates and 70% of trainers.

Concisely, therefore, from the discussion one can still understand that admission criteria, employment opportunities, curriculum relevance, TVET institutions' academic and administrative capacities and partnership between TVET and enterprises have strong relationship with trainees/ graduates employment prospect.

# CHAPTER FIVE

## Summary, Conclusion and Recommendations

This final chapter of the thesis deals with the summary of the major findings of the study. The main purpose of this study was to analyze and describe factors that affect the external efficiency of TVET colleges of Addis Ababa. In order to achieve this, the following basic questions were raised regarding the preliminary activity and the process of identifying factors which affect the external efficiency of TVETs:

1. How effectively is the training in these training institutions/Colleges conducted from the point of view of trainers qualification and experience, trainees academic competency, curriculum and availability of tools, equipments and materials?
2. Do the Institution/ College make a thorough need assessment study to the current and future labour market needs and adjust their training programs accordingly?
3. Does adequate follow up and support given when TVET Trainees are in their apprenticeship training?
4. Are there convenient conditions available to the TVET graduates to start their own business?
5. Do the economic activities have the capacity to absorb the TVET graduates?
6. To what extent do different stakeholders participate to support TVET graduates?

In dealing with this research problem descriptive survey method was employed. The study was conducted in three TVET colleges of Addis Ababa. The three TVET colleges were selected from five TVET colleges in Addis Ababa City

Administration using simple random sampling for the study. The subject of the study was 396 of which 390 were treated through questionnaire and 6 through interview guide. 104 subjects were compared of 90 trainers, 30 employed TVET graduates and 270 trainees. The entire dispatched questionnaires were returned. Through interview guide 3 deans of TVET colleges namely General Winget, Entoto and Misrak, heads HRM in Legehar ETC, EEPCo West district and Addis Ababa Micro and small enterprise were treated. Data was also collected using document review and observation on the factors which affect the external efficiency of TVETs. The obtained data through questionnaire was analyzed using frequency percentage, mean and grand mean of respondents.

## 5.1 Summary of the major Findings

Based on the data collected and the analysis made using different statistical tools, the following results were found

5.1.1. The finding revealed that the process of selection and placement of trainees in to various vocational and technical fields of training was maintained only through studying students' previous academic achievements which usually is determined by their EGELCE /EGELCE result. Here it lacks to employ one of the basic criteria of admission set by TVET policy strategy; That is, trainees' attitude and the will to be so trained. The study also indicated that considerable number of trainees did not get placement to different fields of training according to their first choice in TVET Colleges.

5.1.2. The results of the study showed that, most trainees had high interest in attending the training program in these TVET colleges and majority respond that these trainees were academically competent.

5.1.3. The study revealed that TVET institutions had adequate number of trainers. More over, it was pointed out by the result of the study that almost all trainers (95%) were teaching their field of specialization.

5.1.4. As far as the qualification and experience is concerned the study also revealed that trainers at TVET colleges had adequate competence and experience in teaching. On the other hand, as was revealed in the finding, these trainers were found to have inadequate industrial experience.

5.1.5. It was found out by the result of the study that, trainees, trainers, employed TVET graduates and all interviewees believe that the programs offered at TVET institutions were relevant.

5.1.6. Regarding the adequacy of budget in TVET colleges, the finding revealed that these TVET colleges did not have adequate financial resources to cover all monetary expenditures demanded by training programs. Moreover, as the results of the study indicated, government reallocation of budget, providing training service (on part - time basis), sales service especially of products made during regular training sessions and cost sharing were found to be fund diversification mechanisms employed by TVET institutions to curb budgetary constraints. Besides, expenses, work related or other wise, were covered by trainees / families and the government.

5.1.7. The study disclosed that there is still a problem to find organizations offering apprenticeship training, both government and private. Readiness and willingness of organizations offering apprenticeship training was low. It was, in fact, remarked as reluctance of enterprise to provide work place training. Besides, it was identified that majority of these organizations lack the required human, financial and material resources to effectively provide on - the-job training.

5.1.8. The finding indicates that there is no an organized system to regulate the partnership between TVET colleges and the apprenticeship offering organizations in order to facilitate the implementation of apprenticeship training program, no incentives to apprenticeship offering organizations other than recognizing organizations contribution on

graduation days in order to stimulate further cooperation in the area, no clear guidelines and schedules that help proper implementation of apprenticeship training

5.1.9. The result of the study shows that TVET colleges did not establish sustainable institutional set-up required by LMIS. Hence, systems for labour market data collection and analysis were almost non - existent. The findings of the study indicated that, except for very few trades, the majority of fields of study offered by TVET colleges were marketable.

5.1.10. In spite of great effort made to assess the employment status of graduates from the sampled TVET colleges, no enough information from the respective TVET colleges because these TVET colleges has not carried out tracer study in organized manner for different reasons . However, the majority of the respondents estimate that many of TVET graduates (1998 -2000 E.C) didn't secure employment.

5.1.11. Trainees, trainers, employed TVET graduates who respond through the questionnaire and others also from the interview agree that the programs offered at TVET institutions were relevant though the availability of employment opportunities for TVET graduates was low relative to their number.

5.1.12. The finding also indicates that the investment activity conducted by the government or privately owned companies lacks the capacity to absorb all or majority of TVET graduates of the region.

5.1.13. Regarding self-employment opportunities and a set of social and economic factors associated with it, It was ascertained in the finding that there were, generally, inconvenient conditions to attract TVET graduates to exploit the benefits of self- employment. That is, access to credit, raw materials and market; administrative and other supports and trainees' willingness to be self-employed were found to be low.

5.1.14. The findings of the study indicated that, admission criteria, employment opportunities, curriculum relevance, TVET institutions

academic and administrative capacity and partnership between organizations offering work place training and TVET institutions could determine TVET trainees' employability.

5.1.15. Many of the responses of the open ended question showed that societal bias and stigma had been attached to TVET. Technical regarded as inferior, or as a second choice after professional education, regardless of the student's interests (indeed passions) or abilities. The lack of equivalency between TVET and higher education also contributed to the bias against TVET.

5.1.16. From the responses it is also seen that access to and use of computers while in education can provide students with an important knowledge base that can increase their opportunities for employment and success in the job market. Same to that is access to the internet.

## 5.2 Conclusions

TVET seems to emerge as one of the hot topics in the policy debate of educational development. To a large extent this renewed interest for TVET is motivated by the necessity to address new economic challenges. However, the success of such strategies is by and large dependent on the existence of employment opportunities and the ability of institutions to discover and provide appropriate skills. On the basis of such background, for TVET institutions to offer quality and relevant education and training, criteria of admission, trainees' interest and academic competence; qualification, competence and experience of trainers; competency and experience of management; availability of financial resources, facilities and infrastructure; apprenticeship training, availability of labour market information system; curriculum relevance and availability of employment opportunities were among the major factors the study gave attention.

Explicitly put, the finding of the study unraveled that in addition to the unavailability of some kind of mechanism that can be used to discriminate among trainees who have the caliber as well as inclination and the will to be so trained, quite significant number of trainees were assigned to fields of study with out their choice and interest. Hence, it is not difficult to conclude that this kind of situation can have an adverse effect on the out come of the training program.

Lack of suitable qualification of trainers, poor supply of teaching materials, equipments and facilities, absence of adequate instructional materials and inadequate finance were, revealed during the study. The consequence of this may also affect the quality of training and then the external efficiency of the respective TVET colleges.

Factors such as inadequacy, low resource capacity and reluctance of organizations offering apprenticeship training, absence of cooperation between this apprenticeship offering organizations and TVET colleges have an adverse effect on offering adequate and relevant skills to TVET trainees that meet the needs of the labor market.

In the context of TVET systems, economic growth and investment should be accompanied by the promotion of job creating activities and opportunities. However, within the prevailing environment the study indicated that, the role of investment was not substantial in creating employment opportunities. A large number of trained graduates are left unemployed or underemployed.

Lack of statistical data and information and labour market related studies and Lack of the facilities that is necessary to conduct vocational training services and programs that cope with technological development.

## 5.3 Recommendations

In light of the findings and conclusions of the study, it can be supposed that the following measures may improve the External efficiency of TVET Colleges/institutions of Addis Ababa.

5.3.1TVET should promote problem solving skills, creativity and innovative skills. All techniques should be designed to suit learner characteristics, meet their needs and develop their interest and enthusiasm.

5.3.2. Apprenticeship should be modified in a way that trainees are trained on different contents that they learned in their formal class in colleges through rotating to different enterprises specialized on different items of production or at least with in the same enterprise at different sections than being allocated only at one point. This gives more chances to apprentices find where his actual skill is and in some instances there may be natural talent at a certain specific field that will be strengthened with this training and this may lead even to innovations. It may also give the chance for the apprentice to a variety of choice to start his own business after graduation from different perspectives like financial capacity, place, time, available raw materials etc and compete for wage employment of different sectors.

5.3.3. Appropriate work values and ethics, and gender-sensitive principles and practices shall be incorporated to TVET curricula. This will lead to the development of workers who are not only skilled but also imbued with positive work values.

5.3.4. There is a need to guide high school graduates on what TVET college course to pursue after graduation. Need to select and train persons who have inclination and the capability to grasp the skill and knowledge associated with the fields of training. In light of this, the researcher would like to recommend that there should be a device for entry (aptitude) test or selection interview, to be used by all TVET institutions so that it could be possible to know among trainees who really have interest and the caliber to study.

5.3.5. Intensifying and expanding enterprise-based training program. Practical and hands-on experience, especially in occupations-related training shall be emphasized through enterprise-based training programs.

5.3.6. The governance and management of the TVET lie for efficient delivery of TVET programs. Co-management arrangements of these colleges/institutions can be expanded where the TVET College and specific industry associations may pursue joint TVET initiatives. With this partnership, convergence and pooling of resources would be expedited for more efficient utilization of resources.

5.3.7. Curriculum updating and upgrading to make the TVET curricula more responsive to industry and national development needs and comparable to international standards

5.3.8. A unit or a committee will be required to develop and service a Labour Market Information System. A Labour Market Information System (LMIS) can provide useful information for formulating development plans and employment policies and programmes and for providing direction to developments in TVET.

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## Appendix A

### Frequency percentage, mean and ANOVA Summary on Teaching Materials and Educational Technology

| Items | Respondents | Option | | | | | Mean | Comparing mean: One way ANOVA | |
|---|---|---|---|---|---|---|---|---|---|
| | | V.ad | Ad | Inad | V.Inad | N.av | | F | Sig. |
| Power Tools | Trainees | 29.6% | 41.9% | 17.4% | 3.7% | 7.4% | 2.1741 | | |
| | Employed TVET Graduates | 6.7% | 66.7% | 20.0% | | 6.7% | 2.3333 | | |
| | TVET Instructors | 3.3% | 33.3% | 53.3% | 6.7% | 3.3% | 2.7333 | 9.85** | 0.00 |
| Hand tools | Trainees | 34.4% | 32.2% | 13.3% | 11.9% | 8.1% | 2.2704 | | |
| | Employed TVET Graduates | 6.7% | 46.7% | 40.0% | | 6.7% | 2.5333 | | |
| | TVET Instructors | 6.7% | 53.3% | 36.7% | 3.3% | | 2.3667 | 0.86 | 0.42 |
| Machine tools | Trainees | 24.4% | 37.4% | 14.1% | 8.5% | 15.6% | 2.5333 | | |
| | Employed TVET Graduates | | 30.0% | 46.7% | | 23.3% | 3.1667 | | |
| | TVET Instructors | 10.0% | 40.0% | 43.3% | 6.7% | | 2.4667 | 3.96* | 0.02 |
| Measuring instruments | Trainees | 37.0% | 20.7% | 24.8% | 9.3% | 8.1% | 2.3074 | | |
| | Employed TVET Graduates | 13.3% | 66.7% | 16.7% | 3.3% | | 2.1000 | | |
| | TVET Instructors | 6.7% | 43.3% | 50.0% | | | 2.4333 | 1.05 | 0.35 |
| Spare parts | Trainees | 14.1% | 32.2% | 24.8% | 14.1% | 14.8% | 2.8333 | | |
| | Employed TVET Graduates | | 13.3% | 60.0% | 10.0% | 16.7% | 3.3000 | | |
| | TVET Instructors | 3.3% | 13.3% | 76.7% | 3.3% | 3.3% | 2.9000 | 2.32 | 0.10 |
| Accessories | Trainees | 17.4% | 35.6% | 19.3% | 13.7% | 14.1% | 2.7148 | | |
| | Employed TVET Graduates | 10.0% | 43.3% | 20.0% | 16.7% | 10.0% | 2.7333 | | |
| | TVET Instructors | 10.0% | 16.7% | 60.0% | 6.7% | 6.7% | 2.8333 | 0.32* | 0.72 |
| Teaching Aids | Trainees | 27.4% | 41.9% | 15.2% | 4.8% | 27.4% | 2.2963 | | |
| | Employed TVET Graduates | 10.0% | 56.7% | 20.0% | 6.7% | 10.0% | 2.4333 | | |
| | TVET Instructors | 6.7% | 26.7% | 46.7% | 10.0% | 6.7% | 2.9000 | 9.06** | 0.00 |
| Consumable materials | Trainees | 23.7% | 28.1% | 24.4% | 9.6% | 14.1% | 2.6222 | | |
| | Employed TVET Graduates | 10.0% | 36.7% | 23.3% | 23.3% | 6.7% | 2.8000 | | |
| | TVET Instructors | 6.7% | 26.7% | 63.3% | 3.3% | | 2.6333 | 0.30 | 0.74 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Raw materials | Trainees | 35.2% | 26.3% | 14.1% | 13.3% | 11.1% | 2.3889 | | |
| | Employed TVET Graduates | 16.7% | 30.0% | 23.3% | 6.7% | 23.3% | 2.9000 | | |
| | TVET Instructors | 6.7% | 40.0% | 40.0% | 3.3% | 10.0% | 2.7000 | 3.46* | 0.03 |
| Texts and Guide books | Trainees | 43.0% | 27.4% | 12.6% | 9.3% | 7.8% | 2.1148 | | |
| | Employed TVET Graduates | 30.0% | 26.7% | 26.7% | 13.3% | 3.3% | 2.3333 | | |
| | TVET Instructors | 10.0% | 16.7% | 70.0% | 3.3% | | 2.6667 | 7.74** | 0.00 |
| References | Trainees | 44.1% | 28.1% | 13.7% | 7.4% | 6.7% | 2.0444 | | |
| | Employed TVET Graduates | 10.0% | 33.3% | 33.3% | 20.0% | 3.3% | 2.7333 | | |
| | TVET Instructors | 6.7% | 13.3% | 63.3% | 13.3% | 3.3% | 2.9333 | 23.59** | 0.00 |
| Manuals | Trainees | 34.1% | 26.3% | 19.6% | 12.6% | 7.4% | 2.3296 | | |
| | Employed TVET Graduates | | 23.3% | 43.3% | 10.0% | 23.3% | 3.3333 | | |
| | TVET Instructors | 6.7% | 23.3% | 50.0% | 13.3% | 6.7% | 2.9000 | 15.05** | 0.00 |
| Audiovisuals | Trainees | 20.7% | 28.5% | 21.9% | 14.8% | 14.1% | 2.7296 | | |
| | Employed TVET Graduates | | 23.3% | 26.7% | 23.3% | 26.7% | 3.5333 | | |
| | TVET Instructors | 6.7% | 10.0% | 50.0% | 20.0% | 13.3% | 3.2333 | 9.55** | 0.00 |
| Computers | Trainees | 43.3% | 23.7% | 17.8% | 5.2% | 10.0% | 2.1481 | | |
| | Employed TVET Graduates | 3.3% | 56.7% | 23.3% | 6.7% | 10.0% | 2.6333 | | |
| | TVET Instructors | 3.3% | 26.7% | 50.0% | 20.0% | | 2.8667 | 13.38** | 0.00 |

Key Fcrt = 4.66 with df = 2, 387 at P < 0.01
$F_{crt}$ = 3.02 with df = 2, 387 at P < 0.05

* = significant at 0.05
** = significant at 0.01

## Appendix A

### Table on social and economic challenges for self employment

| Item | | Type of Respondent | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|
| | | Trainees | | Employed TVET Graduates | | TVET Instructors | | Count | Col % |
| | | Count | Col % | Count | Col % | Count | Col % | | |
| Access to credit | High | 77 | 28.5% | 2 | 6.7% | 3 | 3.3% | 82 | 21.0% |
| | Medium | 96 | 35.6% | 8 | 26.7% | 48 | 53.3% | 152 | 39.0% |
| | Low | 75 | 27.8% | 10 | 33.3% | 36 | 40.0% | 121 | 31.0% |
| | Not available | 22 | 8.2% | 10 | 33.3% | 3 | 3.3% | 35 | 9.0% |
| Access to raw material | High | 34 | 12.6% | 1 | 3.3% | 9 | 10.0% | 44 | 11.3% |
| | Medium | 83 | 30.7% | 8 | 26.7% | 30 | 33.3% | 121 | 31.0% |
| | Low | 112 | 41.5% | 15 | 50.0% | 45 | 50.0% | 172 | 44.1% |
| | Not available | 41 | 15.2% | 6 | 20.0% | 6 | 6.7% | 53 | 13.6% |
| Access to market | High | 33 | 12.2% | 4 | 13.3% | 18 | 20.0% | 55 | 14.1% |
| | Medium | 128 | 47.4% | 9 | 30.0% | 36 | 40.0% | 173 | 44.4% |
| | Low | 83 | 30.7% | 14 | 46.7% | 27 | 30.0% | 124 | 31.8% |
| | Not available | 26 | 9.6% | 3 | 10.0% | 9 | 10.0% | 38 | 9.7% |
| Entrepreneurial skills of graduates/trainees | High | 83 | 30.7% | 6 | 20.0% | 6 | 6.7% | 95 | 24.4% |
| | Medium | 88 | 32.6% | 10 | 33.3% | 30 | 33.3% | 128 | 32.8% |
| | Low | 60 | 22.2% | 13 | 43.3% | 42 | 46.7% | 115 | 29.5% |
| | Not available | 39 | 14.4% | 1 | 3.3% | 12 | 13.3% | 52 | 13.3% |
| Graduates'/ trainees' Willingness | High | 112 | 41.5% | 10 | 33.3% | 6 | 6.7% | 128 | 32.8% |
| | Medium | 97 | 35.9% | 8 | 26.7% | 42 | 46.7% | 147 | 37.7% |
| | Low | 52 | 19.3% | 11 | 36.7% | 33 | 36.7% | 96 | 24.6% |
| | Not available | 9 | 3.3% | 1 | 3.3% | 9 | 10.0% | 19 | 4.9% |
| Parents' willingness | High | 116 | 43.0% | 9 | 30.0% | 3 | 3.3% | 128 | 32.8% |
| | Medium | 105 | 38.9% | 10 | 33.3% | 45 | 50.0% | 160 | 41.0% |
| | Low | 39 | 14.4% | 8 | 26.7% | 30 | 33.3% | 77 | 19.7% |
| | Not available | 10 | 3.7% | 3 | 10.0% | 12 | 13.3% | 25 | 6.4% |
| Other supports | High | 49 | 18.1% | | | 6 | 6.7% | 55 | 14.1% |
| | Medium | 84 | 31.1% | 12 | 40.0% | 33 | 36.7% | 129 | 33.1% |
| | Low | 83 | 30.7% | 15 | 50.0% | 33 | 36.7% | 131 | 33.6% |
| | Not available | 54 | 20.0% | 3 | 10.0% | 18 | 20.0% | 75 | 19.3% |

## Appendix B

**Addis Ababa University**

**School of Graduate Studies**

**College of Education**

# Department of Educational Planning and Management

A questionnaire to be filled by TVET Instructors of the sampled Colleges.

With this questionnaire, the researcher intends to assess the status of TVET and its external efficiency. Hence, knowing that your responses will be used only for research purpose, you are kindly requested to fill in the questionnaire. For genuinely doing so by devoting your time and exerting effort, the researcher, really remains very grateful to you; meanwhile, he wishes to bring in to your attention that the outcome of this study will highly depend upon your responsible, sincere and timely responses.

With best regards,

NOTE:

Please note that there is no need to write your name

Part I: Personal background

1. Name of the College_____
2. Region_____ Zone_____ Town/City_____
3. Sex M __ F __
4. Age 20 or less _____ 21-30 _____ 31-40 _____ 41 or above _____
5. Field of training_____

Part //: General questions

Instruction: Circle the choice you think correct. You May choose more than one.

1. Which of the following responsible body makes the selection of trainees to be placed at the College?
   a. the College it self b. the Zone educational Bureau
   c. the Addis Ababa educational Bureau d. other
2. What kind of basic criteria was used to determine the kind of trainees to be admitted?
   a. ESLCE/EGELCE result b. Entrance Examinations
   c. Standardized Aptitude Tests d. Previous vocational or technical experience
   e. Inclination to so trained f. other
3. To what extent did the trainees have the opportunity to be selected on the basis of her/his interest? a. sufficiently b. moderately c. No opportunity
4. If your response to item number 3 is "sufficiently' or "moderately", what proportion of trainees were placed on the basis of their interest?
   a. All b. nearly half of them c. Few d. Very few

5. How competent academically are most trainers at your Colleges
   a. Highly competent b. competent c. Incompetent d. highly incompetent
6. Below are some factors affecting the quality of training. How do you describe each of them

| Quality bench marks | Very good | Good | Satisfactory | Less satisfactory | Unsatisf actory |
|---|---|---|---|---|---|
| Physical facilities | | | | | |
| ▪ *No of offices* | | | | | |
| ▪ *Workshops* | | | | | |
| ▪ *Theory classes* | | | | | |
| ▪ *Equipment and tools* | | | | | |
| Curriculum/ Syllabus | | | | | |
| ▪ *Component of curriculum* | | | | | |
| ▪ *Evaluation methods* | | | | | |
| ▪ *Learning and Teaching Resources* | | | | | |
| Academic Staffing | | | | | |
| ▪ *Pedagogical skills* | | | | | |
| ▪ *Level of technical qualification* | | | | | |
| ▪ *Exposure to the industry* | | | | | |
| Assessment system | | | | | |
| ▪ *Type of exams Project, Written, Practical* | | | | | |
| ▪ *Frequency* | | | | | |
| ▪ *Reporting system* | | | | | |
| ▪ *Grading system* | | | | | |
| Quality of trainees | | | | | |
| ▪ *Aptitude* | | | | | |
| ▪ *Commitment* | | | | | |
| ▪ *Homogeneity* | | | | | |
| ▪ *Entry criteria* | | | | | |
| ▪ *Manner* | | | | | |
| Conducive Learning Environment | | | | | |
| ▪ *Capacity to offer examination* | | | | | |
| ▪ *Enrolment* | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| ▪ *Cleanliness* | | | | | |
| ▪ *Safety and security* | | | | | |
| ▪ *Discipline* | | | | | |
| ▪ *Overall administration* | | | | | |

7. How do you rate the number of trainers in relation to the number of trainees in your College? a Very adequate b. adequate c. In adequate d. very inadequate
8. How do you describe the qualification of the trainers at your College?
   a. Very high b. High c. Low d. very low
9. How do you rate the experience in the world of work of the trainers at your College?
   a. Very high b. High c. Low d. very low
10. How would you rate the experience and competence of the principal/dean of your College?

| Item | High | Medium | Low |
|---|---|---|---|
| *Managerial Competence* | | | |
| *Managerial Experience* | | | |

11. How do you rate the adequacy of budget allocated to your department or College?
    a. Very Adequate b. adequate c. Inadequate d. Very inadequate
12. To what extent are the trainings on different programs at your college match to the actual skill needed in the world of work?
    a. Highly relevant b. relevant c. irrelevant d. highly irrelevant
13. Are the training contents in the Colleges defined from the perspective of work process orientation? a. yes b. no
14. Are there patterns for collecting students' evaluative feedback on the teaching and is the feedback used in curriculum processes? a. yes b. no
15. On what grounds are training contents selected in TVET?

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16. In the following table are items that describe the various equipments and teaching material that should be available in TVET institution. Please rate, their degree of adequacy

| Item | Very Adequate | Adequate | Inadequate | Very inadequate | Not Available |
|---|---|---|---|---|---|
| *Power tools* | | | | | |
| *Hand tools* | | | | | |
| *Machine tools* | | | | | |
| *Measuring instruments* | | | | | |
| *Spare parts* | | | | | |
| *Accessories* | | | | | |
| *Teaching aids* | | | | | |
| *Consumable materials* | | | | | |
| *Raw materials* | | | | | |
| *Texts and Guide books* | | | | | |
| *References* | | | | | |
| *Manuals* | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| *Audiovisuals* | | | | | |
| *Computers* | | | | | |
| *Others* | | | | | |

17. How do you rate the various activities involved in the training process given hereunder

| Activities | Very good | Good | Satisfactory | Less satisfactory | Unsatisfactory |
|---|---|---|---|---|---|
| *Participation of trainees* | | | | | |
| *Even distribution of activities in the class* | | | | | |
| *appropriateness of the Language used* | | | | | |
| *Communication between trainers and the trainees* | | | | | |
| *Appropriateness of resources* | | | | | |
| *Time allotted to the content* | | | | | |

18. How do you rate the availability of apprenticeship offering governmental/private organizations in Addis Ababa administrative region?

| Organizations | Very Adequate | Adequate | Inadequate | Very Inadequate | Not Available |
|---|---|---|---|---|---|
| *Government Organizations* | | | | | |
| *Private Organizations* | | | | | |

19. How interested are these organizations to offer apprenticeship training?

| Organizations | Highly Satisfactory | Satisfactory | Undecided | Unsatisfactory | Highly Unsatisfactory |
|---|---|---|---|---|---|
| *Government* | | | | | |
| *Private* | | | | | |

20. If your answer to question number 19 is "unsatisfactory" or "highly unsatisfactory" please write down the reason

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21. How do you rate the resource capacity of these apprenticeship offering organizations?

| Organizations | Highly Satisfactory | Satisfactory | Undecided | Unsatisfactory | Highly Unsatisfactory |
|---|---|---|---|---|---|
| *Government*<br>*. Manpower*<br>*. Finance*<br>*. Material* | | | | | |
| *Private*<br>*. Manpower*<br>*. Finance*<br>*. Material* | | | | | |

22. Were there incentives given to organizations offering apprenticeship training so as to win their support in implementing apprenticeship training? a. Yes b. No

23. If, Yes, what was the incentive given?

a. Tax exemptions on imported Machines/equipment
b. Charge free provision of land for expansion
c. Charge free training for employees in the organizations
d. Recognizing their contributions on graduation days e. Other

24. Is there any organized system to regulate the partnership between TVET Colleges and apprenticeship offering organizations? a. Yes b. No
25. If your answer to question number 24 is "yes" to what extent does this regulatory body carryout its duty? A. High b. medium c. low
26. How do you describe the performance of your College with regard to the following duties and responsibilities?

| Item | High | Medium | Low |
|---|---|---|---|
| ▪ *Considering grades given for apprenticeship training as a component of criteria for certification* | | | |
| ▪ *Assigning personnel that follows up the apprenticeship training* | | | |
| ▪ *Preparing guidelines and schedules that help proper implementation of apprenticeship training* | | | |
| ▪ *Planning apprenticeship training with enterprises* | | | |
| ▪ *Training In-Plant trainer* | | | |
| ▪ *Sensitizing organizations offering apprenticeship training* | | | |
| ▪ *Working in collaboration with enterprises* | | | |

27. How do you rate the performance of organizations offering apprenticeship training with respect to the duties and responsibilities mentioned hereunder?

| Item | High | Medium | Low |
|---|---|---|---|
| ▪ *Accept trainees for Apprenticeship training* | | | |
| ▪ *Assigning the apprentice in the place appropriate to her/his field of training* | | | |
| ▪ *Assigning a capable in- plant trainer who would enhance the skills of the apprentices* | | | |
| ▪ *Acquaint the apprentice with work methods of the organization* | | | |
| ▪ *Provide apprentice with necessary inputs like it does to regular employee* | | | |
| ▪ *Evaluating and submitting performance of apprentices to TVET* Colleges | | | |
| ▪ *Working in collaboration with TVET institutions* | | | |

28. In your opinion which of the following highly hinder the smooth implementation of apprenticeship training? You may choose more than one answer.
    a. The lack or inapplicability of apprenticeship guideline
    b. Lack of partnership between organizations and TVET institutions/Colleges.
    c. Reluctance of organizations to cooperate
    d. Mismatch between the number of apprentices and resource capacity of enterprises
    e. Budget Problems
    f. TVET curriculum doesn't satisfy the needs of employers
    g. Apprentices lack of interest  f. Other
    _____
29. What proportion of graduates was employed in organizations where they have taken apprenticeship training?
    a. Majority  b. nearly half of them  c. Very few  d. No employment at all
30. How do you assess the marketability of fields of study in your department or institution?
    a. Highly satisfactory  b. Satisfactory  c. Unsatisfactory  d. Highly unsatisfactory
31. What proportion of graduates gets employment?
    a. Majority  b. nearly half of them  c. Very few  d. No employment at all

32. How do you rate the availability of employment opportunities?

| *Item* | *High* | *Medium* | *Low* | *No opportunity* |
|---|---|---|---|---|
| *Government Organizations* | | | | |
| *Private organizations* | | | | |
| *Self employment* | | | | |
| *foreign employment* | | | | |

33. How do you assess the investment potential and its substantial role in creating employment opportunities?

| *Item* | *High* | *Medium* | *Low* | No opportunity |
|---|---|---|---|---|
| *employment in Government Organizations* | | | | |
| *Employment in Private organizations* | | | | |
| *Self employment* | | | | |

34. How do You assess the availability of self employment opportunities with respect to :

| *Item* | *High* | *Medium* | *Low* | *Not available/ No access* |
|---|---|---|---|---|
| ▪ *Access to credit* | | | | |
| ▪ *Access to raw material* | | | | |
| ▪ *Access to market* | | | | |
| ▪ *entrepreneurial skills of graduates/trainees* | | | | |
| ▪ *Graduates'/trainees' Willingness* | | | | |
| ▪ *Parents' willingness* | | | | |
| ▪ *Other supports that facilitate self employment* | | | | |

35. Which of the following factors do you think are significant in determining the employability of TVET graduates/trainees? Rate their significance. You may choose more than one answer.

| Item | High | Medium | Low | No opportunity |
|---|---|---|---|---|
| ▪ *Strong relationship between, TVET intuitions and enterprises* | | | | |
| ▪ *Academic and administrative capacities of TVET institutions* | | | | |
| ▪ *Curriculum Relevance* | | | | |
| ▪ *Wage or self employment opportunities* | | | | |
| ▪ *Improving admission criteria to TVET institutions* | | | | |

36. Is there labour market information system in your College? a. Yes b. No
37. If yes, which of the following labour market monitoring and analysis techniques are frequently used by your institution?
    a. Occupational analysis b. Vacancy Study c. Tracer Study
    d. Training Need Assessment e. establishing strong relationship with enterprises
    f. Other _____
38. If your response to item number 36 is "No" why?
    a. No unit for labour market monitoring b. Lack of trained man power
    c. Financial! budget problem
    d. The need assessment is carried out by the Region Bureau
    e. No experience of carrying LMM
    f. Other _____

39. What major problem do you observe at your College?
    i. Academic problems:

    _____
    _____

    _____
    _____

    ii. Managerial problems:

    _____
    _____

    _____
    _____

    iii. Other problems:

    _____
    _____

    _____
    _____

40. What do you recommend as a solution to :

i. Academic problems?

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ii. Managerial problems?

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iii. Other problems?

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**Appendix B**

**Addis Ababa University**

**School of Graduate Studies**

**College of Education**

## Department of Educational Planning and Management

A questionnaire to be filled by employed TVET graduates of the sampled Enterprises.

With this questionnaire, the researcher intends to assess the status of TVET and its external efficiency. Hence, knowing that your responses will be used only for research purpose, you are kindly requested to fill in the questionnaire. For genuinely doing so by devoting your time and exerting effort, the researcher, really remains very grateful to you; meanwhile, he wishes to bring in to your attention that the outcome of this study will highly depend upon your responsible, sincere and timely responses.

With best regards,

NOTE:

Please note that there is no need to write your name

Part I: Personal Background

1. Name of the College_____
2. Region_____ Zone_____ Town/City_____
3. Sex M __ F __
4. Age 20 or less _____ 21-30 _____ 31-40 _____ 41 or above _____
5. Field of training_____

Part //: General questions

Instruction: Circle the choice you think correct. You May choose more than one.

1. Which of the following responsible body makes the selection of trainees to be placed at the College?
   a. the College it self b. the Zone educational Bureau
   c. the Addis Ababa educational Bureau d. other
2. What kind of basic criteria was used to determine the kind of trainees to be admitted?
   a. ESLCE/EGELCE result b. Entrance Examinations
   c. Standardized Aptitude Tests d. Previous vocational or technical experience
   e. Inclination to so trained f. other
3. To what extent did trainees have the opportunity to be selected on the basis of one's interest? a. sufficiently b. moderately c. No opportunity
4. If your response to item number 4 is "sufficiently' or "moderately", what proportion of trainees were placed on the basis of their interest?
   a. All b. nearly half of them c. Few d. Very few
5. How interested were you in attending the training program?
   a. Very high b. High c. Low d. very low

6. How do you rate the number of trainers in relation to the number of trainees in your College? a Very adequate b. adequate c. In adequate d. very inadequate
7. How do you rate the qualification of the trainers at your College?
   a. Very high b. High c. Low d. very low
8. How do you rate the experience in the world of work of the trainers at your College?
   a. Very high b. High c. Low d. very low
9. To what extent are the programs that you study match to the actual skill needed in the world of work?
   a. Highly relevant b. relevant c. irrelevant d. highly irrelevant
10. Are the training contents in the Colleges defined from the perspective of work process orientation? a. yes b. no
11. In the following table are items that describe the various equipments and teaching material that should be available in TVET institution. Please rate, their degree of adequacy

| Item | Very Adequate | Adequate | Inadequate | Very inadequate | Not Available |
|---|---|---|---|---|---|
| *Power tools* | | | | | |
| *Hand tools* | | | | | |
| *Machine tools* | | | | | |
| *Measuring instruments* | | | | | |
| *Spare parts* | | | | | |
| *Accessories* | | | | | |
| *Teaching aids* | | | | | |
| *Consumable materials* | | | | | |
| *Raw materials* | | | | | |
| *Texts and Guide books* | | | | | |
| *References* | | | | | |
| *Manuals* | | | | | |
| *Audiovisuals* | | | | | |
| *Computers* | | | | | |
| *Others* | | | | | |

12. How do you rate the various activities involved in the training process given hereunder

| Activities | Very good | Good | Satisfactory | Less satisfactory | Unsatisfactory |
|---|---|---|---|---|---|
| *Participation of trainees* | | | | | |
| *Even distribution of activities in the class* | | | | | |
| *appropriateness of the Language used* | | | | | |
| *Communication between trainers and the trainees* | | | | | |
| *Appropriateness of resources* | | | | | |
| *Time allotted to the content* | | | | | |
| | | | | | |

13. How do you rate the availability of apprenticeship offering governmental/private organizations in Addis Ababa administrative region?

| Organizations | Very Adequate | Adequate | Inadequate | Very Inadequate | Not Available |
|---|---|---|---|---|---|
| *Government Organizations* | | | | | |
| *Private Organizations* | | | | | |

14. How interested are these organizations to offer apprenticeship training?

| Organizations | Highly Satisfactory | Satisfactory | Undecided | Unsatisfactory | Highly Unsatisfactory |
|---|---|---|---|---|---|
| *Government* | | | | | |
| *Private* | | | | | |

!5. If your answer to question number 12 is "unsatisfactory" or "highly unsatisfactory" please write down the reason

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16. How do you rate the resource capacity of these apprenticeship offering organizations?

| Organizations | Highly Satisfactory | Satisfactory | Undecided | Unsatisfactory | Highly Unsatisfactory |
|---|---|---|---|---|---|
| *Government*<br>*. Manpower*<br>*. Finance*<br>*. Material* | | | | | |
| *Private*<br>*. Manpower*<br>*. Finance*<br>*. Material* | | | | | |

17. Is there any organized system to regulate the partnership between TVET Colleges and apprenticeship offering organizations? a. Yes b. No

18. If your answer to question number 15 is "yes" to what extent does this regulatory body carryout its duty? A. High b. medium c. low

19. How do you describe the performance of TVET Colleges with regard to the following duties and responsibilities?

| Item | High | Medium | Low |
|---|---|---|---|
| ▪ *Considering grades given for apprenticeship training as a component of criteria for certification* | | | |
| ▪ *Assigning personnel that follows up the apprenticeship training* | | | |
| ▪ *Preparing guidelines and schedules that help proper implementation of apprenticeship training* | | | |
| ▪ *Planning apprenticeship training with* | | | |

| | | | |
|---|---|---|---|
| *enterprises* | | | |
| ▪ *Training In-Plant trainer* | | | |
| ▪ *Sensitizing organizations offering apprenticeship training* | | | |
| ▪ *Working in collaboration with enterprises* | | | |

20. How do you rate the performance of organizations offering apprenticeship training with respect to the duties and responsibilities mentioned hereunder?

| Item | High | Medium | Low |
|---|---|---|---|
| ▪ *Accept trainees for Apprenticeship training* | | | |
| ▪ *Assigning the apprentice in the place appropriate to her/his field of training* | | | |
| ▪ *Assigning a capable in- plant trainer who would enhance the skills of the apprentices* | | | |
| ▪ *To acquaint the apprentice with work methods of the organization* | | | |
| ▪ *To provide apprentice with necessary inputs like it does to regular employee* | | | |
| ▪ *Evaluating and submitting performance of apprentices to TVET institutions* | | | |
| ▪ *Working in collaboration with TVET institutions* | | | |

21. In your opinion which of the following highly hinder the smooth implementation of apprenticeship training? You may choose more than one answer.
    a. The lack or inapplicability of apprenticeship guideline
    b. Lack of partnership between organizations and TVET institutions/Colleges.
    c. Reluctance of organizations to cooperate
    d. Mismatch between the number of apprentices and resource capacity of enterprises
    e. Budget Problems
    f. TVET curriculum doesn't satisfy the need of employers
    g. Apprentices lack of interest
    h. Other
    _____
22. What proportion of graduates was employed in organizations where they have taken apprenticeship training?
    a. Majority b. nearly half of them c. Very few d. No employment at all
23. How do you assess the marketability of fields of study in your department or institution?
    a. Highly satisfactory b. Satisfactory c. Unsatisfactory d. Highly unsatisfactory

24. What proportion of graduates gets employment?
a. Majority b. nearly half of them c. Very few d. No employment at all

25. How do you rate the availability of employment opportunities?

| *Item* | *High* | *Medium* | *Low* | *No opportunity* |
|---|---|---|---|---|
| *Government Organizations* | | | | |
| *Private organizations* | | | | |
| *Self employment* | | | | |
| *foreign employment* | | | | |

26. How do you assess the investment potential and its substantial role in creating employment opportunities?

| *Item* | *High* | *Medium* | *Low* | No opportunity |
|---|---|---|---|---|
| *employment in Government Organizations* | | | | |
| *Employment in Private organizations* | | | | |
| *Self employment* | | | | |

27. How do You assess the availability of self employment opportunities with respect to :

| *Item* | *High* | *Medium* | *Low* | *Not available/ No access* |
|---|---|---|---|---|
| ▪ *Access to credit* | | | | |
| ▪ *Access to raw material* | | | | |
| ▪ *Access to market* | | | | |
| ▪ *entrepreneurial skills of graduates/trainees* | | | | |
| ▪ *Graduates'/trainees' Willingness* | | | | |
| ▪ *Parents' willingness* | | | | |
| ▪ *Other supports that facilitate self employment* | | | | |

28. Which of the following factors do you think are significant in determining the employability of TVET graduates/trainees? Rate their significance. You may choose more than one answer.

| Item | High | Medium | Low | No opportunity |
|---|---|---|---|---|
| ▪ *Strong relationship between, TVET intuitions and enterprises* | | | | |
| ▪ *Academic and administrative capacities of TVET institutions* | | | | |
| ▪ *Curriculum Relevance* | | | | |
| ▪ *Wage or self employment opportunities* | | | | |
| ▪ *Improving admission criteria to TVET institutions* | | | | |

39. What major problem do you observe at your College?
i. Academic problems:

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ii. Managerial problems:

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iii. Other problems:

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40. What do you recommend as a solution to :

i. Academic problems?

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ii. Managerial problems?

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iii. Other problems?

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**Appendix B**

**Addis Ababa University**

**School of Graduate Studies**

**College of Education**

## Department of Educational Planning and Management

A questionnaire to be filled by trainees of the sampled TVET Colleges.

With this questionnaire, the researcher intends to assess the status of TVET and its external efficiency. Hence, knowing that your responses will be used only for research purpose, you are kindly requested to fill in the questionnaire. For genuinely doing so by devoting your time and exerting effort, the researcher, really remains very grateful to you; meanwhile, he wishes to bring in to your attention that the outcome of this study will highly depend upon your responsible, sincere and timely responses.

With best regards,

NOTE:

Please note that there is no need to write your name

Part I: Personal Background

1. Name of the College_____
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4. Age 20 or less _____ 21-30 _____ 31-40 _____ 41 or above _____
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Part //: General questions

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   a. ESLCE/EGELCE result b. Entrance Examinations
   c. Standardized Aptitude Tests d. Previous vocational or technical experience
   e. Inclination to so trained f. other
3. To what extent do trainees get the opportunity to be selected on the basis of one's interest? a. sufficiently b. moderately c. No opportunity
4. If your response to item number 3 is "sufficiently' or "moderately", what proportion of trainees were placed on the basis of their interest?
   a. All b. nearly half of them c. Few d. Very few
5. How interested are you to attend the training program?
   a. Very high b. High c. Low d. very low

6. How do you rate the number of trainers in relation to the number of trainees in your College? a Very adequate b. adequate c. In adequate d. very inadequate
7. How do you rate the qualification of the trainers at your College?
   a. Very high b. High c. Low d. very low
8. How do you rate the experience of the trainers in the industrial sector at your College?
   a. Very high b. High c. Low d. very low
9. To what extent does the training and education conducted to capture your attention and interest. a. Very high b. High c. Low d. very low
10. Are different methods for instruction and training used to promote the trainers' capability to use their competences in different contexts? a. yes b. no
11. To what extent are the programs that you are studying match to the actual skill needed in the world of work?
    a. Highly relevant b. relevant c. irrelevant d. highly irrelevant
12. In the following table are items that describe the various equipments and teaching material that should be available in TVET College. Please rate, their degree of adequacy

| Item | Very Adequate | Adequate | Inadequate | Very inadequate | Not Available |
|---|---|---|---|---|---|
| *Power tools* | | | | | |
| *Hand tools* | | | | | |
| *Machine tools* | | | | | |
| *Measuring instruments* | | | | | |
| *Spare parts* | | | | | |
| *Accessories* | | | | | |
| *Teaching aids* | | | | | |
| *Consumable materials* | | | | | |
| *Raw materials* | | | | | |
| *Texts and Guide books* | | | | | |
| *References* | | | | | |
| *Manuals* | | | | | |
| *Audiovisuals* | | | | | |
| *Computers* | | | | | |
| *Others* | | | | | |

13. How do you rate the various activities in the training process given hereunder

| Activities | Very good | Good | Satisfactory | Less satisfactory | Unsatisfactory |
|---|---|---|---|---|---|
| *Participation of trainees* | | | | | |
| *Even distribution of activities in the class* | | | | | |
| *appropriateness of the Language used* | | | | | |
| *Communication between trainers and the trainees* | | | | | |
| *Appropriateness of resources* | | | | | |
| *Reference materials* | | | | | |
| *Time allotted to the content* | | | | | |

14. How do you rate the availability of apprenticeship offering governmental/private organizations in Addis Ababa administrative region?

| Organizations | Very Adequate | Adequate | Inadequate | Very Inadequate | Not Available |
|---|---|---|---|---|---|
| *Government Organizations* | | | | | |
| *Private Organizations* | | | | | |

15. How do you assess the marketability of fields of study in your department or institution?

a. Highly satisfactory b. Satisfactory c. Unsatisfactory d. Highly unsatisfactory

16. How do you rate the availability of employment opportunities

| *Item* | *High* | *Medium* | *Low* | *No opportunity* |
|---|---|---|---|---|
| *Government Organizations* | | | | |
| *Private organizations* | | | | |
| *Self employment* | | | | |
| | | | | |

17. How do you assess the investment potential and its substantial role in creating employment opportunities?

| *Item* | *High* | *Medium* | *Low* | No opportunity |
|---|---|---|---|---|
| *employment in Government Organizations* | | | | |
| *Employment in Private organizations* | | | | |
| *Self employment* | | | | |

18. How do You assess the availability of self employment opportunities with respect to :

| *Item* | *High* | *Medium* | *Low* | *Not available/ No access* |
|---|---|---|---|---|
| ▪ *Access to credit* | | | | |
| ▪ *Access to raw material* | | | | |
| ▪ *Access to market* | | | | |
| ▪ *entrepreneurial skills of graduates/trainees* | | | | |
| ▪ *Graduates'/trainees' Willingness* | | | | |
| ▪ *Parents' willingness* | | | | |
| ▪ *Other supports that facilitate self employment* | | | | |

19. Which of the following factors do you think are significant in determining the employability of TVET graduates/trainees? Rate their significance. You may choose more than one answer.

| Item | High | Medium | Low | No opportunity |
|---|---|---|---|---|
| ▪ *Strong relationship between, TVET intuitions and enterprises* | | | | |
| ▪ *Academic and administrative capacities of TVET institutions* | | | | |
| ▪ *Curriculum Relevance* | | | | |
| ▪ *Wage or self employment opportunities* | | | | |
| ▪ *Improving admission criteria to TVET institutions* | | | | |

20. What major problem do you observe at your College?
    i. Academic problems:

    _____

    _____

    ii. Managerial problems:

    _____

    _____

    iii. Other problems:

    _____

    _____

21. What do you recommend as a solution to :
    i. Academic problems?

    _____

    _____

    ii. Managerial problems?

    _____

    _____

    iii. Other problems?

    _____

    _____

## Declaration

I, the undersigned, declare that this thesis is my work and that all source of materials used have been duly acknowledged.

Name.....Hailelesul Gairma

Signature.....

Place.....Addis Ababa University

Date of Submission.....14 July 2009

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

Name: Wanna Leka (Ph.D)

Signature.....

Date of approval.....14 July 2009.....

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