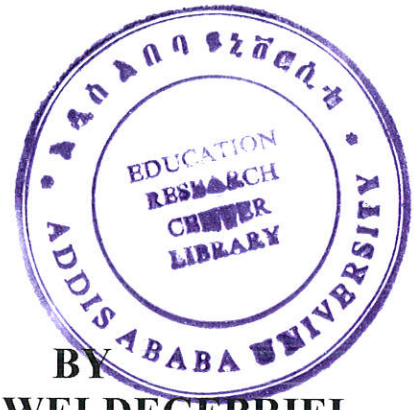
The Status of Technical and Vocational Education and Training Institutions and their Contribution to Employment Opportunities: The Case of Addis Ababa



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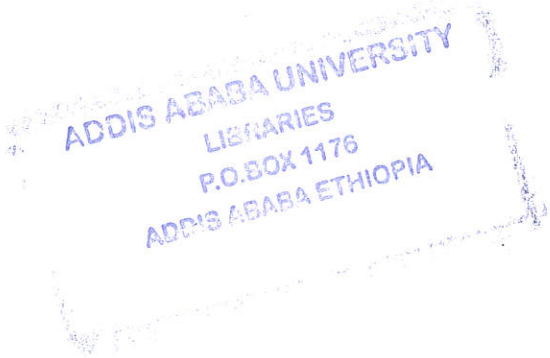

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The Status of Technical and Vocational Education and Training Institutions and their Contribution to Employment Opportunities: The Case of Addis Ababa

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By
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This Thesis has been submitted for examination with my approval as a university advisor

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List of Abbreviations and Acronyms

AACG- Addis Ababa City Government

AAU-Addis Ababa University

CGAAEB- City Government of Addis Ababa Education Bureau

CGAALSAB-City Government of Addis Ababa Labor and Social Affaires Bureau

CRDA-Christian Relief and Development Association

CSA- Central Statistics Authority

EGSEC- Ethiopian General Secondary Education Certificate

ESAURP- Eastern and Southern African Universities Research Programme

FDRE- Federal Democratic Republic of Ethiopia

IER- Institutes of Educational Research

ILO- International Labor Organization

LMIS- Labor and Market Information System

MoE- Ministry of Education

MoPED- Ministry of Planning and Economic Development

MSE- Micro and Small Enterprises

NGOs- Non Government Organizations

SDC-Skill Development Centers

TGE- Transitional Government of Ethiopia

TVE- Technical and Vocational Education

TVET- Technical and Vocational Education and Training

UK- United Kingdom

UNDP- United Nations Development Program

UNESCO-United Nations, Education, Scientific and Cultural Organizations

UNICEF- United Nations International Children's Emergency Fund

US- United States

USSR- Union of Soviet Socialist Republic

VET- Vocational Education and Training

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Abstract

The expansion of TVET programs that has been chosen as an instrument for employment expansion and poverty reduction was relatively a recent phenomenon in the country. But, this would be realized if the expansion of these TVET institutions is balanced with the provision of resources. The principal objective of the study was to assess the status of TVET institutions and their contribution to employment opportunities. To this end, the study was employed a descriptive survey method. The primary and secondary data were collected from different sources using questionnaires, interview, observation and document analysis. Accordingly, from four government TVET institutions found in Addis Ababa 236 trainees, 52 trainers, 51 graduates, 15 employers and 3 officials were involved in the study. The collected data were analyzed and presented descriptively using tables and texts. Moreover, percentages, weighted mean, rank order, chi-square and t-test were used in analyzing the data. The areas of concern believed to be more relevant to assess the status of TVET institutions and their contribution to employment were: factors that affects the status of TVET, application of LMIS, trade demanded in the labor market, policy options recommended to address the problem and employability of graduates. Findings from the data analysis indicated that the guidance and counseling service of the institutions under study was very weak and trainees joined the institutions with out adequate information. Besides, a considerable number of trainees did not like the fields of study they are pursuing. The lack of interest on the part of the trainees was attributed to lack of interest from the beginning, the training was not their first choice and they joined the institutions due to lack of other options. The material, human and financial resources of the institutions are also not adequate to run the training programs. Due to shortage of practical sessions and insufficient of the skills and knowledge they acquired in the training, trainees are not confidence to start their own business or employed in other organizations. Hence, the present status of TVET institutions in Addis Ababa is not satisfactory to produce competent man power to the labor market as desired. On the basis of the findings, it was recommended that it is better to promote the public at large and the trainees in particular as far as the training objectives are concerned. Moreover, the optimum balance between theory and practice need to be maintained, developing close relationship with the stakeholders and it is advisable to have a serious follow up for the apprenticeship trainings and the graduates as well.

CHAPTER ONE

1. The Study and its Approach

This chapter contains the background of the study, statement of the problem, objectives of the study, significance of the study, research methodology, delimitation, limitation and definition of terms used in the study.

1.1. Background of the Study

It is generally agreed, and rightly so, that the society's future fate or economic development to a large extent depends on the success of schools in effectively carrying out their objectives. The education system as an organization produces educated manpower for other sectors. Atchoarena and Delluc (2002:15) state that, schools everywhere are being asked to prepare young people for the job of tomorrow , and Technical and Vocational Education and Training (TVET), more often than not, plays a significant role in this process. For many it is a passport to employment and the possibility of social advancement. TVET is truly bridge between man and his work.

History shown that, TVET was born of the needs of man's social production life; it was man's earliest form of education (Weizhi, 1991: 14). However, the contribution of TVET for the economic development of a nation was not questioned, it did not got attention until the late 20 century. Developed and developing countries are more focusing in the expansion of general education. For instance, in Sub Saharan Africa, because of expectations to develop modern sector , which was supposed to increase the need for skilled labor, TVET get attention during 1970s (Atchoarena and Esquieu, 2002: 43). Moreover, Kazanas (1973: 28) states that during the last decades the social, economic and technological changes in the US society have had unprecedented effects on the TVET.

In the context of today's globalization, the role of TVET becomes crucial to achieve a country's development goals. Most countries have stated in one or another way the general purpose of TVET in the following way: "It is to provide alongside general education, knowledge and skills in technical and vocational fields, in order to meet national manpower requirement in agriculture, business, industry and other technical services" (UNESCO, 1996: 16).

To achieve the stated purpose, the TVET institutions shall be better equipped with the required resource. But many African countries do not afford the investment required by the TVET institutions. Among the challenges facing the TVET institutions are financial, material and human resources. It is true that, TVET institutions require huge financial resources than the general education. Furthermore, some scholars argue that, vocational training program provided within formal education could not ever become an effective method of accelerating economic development (Foster in Blaug, 1987: 21). Foster further denied that general education and vocational training are ever substitute for each other, the former being on contrary necessary foundation for the later, and the later being generally more efficiently provided on the job than inside the school. But, no matter, how they are expensive and what the economic status of the country , various studies carried by the World Bank and educational researchers have shown that investment in TVET is worth while to address the desired purpose (Kerrey, 1996).

Ethiopia is among the poorest countries in the world. The total population is estimated about 73,044,000 (FDRE, 2004). The Ethiopian education has a long history that dates back to the introduction of Christianity it self in 330 A.D. However, modern education was started at the beginning of the 20th century. It has gone through many ups and downs to change from traditional education to modern education.

Despite, the introduction of modern education and the interest of the government to develop qualified civil servants, the subject that were student taught more of academic. This continued until the mid 20th century. In 1974 when '*Dergue*' came to power there were attempts that made reforms on the education system of the country. Among other things, the curriculum was revised with the central objectives of "all rounded development" of the young (Ayalew, 2000). Three broad goals were included in the curriculum, these are: "education for production", "education for consciousness" and "education for socialist consciousness". The intended purpose of education for production was to relate education to productive work at all level. Following this more technical and vocational schools were established to this effect. Moreover, the Ten Year Perspective Plan (1984-1994) was prepared, which envisage eight years of universal polytechnic education and a curriculum that would enhance integration in to the world of work. But, except for the significant changes achieved in the numerical targets, both

remained a futile exercise and practically the education systems were dominated by theory.

Except for the small achievements achieved in recent years, employment creation in the modern and service sector has been affected by the slow pace of private sector development. Besides, the economic and social sector which was highly dominated by government can not absorb all graduates from secondary and tertiary education. Hence, unemployment becomes one of the major social problems in the country. The National TVET strategy (MoE, 2006: 6) clearly stipulate that, major barriers to economic and social development is the fact that, the Ethiopian work force of around 35 million people is characterized by low skill levels and average educational attainment. Only 10 per cent of the urban population has post secondary education.

In spite of the long history of education and ancient civilization of the country formal TVET is a recent phenomenon (Teklehaimanot, 2002: 6). The first technical vocational school was established 43 years later after the introduction of modern education in 1908. It was followed by few technical and agriculture colleges. Some vocational courses in the form of subjects like Handcraft, Drawing, Home economics, Agriculture and others were given in the school (primary and secondary) integrated with the general education.

Following the introduction of Education and Training Policy, the TVET in Ethiopia is currently under going a major reform process and gets attention from the government. And TVET becomes as part of the major implication of the sector strategy. The strategy clearly stipulates that, an expansion of primary and vocational education so as to be more realistic to the objective situation of the country, the demand of the economy and to attain some degree of equity and sustainability. Moreover, the policy incorporates as one of its specific objectives "to satisfy the country's need for skilled man power by providing training in various skills and at various levels" (TGE, 1994:9).

In response to the Education and Training Policy, the expansion of TVET colleges is getting attention nowadays. TVET is being offered at secondary and tertiary level. Currently there are 108 government and 91 non government TVET institutions in the country enrolling 106,336 trainee in all programs (MoE, 2005: 105). However, global and our country's experience shows that the mere expansion of TVET schools does not solve the problem of unemployment. In line with expansion of TVET schools, it is better to equip them with basic facilities, personnel and

finance to enhance their quality.

Addis Ababa, the capital city of Ethiopia, accounted for 26 per cent of TVET institutions in the country (MoE, 2005). There are 10 government and 68 non government TVET institutions in the city. Besides, most of large and medium enterprises in the manufacturing sectors are concentrated in Addis Ababa. In light of the above facts, this study, therefore, focuses on assessing the present status of government TVET colleges/institutions in the city with particular emphasis on their contribution to employment opportunity.

1.2. Statement of the Problem

Availing and effectively utilizing of the resources in the institutions is a necessary condition for the expansion of TVET programs, which has been aimed at expansion of employment. Over the last ten years, Ethiopia has experienced a rapidly increasing demand for the education at all levels and a decline in the provision of resources to support the education system. TVET institutions being one segment of the education system are also facing similar challenges, if not worse than others.

After 1974, to address one of the three broad educational goals, education for production more technical and vocational schools were established in the country. But the expansion of these schools could not realize the intended purpose. In response to the Education and Training Policy issued in 1994, twenty-five Skill Development Centers (SDC) were opened in the country in 1997(Yekunoamlk, 2002). They were established with out a thorough needs assessment to train secondary school leavers in the areas of Auto machine, Building techniques, Building construction, Electricity, Electronics, Metal works, Surveying (Drafting) and Woodworks (Yekunoamlak, 2002: 226). Besides, they did not provide the desired middle level skilled man power to the country.

In 2001, a TVET program was incorporated in to the secondary school system of all regions in the country. Cognizant of these problems the government gave attention and formulated a strategy that helps in the implementation of an expanded, diversified and integrated TVET programs starting from 2001. From that onwards the TVET institutions are using new curriculums and modalities of training.

The TVET programs are expected to enable the trainees acquire a working skills, knowledge and attitude, which will enable them to secure employment or create their own jobs. The TVET are basically aiming at preparing the young for the world of work. However, in Ethiopia according to MoE (2006), a systematic integration of TVET with the world of work has not been yet achieved. Most curricula used in the formal TVET were developed without sufficient involvement of employers. Besides, in Ethiopia, as in many African countries, TVET suffers from a relatively poor public image and many of TVET graduates remain unemployed even in those occupational fields that show a high demand for skilled manpower. A comparative study indicated that, employment rate of vocational graduates in the non government training centers were found to be better than that of government vocational schools (Yekunoamlak, 2000: 71).

Even in the other parts of the world, studies indicate that, TVET systems are every where facing challenges to prepare a sufficient number of people with the right skill to meet labor market demand (Atchoarena and Delluc, 2002:15). Yekunoamlak (2000:72) also finds that, the major problems in the implementation of government vocational training programs in Ethiopia were mainly, lack of facilities and absence of occupational information. Moreover, a critical issue for TVET planners and managers is how to train individual for future job on the basis of information concerning past and present labor market.

The success of such types of programs depends largely on an effective management of the colleges, provision of the required resources and involving the partners in the planning, implementation and evaluation process of the programs, but not on mere expansion of the training institutions/colleges. Hence, due to these and other unmentioned problems the TVET institutions/colleges in the country did not progress as they were intended. In order to address the employment issue and to bring development, strengthening the status of TVET institutions/colleges play a significant role.

Therefore, it is important and rightly so, to examine the present status of TVET institutions/colleges in Addis Ababa in relation to their contribution to employment opportunity. In the course of the study, to achieve the intended purpose attempts were made to seek reliable answer for the following basic research questions.

1. What are the basic social, academic and economic factors that affect the status of TVET institutions/colleges and graduates?

2. In view of competitive labor market, which fields of study have more chance of employment?
3. To what extent the training programs planned based on the demand of the labor market?
4. To what extent the TVET graduates are employed?
5. What policy options should be recommended in order to address the existing problems in the TVET programs of Addis Ababa City Government?

1.3. Objective of the Study

The general objective of the study was, to assess the present status of government TVET institutions/colleges in Addis Ababa and their contribution to employment opportunity. Based on this general purpose the specific objectives of the study can be described as follows.

1. To identify the basic problems that hinder the effective operation of the TVET colleges/institutions.
2. To assess factors that affects the employability of TVET graduates.
3. To identify which field of study is currently prioritized by the labor market.

1.4. Significance of the Study

Since the objective of the study was to assess the status of the TVET institutions/colleges and their contribution to employment opportunity, the output of the study, therefore, has the following academic and policy issue significance.

1. The study may help to provide an up-to-date picture on the present status of TVET institutions/ colleges in the city. Hence, it may be used as a source of information to policy makers and scholars alike.

2. The study tries to indicate which fields of studies are prioritized by the trainee and labor market. Hence, this in turn will help for educational planners to take into account these fields while they are planning trainee enrollment and allocating resources.

3. It is assumed that the study may provide some alternative or feasible recommendations that may help in linking TVET colleges and employment opportunity. These will be used by the colleges themselves and policy makers.

1.5. Delimitation of the Study

Currently TVET programs are launched through out the country and provided by government and non-government partners. However, the study was limited to government TVET institutions/colleges found in Addis Ababa. This was mainly because Addis Ababa consists of 26 per cent of TVET institutions in the country. Besides, since TVET is a relatively recent phenomenon in private colleges, the study focused in government TVET institutions/colleges.

Moreover, TVET programs are given in different forms (formal and non formal) and levels (10+1, 10+2, 10+3). Hence, the study was also limited to formal and 10+2 regular program because they have stayed more in the institutions and has more exposure to the training programs. Out of the five major fields of studies provided in the institutions the study was limited only to three fields of study. These are construction, industrial and textile technology. This was mainly due to the fact that these fields of study share common feature, they required more machines and equipment which was one aspects of the study.

1.6. Research Methodology and Procedure of the Study

The study was aimed at assessing the status of TVET institutions/colleges in Addis Ababa in relation to their employment opportunities, descriptive method of research was employed. This method helps in picturing the existing situation of the issue under study. In addition, it allows the collection of data through data collection instruments and conducting document analysis. Under this method, the descriptive survey was used and the following procedures were employed.

1.6.1. Source of the Data

The study covered four 10+2 government TVET institutions/colleges. The main sources of data for the study were both primary and secondary sources. These include:

- Relevant books, journals, internet and other materials which contain information related to the study.
- Documents, reports and records on TVET graduates found at the TVET colleges/institutions, City Government of Addis Ababa Education Bureau and City Government of Addis Ababa Social and Labor Affaires Bureau.
- All sample TVET institutions deans/principals, all vocational counselor, sample trainer, trainees and fifty four employed and non employed graduates.
- Fifteen government and non government employers in the city which are involved in providing apprenticeship program for the trainee.
- Three officials found at Addis Ababa Education Bureau.

1.6.2. Sample and Sampling Techniques

In order to get sufficient data and to ensure reasonable representativeness of the institutions/colleges, out of 10 Government TVET institutions/colleges found in the city 4 (40 per cent) were selected as a sample. The study employed purposive, availability, stratified and simple random sampling techniques. The purposive sampling was used to select the colleges, employers and the graduates' in order to get pertinent information for the study. Accordingly, Tegbare-ed TVET college and Nefas-silk TVET college were selected for the simple reason that they are colleges and they provide diversified programs. To get a clear picture of the institutions in the city the middle level institutions of Higher 7 and Higher 12 were included in the sample. These four colleges/institutions accounted for 40 per cent of the total government 10+2 trainees and 30 per cent of trainers. Moreover, they represent four different sub cities.

Besides, 15 apprenticeship offering organizations or companies, 3 officials, and 54 graduates were selected through purposive sampling. Availability sampling technique was used in the selection of deans/principals and vocational counselors.

The simple random sampling technique, for it gives equal chance of being included in to the sample, was employed to select the trainees and trainers. Moreover, stratified sampling was used to select the trainees. Sex and occupations was the base for stratification of the various departments' and trainees, to ascertain the participation of trainees from various fields of study and to include female. Accordingly, out of 1105 trainees, 276 (25 per cent) were randomly

selected as a sample. And out of 160 trainers, 56 (35 per cent) were included in the sample.

The number of respondents according their occupations is indicated at the back in Annex 7. The following Table depicts the population and sample of respondents included in the study.

Table I

Population and sample of the study

No	Institutions /colleges	Sub-city	Respondents	Population	Sample		
					T	M	F
1	Tegbare-ed College	Lideta	Trainees	584	146	113	33
			Trainers	64	22	18	4
2	Nefas- Silk College	Nefas-Silk Lafto	Trainees	229	57	48	9
			Trainers	41	14	12	2
3	Higher 7 Middle level TVET Institution	Addis-Ketema	Trainees	144	36	30	6
			Trainers	28	10	8	2
4	Higher12 Middle level TVET Institution	Yeka	Trainees	148	37	31	6
			Trainers	27	10	9	1
			Trainees	**1105**	**276**	**222**	**54**
		Total	**Trainers**	**160**	**56**	**47**	**9**

Source: Computed from CGAAEB reports.

N.B. *Here trainers refer to the teachers, deans/principals and counselors through out similar tables unless expressed explicitly.*

1.6.3. Data Collection Instrument

Basically there were two types of data, primary and secondary. The subjects of the study were trainers, trainees, deans/principals, vocational counselors, graduates, employers and officials. The primary data was collected through questionnaire and interview to obtain first hand information. Questionnaire was preferred since it is best suitable method to collect information from a large sample size population with in a given time frame. Two types of questionnaires (open and close ended) were prepared for the trainee, the trainers and graduates. The

questionnaire for the trainees and graduates were prepared in Amharic, in order to get comprehensive idea and opinion.

In order to acquire additional primary information, interview was held with educational officials found in Addis Ababa Education Bureau and employers (government and non government). Besides, since the very purpose of the study is to assess the TVET institutions/ colleges status, observation check lists were used to gather information pertaining to workshops, libraries, classrooms, machines and the over all infrastructure of the institutions.

1.6.4. Procedure of Data Collection

Before the final questionnaires were distributed to the respondent, the instrument was pilot tested in one college which is not included in the sample for 8 teachers and 30 trainees. This helped to get valuable suggestions for improvement and to test the validity and reliability of the instruments. Moreover, the questions were given for comment to advisor of the researcher, officers pertinent in the field at Education Bureau and colleagues. Accordingly, some questions were discarded and revised based on the information obtained from the pilot test.

Finally, the improved version of the questionnaires were distributed to sample trainers, graduates and trainees and collected by the researcher. With regard to interview, it was conducted with three officials and fifteen employers on a one-to-one basis by the researcher. To maximize the chance of rate of return in advance preparations were made with the respondents. This includes setting convenient time and clarifying the purpose. And a close follow up was also made to increase the chance of rate of return.

1.6.5. Method of Data Analysis

Depending on the nature of the basic research questions and data collected through the aforementioned tools, the data were tallied and organized properly. Based on the number of subjects involved and the type of measurement used to measure the dependent variables, the following statistical tools were used in the study.

Percentage was used to analyses various characteristics of the sample population, such as sex, age, educational background and work experience of the trainers, trainees, and graduates and

different questions. The t-test was also used to see the difference among the responses of trainers and trainees on the factors that affect the status of TVET institutions. Moreover, the Spearman's Rank Order Correlation Coefficient was computed to examine the agreements on the ranking of the trades prioritized in the labor market and factors that affect self-employment between the respondents. In all cases the obtained difference was tested at α (statistical significant) 0.05, to tolerate errors that may occur due to chance. The chi-square was also used to see the difference in opinions between the respondents.

1.7. Definition of Terms

Terms used in the study are used as defined here:

- **Employment**- Refers to a situation where there is a remunerative job, whether for an employed or self-employed person.
- **Employment Opportunity-**Is the availability of remunerative jobs, whether in the form of wage employment or self-employment.
- **Graduates-** Refers to an individual who has satisfactorily completed all requirements of an educational and training program and has been awarded a certificate attesting this (Good, 1973: 264).
- **Technical and Vocational Training and Education-** Refers to the combined process of education and training and recognized the common objectives of employment on their immediate goals (UNESCO, 2002: 96).
- **TVET Institutions-** Institutions /colleges which are providing technical skills at 10+1,10+2, and 10+3 programs.
- **Trainees-** Refer to those attending in TVET institutions as their future career in 10+2 program.
- **Trainer-** Refers to a person who is teaching in TVET institutions.

1.8. Limitation of the Study

The unavailability of the tracer study which can indicate the extent of employability of graduates was one of the major limitations in the study. However, as much as possible this was compensated by incorporating the employed and non employed graduates from different occupations and different years. Moreover, Due to inventory program in the MoE libraries it was difficult to get recent literatures related to the study. To minimize this problem the researcher tried to review different literatures from different sources. Hence, the study and its findings should be evaluated by taking in to account these mentioned problems.

1.9. Organization of the Study

This research report has been organized in to four chapters. The first chapter deals with the study and its approach. The second chapter deals with the theoretical and empirical review of related literatures to the study. Chapter three, deals with presentation, analysis and interpretation of the data. The final chapter treats summary of the finding, conclusion and recommendations. Moreover, a list of reference materials and other papers containing pertinent information are annexed in the appendices.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURES

This chapter provides a theoretical and empirical basis for the study by reviewing the literatures related to the Technical and Vocational Education and Training (TVET) facilities, and their contribution to employment opportunities. Hence, an attempt were made to discuss: the historical development of TVET, rationale and objectives of TVET, related issues in TVET, management of TVET, integration of TVET to employment , other countries experience and trends of TVET in Ethiopia.

2.1. Historical Development of TVET

Vocational education in its informal form came into existence when human beings begin to live together and started to produce goods for their basic needs. In relation to this, Abramson (1979: 19) points out the historical development of TVET dates back to the primitive society in which children learnt from their parents skill that are required for survival such as hunting and fishing. Hence, the father was responsible for his son and the mother to her daughter in providing the necessary occupational instruction, which were used in the daily life.

The model of skill training which developed with the rise of guilds in the middle ages existed both in Germany and England (Deissinger, 1996: 137). According to Hanson (1997: 24), the guilds are association established during the middle age in Europe to protect the interest of members of the same craft. Once the crafts men has organized into guilds according their specialization; the guilds over take the responsibility of local control over each trade and set standard. And this paves the way to development of modern TVET.

Though, it is difficult to mention the exact date when formal skill training was started, the available literature supports that, the industrial revolution can be the turning point. In the same vein, Vanables (1959: 4) concluded that technical education was a belated concomitant of the industrial revolution which began in England about the mid 18th century. Besides, the two world wars played a significant role in the development of TVE. The war resulted in serious shortage of skilled labor in all grades. But, in Sub Saharan Africa TVE get increased attention

during 1970s, because of expectations to increase the skilled laborer used for the modern sector (Atchoarena and Esquieu, 2002: 43).

However, the expansion and development of TVET was not favored by all scholars and the public for various reasons. Among others, Foster (1965) and Blaug (1973) clearly argued that vocationalization can not be a remedy for educated unemployment; it can not prepare students for specific occupation and reduce mismatch between education and the labor market (Tilak, 2002: 4). Furthermore, there are no clear empirical and quantitative evidence that the economic return of TVET out weigh than the general education, Bennell (1995); Bennell and Segerstrom, 1998 (in Tilak, 2002: 14).

Hence, these controversies among the scholars and society have a negative effect on the development of TVET. In relation to this, Weizhi (1991: 15) states that the reason that the past TVET developed at a slow pace, exerted little influence on society, and did not develop in to an organic entity lies in the fact that it was considered as a mere supplement to general education. In the same vein, UNESCO (1979: 103) also contends that, the traditional education system combined with attitudes on the part of educators and the public which disregard TVET and the occupation for which it prepares to a low status form the greatest major barrier to the development of TVET.

In general, despite the low public image and oppositions from some scholars the expansion and integration of TVET in to the general education has a paramount importance for the development of the modern economic sector.

2.2. Rationale for the Emergence of TVET

The evolving, multifaceted role of education in the development process underlines the need of every country for a more flexible, comprehensive and diversified education and training programs. Technical education the smallest sector of the whole educational system has a long lasting significance in meeting the economic needs of the country through industry and commerce (Vanables, 1956: 1). The world today is developing in a global form of production, economy, science, technology and culture. Hence, the training of professionals and technicians, too, must be viewed from the strategic stand point of the global development, rather than the

narrow interest of each country, in order to handle increasingly frequent 'global issues' (Weizhi, 1991: 18).

Cognizant of this fact, the education system should incorporate both general and vocational education at all level in a reasonable proportionate. UNDP (in N'jie and others, 1995: 21) also points out that, with out properly trained man power in industry, commerce and the public service a country can not exploit its own national resources. Of course, the choice of trades and professions in which training should be made available must be peculiar to the particular country based on its priority.

Nowadays, for many countries, TVET is not an option rather it is an imperative. It plays a determinant role in promoting the economic growth and socio economic growth of countries. It is through TVET that such skilled manpower can be obtained. Luguijo and Manyinod (in UNESCO, 1996: 14) emphasize the importance of TVET in the following way: a country's technical and vocational training system is a decisive factor determining the competitive strength and level of development of its economy.

Here it is worth while to mention some argument in favor of TVET and against TVET. To begin with proponents, according to Barlow (1973: 54), one of the principal arguments for TVET is, "it is a social necessity in theory and in fact it represents an individual's turning point from economic dependency up on the social structure to his independent posture as a productive member of society." Thomas Balagh (in Tilak, 2002: 3) was also empathetic in arguing: "as a purposive factor for rural socio economic prosperity and progress, education must be technical, vocational and democratic." The UNESCO adapted in 1974 also puts an important recommendation concerning TVET, and argued for provision of TVET as an integral part of general education, as a means of preparing for an occupational field and as an instrument to reduce the mismatch between education and employment and school and society at large (Tilak, 2002: 5).

Proponents of vocational education also argue that the effect of vocational education on the opportunities of the academically weak should not be judged against the odds of obtaining college education or of entering high-prestige occupations, but it should be evaluated by the extent to which it helps these students avoid unemployment and increasing their chance of becoming skilled workers (Arum and Shavit, 1995: 188).

Carton (1984: 20) points out the following advantages gained from integrating TVE:

- It contributes to improving economic efficiency and raising productivity.
- Enhancing a climate of industrial culture in the less developed countries.
- It equips the trainee with skills and know how which are directly useful in employment or self-employment.
- It provides better opportunity to less advantage segment or vulnerable group of the population.
- It helps in reducing the pressure for higher education to expand if vocational courses are made terminal in nature.
- It improves the over all quality of education by making it less abstract or more related to their own work environment.

On the other side, the emergence and growth of TVET is not blameless. There are some scholars arguing against the importance of TVET. Vanfosen, Janes and Spade (in Arum and Shavit, 1995: 187) argue that, vocational education inhibits the future socio economic attainment of students have shown that it reduce students' chance of attending college. Psacharopuolos and Loxely (in Tilak, 1988: 254) also realized that the powerfulness of vocational training, but argued that it should be given out side the formal education system.

On the whole, it is true that the arguments for and against TVET have their own positive and negative role in the development and expansion of TVET. Even though, there are criticism against TVET the most important point that should be given emphasis is at what level TVET should be given and what should be the proportion of vocational course. Because focusing on vocational/technical education and neglecting the general education cannot bring the desired economic development. The two forms of education have their own paramount importance in the development of nation's economy.

2.3. Objectives of TVET

The purpose and objectives of TVET in a given country limit the scope within which TVET is to be developed and implemented. However, in view of the changes in the labor market, the objectives of TVET have become more diversified; they are not only economic but also social (Atchoarena and Delluc, 2002: 38).

The major purpose of TVET is to train a skilled labor force that can be adapted to the requirement of the labor market (Atchoarena and Delluc, 2002: 37; and UNESCO, 1996: 28). Kazanas and Wolf (1973: 10) also elaborate it in the following way: the purpose of TVET is to help the individual to develop desirable and effective work habits and acquire the necessary knowledge and skills of an occupation of either enter and/or make progress on it. Based on the above general objective there are also commonly shared specific objectives of TVET listed by UNESCO (1996: 17). Some of these are:

- To expose pupils at the basic education level to a wide range of practical activities in order to make them familiar with and to stimulate their interest in vocational subjects so as to give them equal opportunities to choose their future career.
- To equip students with relevant productive and entrepreneurial skills that will prepare them for gainful employment or self-employment.
- To provide skilled labor to match the demand for manpower in the scientific, technological and commercial sector of the nation's economy.

2.4. Related Issues in TVET

2.4.1. Apprenticeship

The concept of apprenticeship comes into existence from the training of master craftsmen developed by medieval guilds. It is basically processes of transmitting know how, together with the transmission of knowledge and it involves practical application of this knowledge. The earliest type of technical/vocational education took the form of apprenticeship. Organized apprenticeship programs for scribes in Egypt are recorded as early as 2000 B.C. Roberts (in Finch and John, 1988: 4).

Moreover, apprenticeship program initiated in ancient Palestine, Greece and other countries followed a similar pattern with youngsters learning a craft or trade through close association with an artisan. Finch and John (1988: 5) also add, however, the apprenticeship program expanded rapidly as various skilled areas become more specialized, the apprenticeship in the form of instruction remained virtually unchanged until the 19th century. With the advent of the industrial revolution in the early 18th century, apprenticeship began a steady decline.

An apprenticeship in the dual system gives young people the opportunity to obtain qualification which opens the path to various employments within an occupationally structured labor market, Beck and Maurice (in Deissinger, 1996: 321). Taking an apprenticeship meant to serve a period of time with a master who was obliged and entitled to host, feed and educate the apprentice. Where as an apprentice refers to every body that entered an employment with a master to learn a trade not with standing whether he paid a premium or become a wage earner, Startman and Patzold (in Deissinger, 1996: 318).

The modern apprenticeship involved structured programs of education, training and work experience. It is primarily sponsored by employers and public training institutions, Munch (in Grubb and Ryan, 1999: 99). This involves a strong co-operation between the institutions and employers/organizations offering training. However, there are major constraints that hinder the expected cooperation between the institutions and enterprises. UNESCO (1996: 31-32) listed out the following major constraints:

- Reluctant of the enterprises- They assume that training is expensive and most enterprises will avoid it if possible. Most local enterprises are small and weak and they do not have sufficient capacity to cooperate with TVET institutions.
- Lack of effective Industrial Attachment Management Mechanisms.
- Inappropriate method of assessment.
- In adequate incentive for the trainees.

In sum, however, there are problems in the effective implementation of apprenticeship training program from both sides; it has an indispensable role in the TVET programs. Hence, there should be a strong and understandable cooperation between the training institutions and the company's offering apprenticeship training. Moreover, the trainees wishing to qualify the apprenticeship training must have the average ability and interest to work.

2.4.2. Vocational Guidance

2.4.2.1. What is Vocational Guidance?

Vocational guidance is the process of assisting the individuals to choose an occupation, prepare for it, enter upon and progress in it (Bentley, 1937: 35). He also adds that the present

vocational guidance movement began in 1908 in Boston, with the organization of the Boston vocation bureau under the leadership of Frank Parsons.

In a more elaborative way Dewey (in Tozers and others, 1995: 330) explains vocational guidance in the following way:

> *Vocational guidance should not be as some thing, which leads up to a definite irretrievable complete choice if it so both education and the chosen vocational are likely to be rigid hampering future growth... educators must certainly be careful that the vocational preparation of youth is such as to engage them in continuous organization of aims and methods.*

Vocational counseling is a cooperative understanding. It is performed by a resourceful individual who has been trained in using the techniques and devices for obtaining accurate and reliable data regarding the counselee's abilities and interest.

Actually, choosing a vocation is difficult because it requires knowledge about different vocations and self understanding. Besides, the trainee's choice of occupation is sometimes dependent on factors out of his/her control and is frequently made on inadequate knowledge or inexpert advice. This in turn affects the career development of the trainees.

Though, in principle counseling should be performed by resourceful individual, the real practice is different from this. The study conducted by Getachew (2005: 109) strengthens this fact by stating that all vocational counselors found in Oromia TVET institutions had only college diploma, however the policy stipulates the minimum qualification is first degree.

2.4.2.2. Importance of Vocational Guidance

If a student has information regarding occupation, chance of future career growth, work habits, etc. he/she will be more motivated than his/her counter part which do not have prior information. However, even with good selection criteria and sound vocational guidance the students' capacity and future career can not be predicted with absolute accuracy. Vocational guidance is helpful in exploring the meaning of work for the person and the implication of career for personal growth and development through out the life cycle.

In light of the above advantages of vocational counseling Woolf and others (1987: 163) describe the essential tasks of counseling in the following way:

- To assist the person in examining the opportunities available.
- To explore the meaning of these opportunities in the light of their own understanding.
- To facilitate the making of decisions and to explore the issue which will or can arise when the person seek to adjust and cope with a new work situation.

2.4.3. Vocationalization of Education

The history of education for work has its beginning almost four thousand years ago (Finch and John, 1984: 4). This implies that education should be related to productivity. The word vocationalization defined by UNESCO, in its recommendation of 1974 (in Aggarwal, 2004: 200) as:

> *Comprehensive term embracing these aspects of the educational process involving, in addition to general education, the study of technology and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in the various sectors of economic and social life.*

Vocationalism become a central issue and marked by a vigorous debate within the education policies in the advanced countries of Western Europe. Among others the following were the source of the debate as listed by McCormic (1988: 37) which include, variety of employers compliant that school curriculum are too academic and remote from the culture of work, pupils are weakly equipped with basic skills and school learners are ill-prepared for work and employment.

Despite various recommendations and suggestions made from time to time by the education experts at various levels, still the education system of developing countries remains mainly academic. For instance, Aggarwal (2004: 199) put the proportion of enrollment in educational and technical courses in higher secondary schools as follows: China 17 per cent, India 5.5 per cent, France 24 per cent, Italy 29 per cent, U.S.S.R 59 per cent , UK 65 per cent and 80 per cent or more in Switzerland, Denmark and Germany.

In Africa, most national policy frameworks call for the integration of technical and vocational education in the general curriculum in order to offer each learner an opportunity to be exposed to basic skills demanded in the world of work (UNESCO, 1996: 16; and UNESCO, 1961).

According to Aggarwal (2004: 201), vocationalization of education has the following merits: Education related to productivity, preparations of individuals' for jobs, employment potentialities, broadening of horizon, dignity of labor, and maximum utilization of the material resources of the country.

In conclusion, to vocationalize or not to vocationalize is no more a dilemma. The question is how much of the educational system should be vocational and how much should be general education in nature, Psacharopuolos, 1987 (in Tilak, 2002: 5). The challenge is therefore, to strike the balance between vocational and general education.

2.5. Management of TVET Institutions

In order to increase the efficiency of the TVET institutions at all level, the management of TVET should take into account the allocation of adequate resources, appropriate organizational development, human resources development policies, and clear definition of function and responsibilities of all concerned bodies. Traditionally, the organization and management of the education system be it general or vocational education was the responsibility of the state. But, now TVET institutions are managed and owned by the state, private sectors and even non governmental organizations (private-or-non profit organization).

There is no single answer with regard to, which government ministries or department should manage the TVET institutions. Lanner and others, (in Atchoarena and Delluc, 2002: 36) state that, since each country is in a different situation and has different concerns, the responsibility for supervising the education system may shift according to the educational and political strategies of the countries.

In most cases, although other ministries play an important role, the MoE and Ministry of Labor are the main government agencies involved in the management of TVET institutions. On the other side, some countries like Togo and Cote d'Ivoire have created a ministry of TVET in order to ensure better management and coordination between technical education and vocational training and to raise skills (Atchoarena and Delluc, 2002: 36).

However, nowadays there is an increasing trend in the involvement of tripartite bodies including employers, government representatives and individuals in the management as well as in the delivery of VET (Gill and others, 2000: 13). Strengthening this fact the MoE (2006: 38) indicates that "Experience in many developing and developed countries shows that successful TVET systems are normally governed by stakeholders which approve important decisions on policy directions and quality management and supervise their implementation." Moreover, in Ethiopia, the management of TVET institutions starting from March, 2004 the Federal Government has given the over all responsibility of managing the TVET programs to the MoE, particularly to TVET sector office (FDRE, 2004: 2578). However, in reality the participation of other stakeholders in the management of stakeholders was very loose.

Attracting and maintaining effective and efficient management in the training institutions is also a big challenge for many TVET institutions. The inability of TVET institutions to attract and maintain qualified and competent managers and staff has combined with the centralization system in many countries to restrict the autonomy of individual institution.

To conclude, the ultimate effect of this inefficient management system results in multifaceted problem in the TVET institutions. Among others, poor quality of training, unskilled graduates, unemployment, negative public image etc. could be the manifestation of inefficient management of the TVET institutions.

2.5.1. Forms of TVET Institutions

The term TVET is used to describe the various forms of initial education and training provided to equip youth with employable skills. Forms of TVET vary from country to country and TVET programs are provided by a broad combination of institutions: TVET schools providing short programs, apprenticeship center, polytechnic, university level institutes (particularly the technical education), etc., (Atchoarena and Delluc, 2002:33). Besides, various approaches have been adopted around the world to give TVET, among others the company, the dual model and within school systems. However, the position held by TVET within the different school systems varies from country to country. TVET usually forms a separate system that parallel to the general education system, with its own institutional setup, teachers and programs.

Usually TVET is provided at three levels, primary, secondary and higher TVET schools. Moreover, there are also three types of training programs namely: formal, non formal and informal. The difference among the there types of programs are clearly distinguished in the following definitions given by Addis Ababa City Government TVET Strategy (AACG, 2005: III-IV).

Formal Training- Training program (in Ethiopia) usually run by public training providers, regulated by government guidelines, leading to certificate recognized by government ministries and bureaus. For example, the 10+1, 10+2, and 10+3 training programs in TVET institutions.

Non formal training- Training program outside the formal training, run by different public or private providers, comprising different mode of delivery and duration of training, usually not leading to recognized certificate. For example, employer based training programs.

In formal training- Is practical learning of skills in a non-structured way. For example, on-the-job training, training on the family.

These different modes of training constitute complementary input into the over all national training strategy, and the selection of the mode of training basically depends on the economic and institutional factors, policy decision etc.

2.5.2. Human, Finance and Material Resources in TVET Institutions

The provision of adequate teaching materials and equipments as well as the human and financial resources are the back bone of the training programs. The limited human, material and financial resources forms an obvious major block to the education system as a whole and particularly to the expansion of TVET institutions. The enrollment capacity of the institutions largely depends on the availability of these resources. Unless, the training decision is based on the supply and availability of these resources the TVET institutions can not achieve the desired goals.

Case studies conducted in twenty companies as part of the training in Britain by Petergrew and others, (in Council of Church in Britain and Ireland, 1989: 107) indicate that, training decisions are not strongly influenced by TVET infrastructures. Apart from provision of resources, in order that TVET programs become effective in Africa, we must consider 'the living forces all

around today' Coombs (in Urevbu, 1988: 267). These forces include the supply side of TVET, the demand side of TVET, and the macro-socio-economic element.

Hence, the successful of the training programs largely depends on the availability and proper utilization of these resources. Each of these elements is separately discussed as follow:

Material Resources and Facilities

Facilities for TVET as part of the education system exist in virtually all the countries, but generally on a rather limited scale. Due to shortage of material resource vocational classes will be established instead of schools (Henze, 1984:130). The high costs of facilities, which can not be affordable by many developing countries, make it problematic to easily obtain the latest technology. In relation to this, World Bank (1993: 41) contends that, inadequate provision of facilities, very poor basic equipments, lack of laboratories, unserviceable or out date equipment and lack of maintenance will make effective teaching impossible. Besides, poor and in adequate investment in resources can not produce higher returns and graduates are unable to find jobs (Tilak, 2002:13; and Atchoarena and Delluc, 2002: 46).

To make the training programs effective, TVET institutions should have suitable text books, laboratories and workshops that can accommodate 20-30 trainees for each trade, rooms for storage, for discussion, for technical and administrative support, first aid room etc. Concerning this the MoE (in Getachew,2005: 27) states that, there will be sufficient hand tools, machines and different equipment inconformity with the number of trainees in each field, basic text books, appropriate teaching aid and others which are essential for training in each institutions. Moreover, there should be sufficient classrooms (1.2 M^2/ trainees), library which accommodate 25 per cent of the total trainees and workshops (4–6 M^2 /trainees for industrial and construction technology) MoE, (2004: 36).

To sum up, TVET institutions also require sufficient and latest technology equipment that can be able to cope with the technological and labor market change.

Human Resource

Of all the resources required for TVET institutions, the trainers (teachers) are the major resources who play a significant role in achieving the intended goals. Peoples are both the ends and means of development programs. Highly skilled, qualified, motivated and creative teachers

are the back bone of any TVET institutions. However, teachers' education and training remains as a major challenge to the present TVET institutions, particularly in the developing countries.

In connection to the qualification of personnel in the TVET institutions, the Ethiopian TVET strategy (MoE, 2002:51) clearly stipulated that a minimum of degree for the trainer, diploma for the assistant, degree for principal and counselor with sufficient support staff. In addition to pedagogical skills, the trainers shall have a technical and industrial experience. Of course, the pedagogical and technical skill development of the trainers can be provided prior or on-the-job. But, experience shows that it is difficult to recruit, train and maintain competent trainers with relevant and adequate industrial or trade experience, particularly in low income countries, Laugo (in Getachew, 2005: 23). Moreover, study carried by Girma and others (1994: 26) find that, in Ethiopia about 60.84 per cent of trainers do not have adequate training for the grade level they were teaching.

Finally, in order to enhance the quality of training and education emphasis is not given only to the academic qualification, but also the methodological approach and ethics of the trainers.

Financial Resource

An important aspect of TVET refers to its financing. The in availability of adequate finance is directly related to the lack of proper human and material resources. TVET programs are costly and the meager, dwindling educational budgets in several developing countries do not allow provision of sufficient resources for TVET institutions (Tilak, 2002: 13). Vocational education of course is quite costly and a drain on the scarce resources. Besides, vocational education is distinguished from general education by its highest cost of delivery, especially at the secondary level.

It is true that the highest cost of TVET is due to the smaller class size and the need for highly expensive equipment, facilities and materials. Hence, TVET programs are expensive than the general education. For instance, in China, according to Doughery (in Tilak, 2002:12-13), the unit cost of vocational and technical schools were 50-100 per cent higher than in general secondary education.

The past as well as the current experience shows that, the state takes the lion share of financing the pre-employment training. According to Middleton and others (1993: 106), as far as

financing is concerned the government role in vocational and skill development is displayed in three broad but fairly distinct activities, namely: providing supporting service, providing training it self and providing finance. Courses at public training institutions are either provided freely or at nominal fees. Therefore, this forces the TVET institutions to address the issue of expansion at the expense of quality. In order to find alternative source of finance and reducing the burden of government expenditure on TVET, it has been recommended that establish closer relationship between institutions and enterprises and introduce a cost sharing mechanism (UNESCO, 1996 and Atchoarena and Delluc, 2002: 47).

Furthermore, different financing mechanisms should be developed in order to reduce the burden of public funding and increase quality of training. According to Ziderman (2003: 12-13), four different ways can be used separately or in combination to diversify funding. These are:

A. **Fund augmentations-** This includes earmarked training taxes, levied on the payrolls of enterprises.

B. **Cost sharing-** Refers to training costs shared by the beneficiaries of trainings. Like wise, Gasskov (2000:193) states that VET financing mechanism reflect the principle that training is a service; hence its beneficiaries should bear its cost.

C. **Income generation-** The institutions obtain additional income from selling products or renting facilities.

D. **Private training provisions-** Refers to encouraging private training institutions.

In Ethiopia, for instance, to diversify training finances cost sharing of trainees will be introduced in the TVET programs. In relation to this, the following was declared in the Federal Negarit Gazeta (FDRE, 2004: 2746): "The source of fund of every public training institution shall be annual budget and subsidy allocated by the governments, training institutions fee collected from trainees, the institutions internal income as well as donation and assistance the institutions may receive."

In addition to strengthening the source of finance for the TVET institutions, the cost effectiveness of financing is also equally important in achieving the TVET programs objectives.

In general, in order to be vocational education successful the following conditions should be satisfied (Tilak, 1988: 254):

- The economy should be ready to provide an adequate allocation for vocational education.
- Vocational teachers ought to be well trained as well as have industrial experience.
- The equipment of vocational school should be neither out-dated nor so advanced so as to have little relevance to the economy in question.

In conclusion, to make effective the training programs the above mentioned resources should be available in the TVET institutions and properly utilized by the institutions. The unavailability of these resources affects the quality of the training and graduates employability.

2.5.3. Evaluation of TVET Programs

Evaluation of any program refers to assessing the performance against the standard set and intended objectives. In a period of increased accountability, the needs for evaluation of programs become important. According to Wentling and Lawson (in Abramson, 1979: 134), evaluation is defined as the process of delineating, collecting and analyzing useful information for judging alternative decisions. Grubb and Ryan (1999: 22-25) contends evaluation is useful for the following reasons: It improves public and employer decisions, generate information that individual need to make their own decision about education and training. Finally, it improves quality of individual programs.

There are two types of evaluation in vocational training programs. These are pre-training and post-training evaluation, CRDA (in Yekunoamlak, 2000:31). The pre-training evaluation refers to the survey of the labor market and the required skill. Where as the post training evaluation is carried out at the end of the training and it has the following three components: self-evaluation by the trainee, on site visit by external evaluation team and the employer. Furthermore, on-the-training evaluation is also essential to take a corrective measure while the training is going on.

Gasskov (2000: 61-62) lists the following criteria and indicators used to measure the performance of the vocational training centers. These include retention rate, percentage of graduates, and percentage of graduates who find employment, utilization of training capacity, staff productivity and degree of satisfaction of client groups (employers and graduates). Besides, in order to evaluate the external efficiency of the program the tracer study technique has been developed to gather information on the labor market performance of TVET graduates.

In addition to evaluation of the program of VET, the issue of accreditation and certification become the integral part of the whole program. Standardizing the certification of the VET program has a paramount role in matching centers and employers need. With regard this Yekunoamlak (2000: 29) points out:

> *Training centers are striving to offer job related training so that the graduates will be competitive and gets access to employment. The employer in the industrial sector on the other hand require self directed and committed worker who generate income.*

Evaluating the apprenticeship program also helps in obtaining the intended purpose of the TVET programs. Finally, the ultimate success of TVET programs is not evaluated merely through students' educational achievement, but through the result of that achievement, that is reflected in the world of work.

2.6. Integrating TVET with Employment

The technological changes in recent years suggest that the future economic prosperity will depend on extensive efforts to prepare and train youth and adults for employment in the jobs that demand new skills. These skills are provided in the form of training and education in the TVET institutions or general education. The specific responsibility of education in relation to employment situation is three fold. These are: education and employment preparation, education and adaptation, and education and employment creation (Aggarwal, 2004: 413). He also adds the following major steps should be taken to link education, employment and development.

A. Improve the technology of existing craft, particularly in rural areas.

B. Impart population education to all appropriate stages.

C. Education of girls should be given very high priority.

UNESCO (1996: 71) also states that:" The principal reason why the enhancement of programs and training by means of education and training should constitute the back ground for any policy regarding economy and employment."

But, training a competent manpower in the required quantities and qualification based on the manpower need of the economy is a major challenge for many developing countries. In the same vein, Norman (1980: 19) contends that, educations relation to employment is a complex issue especially in the context of developing countries. Hence, if the TVET programs were failed to provide the required manpower to the economy it would be a monstrous wastage of social resources.

2.6.1. Education and Productivity

The relationship between education and productivity is the main concern of the problem of efficiency of an educational system. Most scholars agree that the level of education and productivity are positively related. Carony (1999: 70) argued that better education and training should lead to higher productivity, employment and raising average earning in the long run. Moreover, it is reasonable to believe that a better trained work force has a greater potential to increase productivity. Hence, providing sufficient education and training opportunities are pivotal to realize the role of education in enhancing productivity. UNESCO (1975: 47) clearly indicates the relationship among education, national revenue and productivity in the following way:

> *The growth of national revenue depends among others on two factors: increase in the number of productive work, and increase in labor productivity. The increase in labor productivity in turn depends on two factors; improvement of technical equipment and raising the educational and qualification level of the workers.*

Moreover, studies conducted in Eastern and Southern Africa have shown that labor productivity is dependent on the level of education and/or training acquired by individual (ESAURP, 1993: 1). According to Wim and Komba (1995: 14), in poorer countries the integration of productivity of work in education and training has become especially attractive because of the following assumed economic advantages. These are: direct contribution to cost recovery, it makes graduates easier access to job, higher productivity at work and even the

ability to create ones own business. Indeed, the link between formal education and labor productivity is more reflected in the area of technical and vocational training.

Finally, the balance between education and work in the modern sector can be addressed by making realistic the educational qualification needed for the job and increasing job possibilities. Moreover, the link between education and productivity is a very important factor to determine the employment opportunities of graduates.

2.6.2. Employability Skills

In this era of globalization and information, the new technologies require a variety of skills and approaches apart from technical skills. Of course, both technical and employability skills are a key to a decent work. According to Overtoom (2000), "employability skills are transferable core skill groups that represent essential functional and enabling knowledge, skills and attitudes required by the 21st Century work place." Unlike occupational skills they are generic in nature rather than specific and used in all types of industries, businesses and job levels from the entry level of workers to the senior most positions (Robinson, 2000: 1).

Moreover, employability skills are necessary for career success at all level of employability and education and training levels. Nowadays, in the system of flexible work organizations even highly specialized job specific skills become obsolete if not up dated, Mane 1999 (in Yekunoamlak, 2006). Though, the employability skills can be categorized in different ways, Robinson (2000: 2) generally divides in to three skill sets:

A. **Basic academic skills**- this includes reading, writing, science, mathematics, listening and oral communication.
B. **Higher order thinking skills**- Refers to reasoning, learning, thinking, creativity, decision making and problem solving.
C. **Personal qualities**- Includes responsible, self confidence, social skills, honest, team spirit, self directed, cooperative, self management etc.

Majority of the vocational educators agree that as technology is advancing, the area of effective work habits become more important than ever before, because many of the works done by the worker now can be performed by the machine (Kazanas and Wolf, 1973: 10).

Hence, the worker finds him self in a work environment where desirable work attitudes and additional employability skills become the pre-requisite for survival on the job.

It is necessary to note worth, here, the exclusion of young people from full time employment is not due deficiency of education and training, but it is due to lack of the kind of qualities preferred in others (Elliot, 1999: 247). Furthermore, Wentling (in Cotton, 2001: 1) elaborates in the following way: "a review of the literature indicated that employers have no quarrel with skill performance of today's graduates, but they do have serious reservation when it comes to their non technical skills."

Hence, the school (training institutions), parents and trainers have an indispensable role in equipping students with employability skills. Because failure to equip the graduates with these basic skills have a negative effects on the employability of graduates at all levels. Of course, getting job applicant who has these employability skills is a challenge for the employers.

2.6.3. TVET and Self-Employment

Self-employment represents an important route into the labor market particularly in semi-urban and rural areas. The inadequacy of modern sector employment opportunities has forced the individuals in many countries to engage in the informal sector to earn their income. However, the informal sector provides ample employment opportunities; in the context of developing countries it has limited contribution to the economic development. It is mostly hand-to-mouth way of living and unprotected. Moreover, it is characterized by unregulated small scale activities where the production process and technological base is rudimentary. Hence, unless it is transformed to formal small scale enterprises, the informal sector contribution to economic development is limited.

Self-employment demands more than being technically competent in a certain occupational trade. In order to become a successful entrepreneur people need self confidence, vision, creative, realistic assessment of the current and future market, basic business management skills, motivation, and readiness to risk (MoE, 2006: 24).

In many developing countries the share of self-employment in the distribution of employment constitutes the largest share. In Ethiopia, for instance, in 2001 it accounts 39.3 per cent next to unpaid family workers, 49.6 per cent (World Bank, 2005: 185). However, some of the students are not interested to be self employed. The reasons why they do not want to become self employed are: lack of capital, lack of training and national policy which favored self-employment (Sanyal, 1987: 122). The study conducted by CSA (FDRE, 2004: 26) also finds that, one of the major problems in establishing their own business is lack of finance and working place.

Hence, in light of these requirements and importance of self employment basic entrepreneurial and business management training should be incorporated into all relevant TVET programs in addition to the basic trades. TVET, of course, does not give jobs, but it prepares trainees with all they need to succeed in the world of work. In order to strengthen this and reduce the problem of unemployment the TVET programs should encourage self-employment. With regard to this, UNESCO (2004: 34) states:

> *To enhance the relevance of education and training programs for self-employment, programs should pay attention to entrepreneurship and basic management skills. This program should be well linked to micro-credit, technology, marketing and other relevant support services.*

In sum, the government, TVET institutions, graduates, school leavers, and the community should understand and appreciate the economic contributions of self employment in the formal and informal sector to the nation in general and to the individual in particular.

2.6.4. TVET and the Labor Market

Reliable, regular and up-to-date labor market information is essential for the effective functioning of the TVET programs. To this end, Labor Market Information System (LMIS) plays a significant role in planning the TVET programs and systems (Atchoarena and Delluc, 2002: 12; and Yekunoamlak, 2000:18). Because it provides timely and valid data of TVET institutions on the types of occupation and number of the skill labor demanded by the economy. The LMIS contains information on the supply side of the labor market, such as: demographic development, number of school leavers, number of unemployed etc. and information from which the present and future demand for TVET graduates in the labor market

can be obtained, that is skill gabs, employment trends by sector, new investment etc. (MoE, 2006: 37). But in most cases the LMIS is not applicable.

In addition to lack of LMIS, ILO (in Yekunoamlak, 2002: 224) points out the following reasons for lack of relevant skills or absence of need based training programs.

- Need assessment, which is inadequate or based on incorrect assumptions about labor market opportunities.
- Lack of communication between training centers and potential skill users.
- Inadequate feed back mechanisms.
- Wrong reasons for training.

In Gambia, for instance, the main reason that the TVET systems was not very successful as yet was due, seemingly, to the non alignment of the training programs with the labor market realities (N'jie and others, 1995: 24). The changes in the labor market are caused by the demographic and social trend, global competition and information technology (Thuy and others, 2001: 11). Of course, the flexible nature of TVET programs creates problem in forecasting the long term demand of labor in the market.

Hence, to wisely use the limited job opportunities the LMIS must be a continuous process in order to respond to the changes in the labor market. Plan for vocational programs also should not be up on today's labor market. Besides, there must be a system which quickly matches the supply and demand for labor market and employment.

2.6.5. Role of Partnerships in TVET Programs

The TVET programs run at the interface of various sector of the society, among others the education sector, the labor market, industry sector, Micro and Small Enterprises (MSE), agriculture, rural development, and public administration. Depending on their scope and purpose of the TVET programs, the involvement of different organization varies from country to country. The success of TVET programs is made possible only through a wide variety of living partnership at various levels and concerning with differing aspects.

International experience shows that successful TVET systems are built on strong and well-defined partnership between government and non government sectors (MoE, 2006: 15). In relation to TVET programs, the private sector needs to play a crucial role through a wide spread traditional apprenticeship training. However, stakeholders' participation is a relatively new phenomenon in Ethiopia (Getachew, 2005: 37). A TVET system should create an

opportunity that strengthens the role of the private sector and minimizing the dominant role of the government. According to MoE (2006: 14), stakeholders are needed to play a major role in the following function of TVET systems:

- Policy development, planning and reviewing through participation in relevant discussions and panels.
- Financial contribution to the TVET system.
- Active involvement in the setting of standard that helps in assuring quality.
- Through provision of training to their own staffs.
- Supervision and monitoring the TVET programs at different government levels.

Hence, in light of the above mentioned roles the importance of stakeholders in the development of TVET system becomes crucial nowadays than ever before. A continuous, understandable and institutionalized interaction among the employers, TVET institutions and the government is an essential condition for success. The relationship between the employer and employee had changed radically. In a competitive and globalize world employers are looking for comprehensive TVET skills, decision making skills and communication, and know how delivery skills from the employees.

2.6.6. Problem of Un-employment

Unemployment with all trouble is now serious problem in nearly every developing countries and becoming increasingly so. The word unemployment first comes into common use in English speaking countries only at the end of 19th century, Sexan (in Chacrapanic, 1995:12). Unemployment problem is primarily a problem of inadequate income and insufficient work opportunities. The history of unemployment is closely associated with the history of industrialization. In supporting this idea, Chacrapanic (1995: 17) states the following:

> *The basic cause behind unemployment therefore may be traced to the shift from craft to agriculture, from pastoralist to industrial production and the consequent change in the occupational structure which has become more complex, more specialized and more technical in terms of its manpower skill.*

Though, it is not an easy task to give a universal definition of unemployment, for the purpose of this study we use the following definition given by Harris and Levely (in Chacrapanic, 1995: 13). "it is a condition of one who is able to work but unable to find it". According to Sanyal (1987:126), the problem of unemployment has two main aspects. One related to the

incidence of unemployment which is explained by the percentage of unemployed people and the second is duration of unemployment.

The problem of unemployment is rapidly increasing concern to the governments, employers and workers of the world, especially in developing countries. Nowadays unemployment is not only a psychological or educational issue but also a political issue.

Among others the integration of vocational training in the education system is one solution in addressing the problem. Because vocational courses are practical ones geared more directly to employment. Moreover, response to employment demand is central to vocational training.

The major problem of unemployment in Ethiopia is a combination of usually rapid population growth and limited productive capacity of the present economy, MoPED 1994 (in Yekunoamlak, 2002: 227). The prevalence of unemployment in Ethiopia can be illustrated in Table II below.

Table II

Unemployment rate of urban population aged 10 years and over by age group, sex and educational level (April 2004)

Level of schooling	Total unemployed Population			Unemployment Rate (%)		
	Male	Female	Total	Male	Female	Total
Illiterate	34,349	124,170	158,519	11.2	19.2	16.7
Literate	270,197	417,196	687,393	16.6	37.1	25.0
-Non formal	3,128	4,916	8,044	5.1	17.4	9.0
-Grade 1-8	109,581	189,043	298,624	14.8	34.3	23.1
-General education not completed	32,300	43,810	76,110	20.3	51.4	31.2
-General education completed*	96,775	148,060	244,835	24.7	44.8	33.9
-Certificate	8,078	9,115	17,193	9.7	16.4	12.4
-Diploma or not completed Degree not completed	7,619	8,749	16,368	24.7	51.3	34.1
-Diploma and above	12,543	12,688	25,231	8.1	23.2	12.0

Source: Central Statistics Authority (FDRE, 2004: 55)

* Including preparatory education

As indicated in Table II, the problem of unemployment is more sever in the literate (25 per cent) than the illiterate (16.7 per cent). Moreover, as compared to male and female, the unemployment rate for female is high in all level of schooling.

Regardless of the causes for unemployment, its impact reaches beyond the individual and the family to society as a whole. Furthermore, the social cost of unemployment can be viewed from many angles. There is a loss in production and national wealth, deterioration in the skill and morale of the unemployed labor force (Chacrapanic, 1995: 24). Increasing unemployment also results in raising crime and suicide.

Hence, the challenge over the next years will be matching the training with employment, maximizing the economic growth and employment opportunities.

2.7. Other Countries Experience in TVET System

2.7.1. The Dual System of TVET in Germany

The Federal Republic of Germany is popular for its Dual System in the developed and developing countries. The genesis of the modern vocational training, known by the dual system is determined by the emergence of substantial activities on the part of the state to strengthen the ancient craft system. The dual system, which Germany's approach to TVET was introduced in 1969 to strengthen the link between education and employment (Gill and others, 2000: 485). The system is 'dual' because it provides the vocational and occupational training simultaneously (that is, during single program of work and study) to participate by schools and employers respectively.

The Germany's dual system has been given considerable attention in the past 20 years in view of the vocational qualification and employment issues arising in many countries (Braun, 1987: 123). As Braun (1987: 125) states the Federal Republic of Germany's TVET system can be classified into three central subsystems. These are the on-the-job-training firm, the part time vocational school, and the full time vocational school. The purpose of the dual system is to prepare well qualified and competent work force in response to the need of the economy, which is therefore necessary to hire the trainees (Yekunoamlak, 2000: 30).

The foundation of the dual system is not lie in school based education but in apprenticeship that started over several centuries (Gill and others, 2000: 507). Of course, the school based

instruction, which accounts 20 per cent of instruction time and expense is relatively a recent addition to the dual system. In Germany still there is the link between the traditional apprenticeship and the state regulation in the dual system. The state has emerged as a forceful agent in promoting vocational training. In support of this idea, Peter Raggat (an English observer) underlines the laws in the dual system are regarded as a 'guaranteeing rights' not considered as a ' restricting rights' as in England (Dessinger, 2000: 318).

Another prominent feature of the dual system is the share of responsibilities for funding the program. It is shared between the company's and the ***lander*** (regional) government Raggat (in Gill and others, 2000:321). Generally, the system is determined by private, semi-private, public interest and trade unions, particularly the chambers. Thus, the company's are responsible to recruit their trainee depending on their absorbing capacity and demand of the labor market.

However, the large share of graduates of the dual system enter into the labor market, many go on higher education. In relation to this, the Ministry of Education and Research, 1996 (in Yekunoamlak, 2000: 32) points out at the end of the training, most of the graduates become employee in the same company and some of the trainees may also be employed in other companies.

In conclusion, the Germany's dual system clearly shows that when the mix between general and job specific training is determined by the employers and government, majority of the trainee are secured to get job, which is attributable to Germany's low rate of unemployment of youth. The major challenge of the system could be its skepticism about whether, as a tradition based training system, it will be able to respond the technological and social change of the 21st century.

Lessons Learned from the Dual System

- The close cooperation among the government, employer and the trade unions. And sharing of funds and responsibilities.
- The organization and control of vocational training are best left to the body that pays for the program.
- The formal vocation education came many years after the vocational training has been formalized.
- Job specific training are financed and organized by employers.
- The graduates of the vocational training can join the higher education.
- Training is demand driven.

2.7.2. Vocational and Technical Training in China

China is the world's most populous country with close to 1.2 billion people. The emergency of vocational training in China was not coincident but rooted in the social needs and very closely linked with the economic development (Weizhi, 1991: 13). It had a long emphasized vocational education in its curriculum. However, before 1977 the structure of vocational education in China was far from fulfilling the requirement of the economic development. For economic and political reason and because of the traditional educational thinking, China's VET remained backward.

As Gills and others, (2000: 161) pointed out China has successfully followed a strategy of economic reform since 1978. Moreover, after the Third Plannery Session of the Eleventh Central Committee, vocational education and training started to progress (Weizhi, 1991: 14). In line with this reform, a number of governments' senior secondary schools were converted into vocational schools. According to Weizhi (1991: 14), the 1985 central committee decision on Reform of the Educational Structure had a significant role on the Chinese VET and in the education system as a whole. It states all effective measures should be taken to enable VET to progress in a big way. Besides, since 1977 investments in education has been evaluated as being productive and have been increased (Henze, 1984:131).

In China VET is provided in three levels. One is at primary level, at secondary level, and at higher institutions. There are three types of vocational schools, these are: secondary special school, skilled workers school, and secondary vocational schools.

However, the over all situation of the secondary VET school in China at present seems good, as many of other developing countries it suffers from lack of reliable teachers and materials (Weizhi, 1991:17; and Henze, 1984: 131). As a result vocational classes were established instead of vocational schools.

The enrollment rate of China's VET is dramatically increased. For instance, since 1980, the enrollment in specialized secondary school and skilled workers school increased by 10 per cent per year and the growth in secondary vocational school was even more fantastic, about 17 per cent per year (Gill and others, 2000: 165-166). Until the late 1980s graduates were guaranteed

employment, recently however there are no national wide data on employment out come for VET graduates, evidence suggest that all find job (Gill and others, 2000:165-171).

These all indicates that China had made significant improvement in the expansion of VET since 1977; it is also note worthy to observe that it has also experienced very rapid economic growth since that period.

VET in China is still supply driven and government have the dominant role on the provision of school based VET. However, the broad policy of the government is to move incrementally to a market responsive system, VET in the secondary technical school and skilled workers school owned by technical ministries and enterprise are strongly linked to job (Gill and others, 2000:168).

Thus on the whole, even VET in China is less developed than in Europe, it contributes a lot to the economic development of the country. The major problems to the system are supply driven provision of VET, overlap and duplication of courses, school's lack of accountability and responsibility, and in adequate financial resources.

Lessons Learned from China VET

- VET is important for economic growth.
- The highest enrollment rate and rapidly expansion of VET schools.
- VET is also provided to adults outside school.
- VET schools are closely related to jobs and graduates are secured to get jobs.

2.8. Trends of TVET in Ethiopia

2.8.1. Historical Development of TVET in Ethiopia

The history of traditional education in Ethiopia dates back to the introduction of Christianity. In spite of the long history of traditional education and ancient civilization of the country, the introduction of modern education is relatively recent phenomenon. The first modern education was started in 1908 at Addis Ababa named by Menelik II. Moreover, the traditional education was highly religious oriented and discouraged the manual work. Its aim was to serve the church and the state.

Ethiopia had craftsmen and artisans for centuries. But they are regarded as 'bad' work and society gave low status to these parts of the society. This in turn hampered the development of manual skill in particular and modern education in general.

Despite the negative attitude of the society towards the craftsmen and artisans, the Ethiopian rulers such as Tewodros, Yohannes, and Menelik II were very much interested in bringing foreign technicians who could build bridges, roads, rail ways firearms etc. (Wanna, 1998:57).

As compared to the traditional education, modern education expanded fast in the year 1925 and 1935. There were a total of 30 academic schools in the country between 1925 and 1935 (Girma and others, 1994: 9). However, still the development of vocational education was not reflected in the curriculum. At that time most schools were offering more academic subjects.

In 1941, the first vocational/technical school of Addis Ababa was established under the name of 'Ecole National des Arts' to meet the growing demand for skilled workers in the industry. French was used as a medium of instruction in addition to Amharic, MoE, 1973 (in Yekunoamlak, 2000:37). Subsequently the urgent need of manpower in the industry sector of the economy leads to the establishment of Addis Ababa Commercial School, Ambo and Jima agriculture school and Bahir Dar polytechnic institute. These schools recruit their trainee from different parts of the country.

In the early 1960s, in an attempt to make the curriculum vocational the concept of comprehensive secondary school was introduced in the education system. The principal objective of comprehensive program was relating education with work (Girma and others, 1994: 11). Accordingly, some of the secondary schools were converted into comprehensive secondary school. Woizero Sihen secondary school was the first school converted into comprehensive secondary school.

However, the comprehensive secondary schools were not efficient to achieve the desired purpose and start to decline. Owing to lack of sufficient teachers, materials, and limited budget, the quality of the graduates was not as expected (Wanna, 1998: 8). There after it could not solve the problem of unemployment and even there were graduates unemployed.

In response to the failures in the comprehensive program the government again started to strengthen the vocational/technical schools. Hence, the numbers of vocational/technical

schools were raised from 4 to 17 government and non government schools (Wanna, 1988: 8; and Negatwa, 1989: 4). These schools give three year of training for students who complete grade ten (10+3).

Despite the introduction of vocational schools in the country as compared to other African countries the enrollment rate of TVET in Ethiopia secondary education is very low. For instance, in1990-1996 the percentage of TVET enrollment in the secondary education is only 3-4 per cent (Atchoarena and Delluc, 2002: 40).

Cognizant of the aforementioned problems and importance of TVET, in 1997 twenty five skill development centers (SDC) were established in the country to train secondary school leavers. However, because they were not launched with a thorough need assessment they could not serve as they were intended to serve. Besides, the training centers are facing several problems, such as shortage of skilled trainers, equipment and possibility of getting paid jobs or self-employment options (Yekunoamlak, 2000: 42).

In 2001, the TVET program was included into the secondary school system of all regions in the country. According to the Federal Negarit Gazeta, Proclamation No. 391/2004 the newly launched TVET program is divided into three levels, namely: basic vocational training program, junior technical and vocational training program, and middle level TVET program. There are more than 33 occupational fields. Besides, the TVET program consists of four broad areas these are: industrial education, agricultural education, commercial education, and social service education, UNESCO, 1982 (in Wanna, 1998:56).

The standard recurrent unit cost of each trade (10+1 and 10+2) ranges from Birr 1388 for beginning accountant to Birr 5154 for auto machine (MoE, 2003: 30).

Despite the efforts made by the government and private sectors still the TVET programs are at infant stage in Ethiopia and not able to solve the existing problem of unemployment as expected.

2.8.2. Programs and Objectives of TVET in Ethiopia

2.8.2.1. Programs of TVET

In Ethiopia basically there are three types of TVET programs. One is the formal TVET which comprises college, middle level 10+1 and 10+2. Second, is the non formal TVET named by junior level, and the third is the basic level. The admission requirement for both programs in the formal TVET is minimum completion of grade 10. Usually students who scored below 2.0 in the EGSEC and who do not join the preparatory programs are enrolled in the TVET institutions. Of course, the admission requirement varies from region to region depending on the absorbing capacity of the regions. And this could be one of the possible sources of obstacles in the development of TVET programs. However, the admission requirements for the non formal and basic level are below grade 10. The duration of the program is also less than one year.

All these programs are provided by the government and private sectors. The public institutions are under the education sector. There are also employers based TVET schemes of public and private companies. Currently TVET institutions are also run by NGO and an increasing number of private commercial TVET providers.

2.8.2.2. Objectives of TVET

According to the National TVET Strategy (MoE, 2006: 10), the over all objective of TVET is; "to create a competent, motivated, adaptable and innovative work force in Ethiopia contributing to poverty reduction and social and economic development through facilitating demand–driven, high quality TVET, relevant to all sectors of the economy, at all levels and to all people in need of skill development." Besides, TVET responds to the skills required in the labor market of the country.

Based on the above general objective the strategy also stipulates specific objectives. Some of these are listed as follows:

- Create and further develop a comprehensive, integrated out-come based and decentralized TVET system for Ethiopia.

- Strengthening the culture of self-employment and support innovation in the Ethiopian economy, in particular in the emerging regions.

2.8.3. Trends of TVET in Addis Ababa

The introduction of modern as well as vocational/technical education in Addis Ababa is same as to the country. The first modern education and vocational/technical school was established in Addis Ababa.

Addis Ababa the capital city of Ethiopia has currently about 3.5 million inhabitants with annual population growth rate of 2.8 per cent (AACG, 2005: 2). Moreover, 60 per cent of the inhabitants directly depend on the informal sector of Micro and Small Enterprises (MSE). The unemployment rate is around 38 per cent in 2003. The highest population growth and unemployment rate was attributable to the natural population growth and migration from suburbs and other towns in searching of jobs. Hence, this alarming problem of unemployment calls for the effective cooperation between TVET and MSE.

Owing to it is being the capital city of the country and large population size, Addis Ababa accounts the largest share of TVET institutions. In 1960, for instance, out of the 6 vocational and technical schools 3 of them were found in Addis Ababa. In 1999 also there were 9 TVET institutions out of the total 25 TVET institutions in the country. In the year 2004/5 there are 52 formal TVET institutions in the city. This is 26 per cent of the total formal TVET institutions in the country. There are also 163 (18 government and 145 non government) informal training centers in the city. Despite the existence of more TVET institutions in the city still there are some sub cities which do not have any formal or informal training institutions.

Moreover, as compared to the other regions the participation of the private sector is more in Addis Ababa. Out of 52 formal TVET institutions 42 (80.7 per cent) are owned by private sectors and non government organizations (MoE, 2005: 105).

Despite the fact that access to education has increased since the beginning of 1988 enrollment in TVET also shows improvement. According to the AACG (2005: 2), the TVET enrollment reached 87,158 in 2003 from 8,639 in 2000. The over all objective of TVET in Addis Ababa is to enhance the social and economic development of the city.

The responsibility for the management of TVET institutions of Addis Ababa has to lie on various shoulders, including relevant ministries, private and non governmental organizations and other appropriate bodies. There is also a TVET council which plan, control, and evaluate the Addis Ababa TVET policies, strategies etc. The Ethio-German TVET program works in cooperation with the Addis Ababa TVET institutions, based on the bi-lateral partnership project agreement signed in 1992/3 E.C.

In line with the National Education and Training Policy of 1995 E.C. the Addis Ababa city government develops a TVET strategy that promotes the development and change (AACG, 2005: 1). Furthermore, the city government recognizes the development of TVET has been a crucial tool for economic progress in the city. It is expected that TVET prepared skilled man powers in different fields in order reduce unemployment. The TVET institutions are closely connected with the construction industry, MSE, low cost housing project.

In general, even though, the development and expansion of TVET institutions in Addis Ababa is encouraging, still there are some problems that hinder its development. Some of these are: lack of transparency in the labor market, employers compliant about the out comes of training, poor management, inadequate fund and shortage of qualified teachers (AACG, 2005: 6).

CHAPTER THREE

3. Presentation and Data Analysis

This part of the study deals with the analysis and interpretation of the data collected from sample trainers, trainees, graduates, employers and officials in the education bureau. Data were collected from the sources using questionnaire, interview, observation check lists and document analysis. The questionnaire was used to solicit data from the trainers, trainees and graduates. Where as, the interview was used for the employers offering apprenticeship training and officials found in the education bureau.

A total of 276 questionnaires were distributed to trainees, 56 to trainers, and 54 to graduates. However, for various reasons all the distributed questionnaires were not completed and returned. Hence, out of the total 386 questionnaires distributed, 339 (87.82 per cent) were filled and returned. Of those who returned the questionnaires, the proportion of trainers was 93 per cent, trainees 85.5 per cent and graduates were 94.5 per cent.

Depending on the responses collected from sample respondents, each of the questions were presented, analyzed and interpreted. For the sake of convenience and manageability of the study, related questions were treated together in one table. Besides, when ever appropriate the responses of employers and officials were used as additional data to substantiate the response obtained through questionnaire.

3.1. Characteristics of Respondents

Table III here under indicates the personal characteristics of respondents' in terms of sex, age, qualification, work experiences and employment status of graduates.

Table III

Characteristics of Respondents

No.	Items	Respondents					
		Trainers		Trainees		Graduates	
		No.	%	No.	%	No.	%
1	Sex						
	A. Male	45	86.54	191	80.94	41	80.4
	B. Female	7	13.46	45	19.06	10	19.6
	Total	52	100	236	100	51	100
2	Age						
	A. 15-20 years	0	0	221	93.64	31	60.78
	B. 21-25 years	0	0	10	4.24	18	35.30
	C. 26-30 years	17	32.7	3	1.27	2	3.92
	D. 31-35 years	6	11.54	2	0.85	0	0
	E. 36-40 years	4	7.69	0	0	0	0
	F. 41-45 years	6	11.54	0	0	0	0
	G. Above 45 years	19	36.53	0	0	0	0
	Total	52	100	236	100	51	100
3	Qualifications						
	A. Diploma	19	36.54				
	B. BA/BSc	32	61.53				
	C MA/MSc	1	1.93				
	Total	52	100				
4	Work experience in TVET institutions						
	A. 1-5 years	26	50				
	B. 6-10 years	23	44.23				
	C. 11-15 years	1	1.93				
	D. 16-20 years	0	0				
	E. Above 20 years	2	3.84				
	Total	52	100				
5	Employment status						
	A. Employed (wage earner)					18	35.3
	B. Self-Employed					10	19.6
	C. Un employed					23	45.1
	Total					51	100

As can be seen from Table III, the overwhelming majority of respondents were male. In all respondents the share of female respondents was below 20 per cent. One of the possible explanations for the domination of male could be the fact that the sample fields of study (construction, industrial and textile technology) were more favored by their male counter parts.

The low participation of female trainers and graduates could also be attributed to similar reason to that of trainees.

As to the age composition of respondents, almost all (93.64 per cent) of the trainees were in the age range of 15-20 years. Similarly, more than half of the graduates, 60.78 per cent also belong to this category. Hence, from the age category of trainees and graduates, one can conclude that majority of them were in the standard age category (15-18 years) for secondary education and most of them were adults. Regarding the age composition of trainers, 32.7 per cent belongs to the age category of 26-30 years, while 11.54 per cent of the trainers belonged to the range of 31-35 years. The remaining, 55.76 per cent were above 35 years. Therefore, the closeness of the age category between the trainers and trainees can make the communication and relationship easy in the training session, because they can act as friendly.

Concerning the educational background of the trainers, the policy states that 50 per cent first degree and 50 per cent masters in their related fields for the colleges and 50 per cent first degree and 50 per cent diploma for the Middle level TVET institutes. The data in Table III, however, reveals that only 1.93 per cent had master degree and 61.53 per cent had first degree. On the contrary, still a considerable number of trainers (36.54 per cent) were diploma. Besides, there were more diploma holder trainers even in the colleges. Hence, we can deduce from these findings that the actual practice seems to contradict with the education and training policy and TVET strategy concerning the qualification of trainers.

Regarding work experience of the trainers, almost 94.23 per cent had served in TVET institutions from 1-10 years. Only 3.84 per cent had more than 20 years of service. This is possibly due to the fact that TVET expansion was a recent phenomenon in the country. The previous experience of trainers was also examined. Accordingly, more than half of the trainers had experience in other organizations, other than industrial experience. Although, not indicated in the Table, all of the trainers were assigned in their fields of study. Hence, it seems that nearly half of the trainers have work experience that would enable them to carry out their duties, and this would become more effective if supplemented by short term training and experience sharing.

Based on this premise, trainers were asked to express their interest toward their profession and the extent of training they had to upgrade their qualification and methods of training. Accordingly, the following results were found out:

More than half the trainers, 63.47 per cent explained that they had interest in the TVET institutes. However, a considerable number of trainers, 36.53 per cent stated that they still did not have interest in TVET institutes. From this finding one can imagine that the trainers could not encourage their trainees in the training they were giving.

Regarding item 2 of same Table, 69.23 per cent of the trainers had got further training to up grade their qualification and to introduce themselves with the TVET institution. The duration of the training was ranging from one week to a year. On the other hand, a considerable portion (30.77 per cent) of trainers did not get any refreshment or upgrading training.

The Table further shows that, 78.85 per cent of the trainers had got a pedagogical training from the college/university they had graduated. Although, the policy states that a trainer should be trained in pedagogy, nearly quarter (21.15 per cent) of trainers were not trained in pedagogy.

Generally, although majority of the trainers have positive interest to the TVET institutions, nearly one third of the trainers still did not have interest and did not get any further training. Hence, this could affect the training programs negatively. Of course, majority of the diploma holder trainers are attending degree program in the in-service program.

In the following Table, trainers were asked to rank their reason as to why they were not interested in the TVET institutions.

Table V

Reasons for lack of Interest in TVET Institutions

No.	Reasons	Trainers(N=18)					Mean	Rank
		1	2	3	4	5		
A	Working environment is not conducive	8	4	0	0	6	2.55	1
B	It is tedious work	1	3	6	4	4	3.38	4
C	Limited job opportunities	4	2	4	6	2	3	3
D	Low social status	0	5	1	8	4	3.61	5
E	Limited opportunity for further education	5	2	4	3	4	2.94	2
F	Others							
	Total							

N.B. -1 for the major reason...,and 5 for the least reason.
- One respondent did not respond for this question.

As depicted in Table V, inconvenience of the working environment, limited opportunity for further education and limited job opportunity were the three major consecutive reasons given by the trainers who said I do not have interest in TVET institutions. The second prioritized reason is consistent with the findings of item 2 of Table IV that is lack of further education. Moreover, tedious work and low social status were found to be the two least reasons for their lack of interest in the TVET institutions.

In line with this, in the open ended questions all respondents have raised lack of sound management in the institutions was one of the major problems that hinder the smooth running of the training programs. Therefore, it is reasonable to conclude that poor management system leads to poor relationship between the staff and the management and the staff and the trainees, which in turn affects the over all training programs.

Table VI

Competence of Trainers Viewed by Trainees and Deans/Principals

	Item	Respondents			
		Trainees		Deans/Principals	
		No.	%	No.	%
1	What is the competence of your trainers?				
	A. Very satisfactory	29	12.29	0	0
	B. Satisfactory	150	63.56	4	100
	C. Not satisfactory	57	24.15	0	0
	Total	236	100	4	100

Among other things, the effectiveness of the training programs depends, to a large extent, on the competence of the available human resources. As far as teachers' competence is concerned, UNESCO (1997: 12) pointed out that the training staffs with in Technical and Vocational Institutions need to be well qualified in both their area of specialty and pedagogical skill, and have sufficient and relevant experience. In connection to this, respondents were asked to evaluate the competence of their trainers. Accordingly, all of the deans/principals confirmed that it is satisfactory. Similarly, 63.56 per cent of the trainees also confirmed that it is satisfactory.

On the other side, 24.15 per cent of the trainees responded that their competency is not satisfactory. This may be possibly due to the inadequacy of the training they had and lack of interest to the profession.

In relation to this, the interview made with the officials also strengthened this fact. They stated that although it is not possible to fulfill as per the strategy of TVET, as compared to the previous the competence of the trainers, the recent competence levels of trainers were found to be satisfactory. The officials added, even though there is a need to hire competent, qualified and experienced trainers, it was not possible to get from the labor market due to the low pay scale.

Table VII

Respondents Attitude and Interest toward their Training

No.	Items	Respondents			
		Trainees		Graduates	
		No.	%	No.	%
1	When you completed your secondary school you wanted to be?				
	A. Natural scientist	11	4.66	2	3.92
	B. Social scientist	5	2.12	0	0
	C. Agriculturalist	6	2.54	0	0
	D. Health profession	32	13.56	11	21.56
	E. Engineer	58	24.58	13	25.5
	F. Lawyer	36	15.25	6	11.76
	G. Economist	4	1.7	0	0
	H. Business manager	10	4.24	5	9.8
	I. Technician	65	27.54	12	23.54
	J. Other	9	3.81	2	3.92
	Total	236	100	51	100
2	Do you like your fields of study?				
	A. Yes	171	72.46		
	B. No	65	27.54		
	Total	236	100		
3	If No, why?				
	A. Lack of job opportunities in the field	10	15.39		
	B. I do not have interest from the beginning	37	56.92		
	C. Lack of encouragement from the trainers	14	21.54		
	D. Shortage of resources in the institutions	4	6.15		
	E. Others	0	0		
	Total	65	100		
4	Is the training you are/were pursuing, your----				
	A. First choice	82	34.75	16	31.38
	B. Second choice	33	13.98	10	19.6
	C. Third choice	39	16.52	12	23.53
	D. Fourth choice	40	16.95	9	17.65
	E. Beyond fourth choice	42	17.8	4	7.84
	Total	236	100	51	100
5	What initiates you to pursue the training?				
	A. I like the profession	99	41.95		
	B. Parental influence	17	7.2		
	C. Better job opportunities	82	34.74		
	D. I did not have any option	102	43.22		
	E. Others	11	4.66		
	Total*				

*More than one response was possible

As can be seen from item 1 of Table VII, a question that was intended to know whether or not the respondents have positive attitude toward the training they were pursuing, except for a slight difference, majority of the respondents have responded they wanted to be engineers and technicians after they completed their high school. Engineering accounted, 24.58 per cent for trainees and 25.50 per cent for graduates. Likewise, technician represents about 27.54 per cent and 23.54 per cent for trainees and graduates respectively.

Next to engineers and technicians the health profession follows. Even though, the proportion of male and female were not depicted in the Table, majority of the female trainees and graduates preferred to become health profession, lawyer and economist.

As indicated in item 2 of Table VII, majority (72.46 per cent) of the trainees have interest in their fields of study. On the contrary, however, the trainees are left with a few months to complete their study still some of them (27.54 per cent) did not have interest in their fields of study.

In the same Table, respondents were also asked as to why they were not interested in their field of study. Consequently, 56.92 per cent of the trainees responded that they did not have interest from the beginning. Probably the possible reason for this could emanate from their misunderstanding of the TVET objectives or it was not their first or second choice. Likewise, 21.54 per cent and 15.39 per cent of trainees confirmed that it was due to lack encouragement from their trainers and lack of job opportunities respectively. Only, 6.15 per cent of the trainers replied that it was due to lack of resources in their institutions.

Regarding item 4 of Table VII, only 34.75 per cent of trainees and 31.38 per cent of graduates asserted that the training they were pursuing was their first choice. Hence, one can imagine that more than two-third of the respondents joined in the fields which were their 2nd and 3rd choice. This in turn affects their interest or attitude toward the training which ultimately is likely to affect their performance. Moreover, for 34.75 per cent of the trainees and 25.49 per cent of the graduates it was beyond their third choice. Hence, this finding is almost consistent with the findings of reasons for lack of interest in the training. Besides, the implication, thus, is that the trainees mostly join the field of study with out their interest.

A person's training raises expectation of personal benefits of job, social status, security and enjoyment of the work after acquiring the additional skill and knowledge. In connection to this, item 5 of Table VII, was intended to assess the trainees initiation right from the beginning to join the training, to ensure whether they like it or not. Accordingly, 43.22 per cent of the

trainees confirmed that they joined the training due to lack of any other options. Conversely, 41.95 per cent of the trainees responded that they like the profession from the beginning. It is also interesting thing to note that, 34.74 per cent of the respondents were initiated by the expectation of better job opportunities.

Generally, from the above findings we can conclude that some number of trainees, for different reasons did not have interest in the training. A number of factors could be associated with this. Among others, after completing their secondary school students may not get adequate information on the programs in general and the training in particular, the poor image given to the program by their friends, family as well as their trainers and due to poor public promotion of the program. Hence, the combination of these problems negatively affects the training programs. Interest towards their training on the part of the trainees is one of the major factors for the successful attainment of the training programs objective. Moreover, one can realize that the trainees' choices were not based on understanding of the overall objectives of the TVET programs.

Table VIII

Competence of Trainees Viewed by their Trainers

No.	Item	Trainers	
		No.	%
1	What is the competence of your trainees?		
	A. Very satisfactory	5	9.61
	B. Satisfactory	29	55.77
	C. Not satisfactory	18	34.62
	Total	52	100
2	If "not satisfactory" what are the possible factors? you can answer more than one.		
	A. Trainees do not have interest in the training	15	83.33
	B. Curriculum is not relevant to the level of trainees	7	38.89
	C. The allotted time is not enough	3	16.67
	D. Trainers do not have sufficient knowledge	8	44.44
	E. Lack of adequate resources	11	61.11
	F. Others	2	11.11
	Total*		

* More than one response was possible

The trainees' competence is a function of different related factors, mainly these are, trainees interest, trainers competence, adequacy of resources and relevance of the curriculum.

As can be seen from Table VIII, a little more than half (55.77 per cent) of the trainers confirmed that their trainees competence was satisfactory. Conversely, 34.62 per cent of the trainers asserted that the trainees' competence was not satisfactory. In one or the other way, this finding is consistent with the finding in Table VI, because, as mentioned above trainees competence can be affected positively or negatively by their trainers' competence. Moreover, trainees' competence also affects their employability in the labor market.

Few numbers of trainers (9.61 per cent), confirmed that their trainees' competence was very satisfactory. In line to this, the interview held with the employers asserted that the trainees' competence in the apprenticeship training was medium.

According to the trainers opinion, the major reasons for their incompetence was lack of interest on the part of the trainees, lack of resources and teachers in competency which accounted for 83.33 per cent, 61.11 per cent and 44.44 per cent respectively.

3.3. Vocational Guidance

It is certain that the trainee in the TVET institutions faces different social, economic and academic challenges. Such challenges could, obviously, affect their academic performance. The vocational counseling department (services) in the institution is always in charge of dealing with such problem and trainees career possibilities. Whether or not this important department exists in the institutions and to what extent it is functioning, among others, was one aspect of the study. Hereunder Table IX; different questions were presented to respondents in relation to vocational guidance.

Table IX

Respondents Opinion on Vocational guidance

No.	Items	Respondents						Table-val. At Df=2	Obtained χ^2
		Trainees		Graduates		Trainers			
		No.	%	No.	%	No.	%		
1	Did you get any information choice of trade before you joined the training?								
	A. Yes	91	38.56	12	23.53				
	B. No	145	61.44	39	76.47				
	Total	236	100	51	100				
2	Did trainees get vocational advice in the institutions?								
	A. Yes	89	37.71	11	21.57	24	46.15		
	B. No	147	62.29	40	78.43	28	53.85		
	Total	236	100	51	100	52	100	5.99	7.1346
3	If Yes, from where?								
	A. Parents	25	28.08	2	18.18				
	B Friends	18	20.23	3	27.28				
	C. Vocational counselor	11	12.36	2	18.18				
	D. Staff of the institutions	35	39.33	4	36.36				
	E. Others	0	0	0	0				
	Total	89	100	11	100				
4	Was the advice -----								
	A. Very satisfactory	17	19.1			3	12.5		
	B. Satisfactory	59	66.3			16	66.67		
	C. Not satisfactory	13	14.6			5	20.83		
	Total	89	100			24	100		

As can be observed from Table IX, of item 1, 61.44 per cent of the trainees and 76.47 per cent of graduates did not get prior information on their career possibilities and choice of trades. This implies that majority of the trainees and graduates have not any idea concerning TVET program before they joined the training. However, the remaining 38.56 per cent of trainees and 23.53 per cent of graduates had prior information from different sources.

Regarding item 2 of same Table, 62.29 per cent of trainees and 78.43 per cent of graduates confirmed that they had not got vocational advice in the institutions after they joined. On the contrary, nearly half (46.15 per cent) of the trainers attested that trainees get vocational advice in the college.

As we can understand from the data, there is difference in respondents' opinion. Hence, in order to test the difference between the three groups of respondents, for further statistical analysis a Chi-square test of independence at 0.05 significant level was used to test if there was any significance difference between respondents opinion (that is there is less than a five in one hundred chances that the conclusion is erroneous).

As can be observed from the chi-square test, the Table-value 5.99 at $p<0.05$ less than the calculated value 7.1346 implies that there was statistically significant difference in the opinion of respondents regarding the availability of vocational guidance service in the institutions. This difference may emanate from the closeness of the respondents to the service, because the trainees are the users and closest to the service they have better information than the trainers.

As a whole, from these data we can infer that most of the trainees join the training program with out adequate information at their secondary school and even in the training institutions.

The Table further shows, respondents response from where the information they got. Accordingly, 39.33 per cent of the trainees and 36.36 per cent of graduates responded that they got the advice from the staff of the institution/colleges. This could possibly be from their trainers, department heads and supporting staffs. The second sources of information for the trainees were their parent which accounted for 28.08 per cent and their friends were the second source of information for the graduates, which accounted for 27.28 per cent.

One of the major duties of vocational counselors in the institutions was provision of vocational guidance to the trainees. Surprisingly the data shows that it was the least sources of vocational guidance for the trainees which accounted only, 12.36 per cent for the trainees and 18.18 per cent for graduates.

Moreover, respondents were asked as to what extent the advice was satisfactory. Accordingly, as indicated in item 4 of Table IV, majority of the respondents confirmed that it was satisfactory. On the other hand, 14.60 per cent of the trainees and 20.83 percent of the graduates replied that it was not satisfactory.

Generally, on the basis of these findings, it is reasonable to conclude that the vocational and counseling department of the institutions was not performing its duties effectively. Besides, the unavailability of this service affects trainees' interest toward their training, which in turn hampers their performance.

3.4. Resources in TVET Institutions

The availability and efficient and effective utilization of resources is a major challenge for most of the TVET institutions to attain their goals. As mentioned in the literature review, TVET requires more investment than the general education. The training facilities are prominent instrument in the process of training programs. They are tools through which training objectives are achieved. Since one of the major purposes of the study was to assess the TVET institutions status, the researcher intends to obtain on the extent to which the resources available are adequate and appropriate to the training programs objectives. Accordingly, respondents were asked to evaluate the availability of resources and their relevance using, the five point likert scale type: very low (1), low (2), medium (3), high (4), and very high (5) in the following four consecutive Tables.

Table X

Adequacy of Human resources

No	Items (Variables)	Respondents				t	Significant value
		Trainees(N=236)		Trainers(N=52)			
		Mean	SD	Mean	SD		
1	Trainers	2.9619	1.0771	3.25	1.118	-1.734	0.084
2	Qualification of trainers	3.5212	0.9518	2.0769	0.9465	3.05	0.003*
3	Tool persons	2.5169	1.1867	2.5769	0.332	-0.332	0.74
4	Vocational counselor	1.9364	0.9851	2.6731	1.1496	-4.731	0.000*
5	Supporting staffs	2.0124	1.1392	2.9231	1.1153	-5.22	0.000*
	Cumulative mean	2.5897		2.7			

(significant at 0.05)

Where: SD is Standard Deviation

Df = 286 (computed N1 + N2 - 2 = 286)

Sig. Significant (two-tailed)

The mean score of data analysis were interpreted as follows: 0.05-1.49 very low, 1.5-2.49 low, 2.5-3.49 medium, 3.5-4.49 high and above 4.5 very high.

As can be revealed from Table X of item 1, both groups of respondents agreed that the adequacy of trainers was medium, because its mean value falls in the range between 2.5-3.49. The t-test value also shows there is no statistically significant difference in the opinion of trainees and trainers regarding adequacy of trainers.

Concerning item 2 of Table X, the qualification of trainers was low, according to the trainers view. Conversely, according the trainees view it was found almost high with a mean value of 3.5212. The variation in response was also confirmed by the t-test value. The t-test value shows there is statistically significant difference between the respondents as to trainers' qualification. One of the possible reasons for the variation between the respondents could be their closeness to the information. The trainers finding is in harmony with the findings in the characteristics of respondents, which is their qualification.

In the same Table item 3, respondents were asked to evaluate the adequacy of tools person. Consequently, it seems there is a consensus on the extent of tool persons by both groups of respondents. The mean value was found in between 2.5169 for trainees and 2.5769 for trainers. The t-test value also reveals that there is no statistically significance difference between the respondents in perceiving extent of tool persons.

Concerning vocational counselors and supporting staffs, it was found out that low for the trainees and medium for trainers. Moreover, there was statistical difference between the two group of respondents in viewing the extent of vocational counselors and supporting staffs. The finding regarding inadequacy of vocational counselor is also consistent with the findings about lack of vocational counselors in the institutions (Table IX, item 2).

As a whole from the above findings, it is possible to conclude that the adequacy of human resources in the institutions was laid in the interval between low and medium. This implies that there is a shortage of personnel in the training institutions.

Table XI

Availability of Training Materials

No	Items (Variables)	Respondents				t	Significant value
		Trainees(N=236)		Trainers(N=52)			
		Mean	SD	Mean	SD		
1	Machines and Equipments	2.9831	1.2307	2.8269	1.1153	0.842	0.401
2	Hand tools	3.3136	1.1864	3.0192	0.98	1.667	0.097
3	Training models/charts	2.8008	1.1626	2.4038	1.0893	2.254	0.025*
4	Consumable row materials	3.127	1.4246	2.8462	1.0363	0.797	0.426
	Cumulative mean	3.0275		2.77			

(Significant at 0.05)
Df = 286

As can be see from the t-test value, except for the training models there was no significant difference between the respondents opinion in perceiving the availability of training materials. Moreover, the mean value for all items was found to be medium, but low for training models perceived by the trainers. However, in spite of such differences and similarities across all items in Table XI, respondents' cumulative level of assessment for the availability of training materials was medium.

This finding is consistent with the information of the researcher collected through observation. There are some machines and tools which did not function due to lack of maintenance. Moreover, there is a problem of work shops. For instance, in some of the institutions only one work shop was used for auto machine, while both the electrical and motor work was done in a congested area. This may result in a great damage on the work shops when a problem arises in the electrical one. The trainers stressed that it is not recommendable to have such types of work shops. On the other and, interestingly there are expensive and latest machines in the machine technology workshop almost in all the sampled institutions.

On top of these, even though, the institutions have well furnished and equipped libraries there were no adequate relevant reference materials. The trainees and trainers have no access to internet. Majority of the institutions have relatively enough compounds for expansion but often no recreational facilities.

Table XII

Adequacy of Financial Resources

No	Items (Variables)	Respondents				t	Significant value
		Trainees(N=236)		Trainers(N=52)			
		Mean	SD	Mean	SD		
1	Recurrent budget for raw mater.	2.5339	1.2661	2.8269	1.1669	-1.531	0.127
2	Capital budget for machines	2.4237	1.2267	2.3077	1.032	0.634	0.527
3	Budget for project work	2.1568	1.1169	2.3077	1.0202	-0.895	0.371
4	Budget for field visit	1.6017	0.9905	1.5577	0.8264	0.298	0.766
	Cumulative mean	2.179		2.25			

(Significant at 0.05)
Df = 286

Among the four items listed in Table XII, except item 1 all of them were found to be low and very low. The mean results of these items were between 0.9905 and 2.4237. In other words, the result of their mean values indicated that it was below average (2.5). Both respondents confirmed that the recurrent budget for raw material was medium. Moreover, as can be seen from the t-test value there was no observable statistical difference between the trainees and trainers in assessing the availability of financial resources. Though there were some differences and similarities in assessing the adequacy of finance by both respondents across all items of Table XII, the cumulative mean value of both respondents were found low with out statistically significant differences.

As far as the financial resource of the institutions is concerned, the interview conducted with the officials in the education bureau has asserted that the colleges have autonomy over their financial resources. However, the middle level institutions are not autonomous; they used their finance via the sub cities. This results delay in obtaining the required materials for the training programs. This was mainly due to lengthy purchasing and disbursement procedures. Besides, the official adds the colleges have the right to recruit and hire their man power from the labor market in line with the government rules and regulations, but the pay scale did not attract senior and competent trainers. This was also not granted for the middle level TVET institutions, it is one of the major organizational problems for the institutions that hinder effective utilization of their resources.

As depicted in Table XII of item 3 and 4, the allotted budget for the project and field visits were low as compared to the other items. This implies that the trainees have not ample access to practical works.

Generally, from the above findings we can deduce that the allotted finance for both items were found to be insufficient to run the training programs as desired. Of course, the problem was more severe in the middle level TVET institutions.

Table XIII

Appropriateness of the Available Machines and Tools

No	Items (Variables)	Respondents				t	Significant value
		Trainees(N=236)		Trainers(N=52)			
		Mean	SD	Mean	SD		
1	To local situation	2.8263	1.1667	2.6731	0.9229	0.887	0.376
2	To level of trainees	2.9068	1.1777	3	1.0664	-0.525	0.6
3	To level of trainers	3.0381	1.2039	3.1538	1.0172	-0.644	0.52
4	Up-to-date ness	2.843	1.2568	2.7115	1.1085	0.698	0.486
	Cumulative mean	2.9035		2.8846			

(Significant at 0.05)
Df = 286

In addition to adequacy of machines and tools, their relevance to the intended objective is one of the key preconditions for success in the training programs. To obtain a general picture of the appropriateness and up-to-datedness of the available machines and tools respondents were asked to air their view, Table XII contains their results. As it was indicated clearly in the table the mean value of all items were found medium for both respondents. Furthermore, as can be observed from the t-test value of the Table there was no statistically significant different for all items between the trainers and trainees in viewing the appropriateness of the available machines.

Moreover, despite the slight difference in ratings the items by both respondents across all items of the Table, their cumulative mean value were found medium, with out statistically significant differences. This implies that to some extent the available machines and tools were not

appropriate to the intended purpose. This also leads to difficulty in coping up with the world of work, on the part of the trainees.

As a whole, it can be concluded, therefore, that the TVET institutions in Addis Ababa were facing a shortage of resources and problem of relevance as was confirmed by the respondents and observation made in the fields.

Table XIV

Respondents Opinion on the Allotted Time

No.	Item	Respondents						Table -value at Df=2	Obtained χ^2
		Trainers		Trainees		Graduates			
		No	%	No.	%	No.	%		
1	Is the time allotted in 10+2 program sufficient to acquired the required skills?								
	A. Yes	39	75	99	41.95	30	58.82		
	B. No	13	25	137	58.05	21	41.18		
	Total	52	100	236	100	51	100	5.99	20.68

In addition to material, human and financial resources time is a crucial resource in the implementation of the training programs. The duration of any training program had a significant effect on the end-products. To this end respondents were asked whether the allotted time for10+2 programs are sufficient or not. Consequently, most of the trainers (75 per cent) asserted that it was sufficient. Like wise, 58.82 per cent of the graduates shared the trainers' opinion. On the others side, more than half (58.05 per cent) of the trainees claimed that it was not sufficient to acquire the necessary skill and knowledge.

One of the possible sources of this difference opinion between trainers and trainees could be their understanding of time. Accordingly, trainers perceive time in terms of the allotted time in the whole academic year, where as trainees perceive time as the contact they have with their trainers in the classrooms and workshops. Moreover, trainees substantiate this idea in the open ended questions; it was found that the improper utilization of time on the part of trainers was cited as one of the major problem in the institutions.

Further statistical analysis was used to test the difference of opinions among the three groups of respondents. Hence, the Chi-square test at 0.05 level of significant shows that, the calculated $\chi 2$ (20.68) was greater than the table value of $\chi 2$ (5.99), this implies that there is statistically significant difference between the trainers and trainees in perceiving the allotted time for the program.

Table XV

Planning of the Program and Resource Consideration

No.	Items	Trainers	
		No.	%
1	Which planning approach is used currently?		
	A. Planned and approved by the Education Bureau.	2	50
	B. Planned by the colleges/institutions deans and approved by the Education Bureau.	2	50
	C. Planned by departments and approved by the dean/principal and latter by the Education Bureau.	0	0
	D. Planned and approved by the college/institutions dean/principals.	0	0
	Total	4*	100
2	Consideration of resources in enrollment of trainees---		
	A. High	4	7.69
	B. Moderate	21	40.38
	C. Low	19	36.53
	D. Not at all	8	15.4
	Total	52	100

*The question was treated only by deans/principals

The planning of training programs started with the collection, compilation and analysis of the available data. Among other things, consideration of the existing resources is one of the major components in planning. Moreover, planning demands collaborative efforts from different parts with in or out side the organizations. In relation to this, Table XV was intended to assess the planning approaches used by the institutions and extent of resources consideration while they are planning.

Regarding the planning approach used in the institutions, half (50 per cent) of the respondents asserted that it was planned and approved by the education bureau. The remaining respondents confirmed that it was planned by the institutions and approved by the education bureau. As can

be seen from the respondents distribution of responses there are two approaches of planning in the institutions. Though, it was not portrayed in Table XV as the researcher look thoroughly in to the responses the difference was due the nature of the institutions. The middle level TVET institutions used the plan prepared by the education bureau where as the colleges prepared the plan and sent to the education bureau for approval.

Concerning item 2 of same Table, almost half (51.93 per cent) of the respondents suggested that there was low and no consideration of resources during respondents enrollments. On the contrary, 40.38 per cent of the respondents replied that the consideration was medium. In supporting this idea the officials also confirmed that enrollment was basically decided based on the number of students who did not join to the preparatory programs. Hence, from this finding one can realize that there was low consideration of resources in planning the trainees' enrollment. Moreover, the training program seems supply driven than demand driven.

This finding is also consistent with the respondents' opinion to the open ended questions about the existing problems. They were reported that more number of trainees in one occupation was one of the major problems in the institutions.

3.5. Feasibility of the Training Programs

One of the pillar objectives of TVET is related to its contribution to employment opportunities. The employability of graduates is also determined by the skills and knowledge they acquire and the availability of the labor market in the country. Hence, the assessments regarding acquisition of expected skills and knowledge in their respective fields of study can help us to assess the value of the training programs in particular and the quality of the training in general. The application of knowledge and skill is central to the performance of a trainee graduated from TVET institutions. Based on this premise in order to assess the extent of the skill and knowledge, trainees were asked as to whether they were satisfied or not with the training they had in their institutions.

Table XVI

Respondents Opinion on the Feasibility of the Training Programs

No.	Items	Respondents						Table value At DF=1	Obtained χ^2
		Trainees		Graduates		Trainers			
		No.	%	No.	%	No.	%		
1	Is the skill and knowledge you/they acquired sufficient to start your/their own business or employed?								
	A. Yes	94	39.83			31	59.61		
	B. No	142	60.17			21	40.39		
	Total	236	100			52	100	3.84	7.0723
2	If No, why?								
	A. Training not related to the world of work	21	14.79			3	14.28		
	B. More time spent on theory	73	51.4			12	57.14		
	C. Machines and tools in the institutions are not related to the practical work	42	29.57			6	28.57		
	D. Others, like teachers incompetence	22	15.79			4	19.04		
	Total*								
3	Is the job you are doing now related now related to your field of study?								
	A. Yes			22	78.57				
	B. No			6	21.43				
	Total			28•	100				
4	Extent of relating theory and practice---								
	A. High	71	30.08	4	18.18				
	B. Medium	124	52.55	14	63.64				
	C. Low	41	17.37	4	18.18				
	Total	236	100	22	100			5.99	1.2918

* More than one response was possible

• Treated only by employed graduates

As indicated in Table XVI above, most (60.17 per cent) of the trainees seem to have not confidence in the skill they acquired to start their own business or to be employed. Conversely, less than half (39.83 per cent) of the trainees indicated that they had acquired sufficient skill and knowledge which enabled them to start their own business or to be employed in other organizations. Conversely, 59.61 per cent of the trainers asserted that it was sufficient to start their own business or employed in others. The obtained chi-square test, $\chi^2 = 7.0723$ (at Df=1 and Table-value 3.84) indicates a significance difference between the respondents regarding the adequacy of the training. Possibly this difference emanates from self-defense of the trainers and/or high expectations of the trainees from the training programs.

Therefore, it possible to conclude that, though, the prime objective of TVET was employment creation, the trainees did not acquire sufficient skill and knowledge that enabled them to become self-employed or wage employed.

In connection to this, respondents were also asked to point out the reasons for the lack of sufficient skills. Accordingly, nearly half (51.40 per cent of trainees and 57.14 per cent of graduates) claimed that most of the training time were spent on theory. Similarly, the available tools and machines in the institutions were not related to the practical work, accounted 29.57 per cent of trainees and 28.57 per cent of trainers. Moreover, the training not related to the world of work and trainers' incompetence accounted less than 20 per cent for all respondents.

This finding implies, although in principle, 70 percent of the training session was allotted to practical work, in reality most of the trainings time were spent on theory.

The 3rd item in Table XVI, were also intended to assess the relevance of graduates fields of study and their current job. Interestingly, majority (78.57 per cent) of the graduates were engaged in their fields of study. The remaining, 21.43 per cent were working in different fields. The reason given by those who replied negatively was, they did not get work in the occupation for which they were trained. For instance, two electricity graduates were working as driver. Moreover, a few number of graduated respond that they were not interested to work on their fields of study.

The success of any technical and vocational training is to a large extent measured by its graduate's ability to apply the skill and knowledge in to practical work situation. Hence, for trainees to succeed, the training institutions must succeed in training him/her how to do things and not only in teaching him/her theory. To this end, in item 4 of the same Table, it was intended to know the extent of correlation between theory and practice. Consequently, the finding implies that 52.55 per cent of trainees and 63.64 percent graduates have confirmed that the correlation was medium. Moreover, respondents ranging from 15-20 per cent responded it was low. Contrary to this, 30.08 per cent of trainees and 18.18 per cent of graduates confirmed that it was high. . In order to test their difference a chi-square test was employed, consequently,

the calculated χ^2 =1.2918 (at Df=2 and sig=0.05) was less than the Table-value (5.99). This implies that there is no statistically significance difference between the respondents view regarding the degree of correlation between theory and practice.

This finding is directly related with item 2 of the same Table, both of them indicate that the training secession was highly dominated by theory. Hence, it is reasonable to infer that the trainees lack practical skill in the training.

Besides, this finding is in harmony with the employers' opinion, they suggested that the apprentices did not have more practical know how in the training. Because of this problem they were afraid to be involved in the practical work. In general, from the foregoing findings, one can conclude that there was a serious problem in the acquisition of sufficient skills to the trainees and relating theory into practice. Hence, this affects the whole objectives of the training programs and employability of the graduates.

Table XVII

Relevance of Trades to the Labor Market

No.	Items	Respondents						Table-value at Df=2	Obtained χ^2
		Trainees		Trainers		Graduates			
		No	%	No	%	No	%		
1	Do you think the trades provided inthe institutions are relevant to the world of work?								
	A. Yes	199	84.32	31	59.6	44	86.27		
	B. No	37	15.68	21	40.4	7	13.73		
	Total	236	100	52	100	51	100	5.99	18.1688

The mere provision of training and acquiring sufficient skills and knowledge in the required level in an institution, in general, and to a given trainees in particular, could on its own nothing to the over all objectives of TVET programs. That is, unless the training programs are relevant to the world of work in the country, with what ever diversified programs and qualification it could contribute nothing. It was in this view that an attempt was made to find out whether or not the available trades in the institutions are relevant to the world of work. Subsequently, as can be observed from Table XVII, the great majority of trainees and graduates (84.32 per cent

and 86.27 per cent respectively) confirmed that the available trades were relevant to the world of work.

Like wise, quite a majority (59.62 per cent) of the trainers asserted that the trades were relevant to the world of work. However, a considerable number of trainers (40. 38 percent) responded that the trades were not relevant to the world of work. In order to test the differences or similarities among the group of respondents further statistical tool ($\chi 2$) was employed, accordingly, the obtained value of $\chi 2=18.1688$ was greater than the Table value=5.99 (at 0.05 significant level and Df =2). This implies that there is a significant difference in the respondents as far as the relevance of the trades to the labor market is concerned.

Generally, however, there was a significant difference among the respondents, since majority of the graduates confirmed that they are relevant, it is reasonable to conclude that regardless of their content and mode of delivery most of the trades provided in the institutions were relevant to the world of work. Because, the graduates were at the grass root level of the world of work, they have better exposure to the situation than others.

3.6. Need Assessment and LMIS

Mere expansion of TVET institutions with variety trades can not guarantee the successfulness of the TVET objectives. That is, unless the commencement of these different trades was based on training needs and LMIS. Though the nature of the TVET program is flexible and impossible to predict the need accurately, the use of need assessments and LMIS is an indispensable activity for the training institutions. With this view the study tried to assess the practice of need assessments and LMIS by asking different questions to the trainers.

Table XVIII

Training Need Assessment and Labor Market Information Systems (LMIS)

No.	Items	Trainers	
		No.	%
1	Do your institutions/colleges conduct need assessments?		
	A. Yes	11	21.15
	B. No	41	78.85
	Total	52	100
2	If yes, how often?		
	A. Annually	7	63.64
	B. Every three years	2	18.18
	C. Every five years	0	0
	D. Others	2	18.18
	Total	11	100
3	Mechanisms to obtain adequate and timely LMIS		
	A. Tracer study	4	100
	B. Labor market monitoring	0	0
	C. Need assessment	0	0
	D. All	0	0
	Total*	4	100

*The question treated only by the deans/principals

As portrayed in Table XVII, most of (78.85 per cent) of the respondents asserted that there was no need assessment. Conversely, 21.15 per cent responded that there was need assessment in their college. Like wise, majority of the respondents attested that it was carried annually.

In harmony to the above finding, in the interview held with the officials, all of them approved that there was no need assessment at city level. The officials also added, there was an attempt in 2004 but it was not detailed and comprehensive. Among other things, shortage of finance was cited as a major problem. Moreover, lack of Research and Development Department in the office was also another challenge for those and other related activities. Though, it was not explicitly put in the Table all the deans/principals attested that there was no need assessment in their institutions. Hence, the positive response forwarded by some of the trainers could be due to lack of proper understanding to the activity.

Regarding item 3 of Table XVIII, all of the deans/principals responded that the source of their LMIS was tracer study. As can be seen from the document of the institutions there was a format used to follow-up the graduates, but for different reasons none of them have applied it. The source of their LMIS was based on scattered information from here and there.

In general, from the foregoing findings, one can imagine that, however, the government and the public spend a lot on the programs; they were not based on training need assessment. Hence, as the researcher's view this could adversely affect the training programs. Besides, it could also aggravate the already existing educated unemployment.

Table XIX

Trades prioritized in the Labor Market

No.	Fields of study	Respondents														Di	Di^2
		Trainers(N=48)							Graduates(N=48)								
		1	2	3	4	5	Mean	Rank	1	2	3	4	5	Mean	Rank		
A	Industrial	22	11	14	1	0	1.98	2	14	12	18	4	0	2.25	3	-1	1
B	Business	6	8	19	8	7	3.04	3	14	22	6	6	0	2.08	2	1	1
C	Construction	14	28	3	3	0	1.89	1	24	12	12	0	0	1.75	1	0	0
D	Textile	4	1	6	22	15	3.89	4	2	6	18	22	0	3.25	4	0	0
E	Home science	0	1	4	18	25	4.39	5	0	4	4	16	24	3.83	5	0	0
	Total																$\Sigma Di^2=2$

N.B. 1 for the best preferable ...and 5 for the least preferable
-Because the question was not treated by all respondents the number of graduates and trainers was not similar to the total number of respondents

Key: Weighted Mean = $\frac{w_1f_1+w_2f_2+....+w_5f_5}{f_1+f_2+....+f_5}$

where - $f_1, f_2 .... f_5$ are observed frequencies

- $w_1, w_2 .... w_5$ are weights given

Under the above five major fields of study there are more than forty trades provided in the institutions. Although, these fields are relevant to the world of work, in terms of their priority in the labor market there is difference among these fields of study. With this view in mind the researcher intends to assess the demands of each fields of study in the labor market. The relevance of this question also lays in the fact that there is an observable difference on the demand of the trades. Consequently, both respondents agree in ranking the 1st, 4th and 5th fields of study are demanded in the labor market currently.

On the other side respondents did not agree in ranking the 2nd and 3rd fields of study. The interview made with the officials and employers also strengthens this fact with a slight difference. In both groups of respondents, although the ranking of the different fields varies, construction technology retains its position as the top prioritized fields of study according to both respondents. One of the possible explanations for this could be the massive expansion of construction projects in the country.

In order to test the variation between the two groups of respondents in ranking the different fields of study, further statistical analysis was used to test the extent of agreement or disagreement, using the Spearman's Rank Correlation Coefficient, i.e. calculated by the following formula.

$$\gamma_s = 1 - \frac{6\Sigma di^2}{n(n^2-1)}$$

Where: γ_s - Spearman's Rank Correlation Coefficient
di- Differences in ranking
n- Number of observations (fields of study)

Using the formula γ_s was obtained 0.88.The value of γ_s approaches to 1; it implies that there is a strong positive agreement on the groups of respondents in ranking the fields of study prioritized in the labor market. Hence, it seems that there is a consensus on the ranking of the fields of study demanded on the labor market by both groups of respondents.

3.7. Stakeholders participation and Apprenticeship Training

Strengthening the role of stakeholders on the one hand and minimizing the role of government on financing and managing the TVET institutions on the other hand have a paramount importance on the achievement of TVET objectives. From the very beginning of their establishment, TVET institutions were supposed to have an integrated net work with different organizations, for planning, training and other assistance purposes. The apprenticeship training in the TVET program demands a sound co-operation among employers, institutions, the apprentices and governments.

Table XX

Participation of Stakeholders and Apprenticeship Training

No.	Items	Respondents				Table value at Df=2	Obtained χ^2
		Trainers		Graduates			
		No.	%	No.	%		
1	Participation of stakeholders in general and emplo						
	yers in particular in TVET institutions						
	A. High	0	0				
	B. Moderate	0	0				
	C. Low	1	25				
	D. No participation at all	3	75				
	Total*	4	100				
2	Importance of apprenticeship to the over all training...						
	A. High	3	5.77	25	49.02		
	B. Moderate	32	61.54	24	47.06		
	C. Low	17	32.69	2	3.92		
	Total	52	100	51	100	5.99	30.2636
3	If low or moderate, what are the problems?						
	A. Organizations do not have resources	16	32.65	11	42.3		
	B. Not allowing trainees on machine and tools	23	46.93	9	34.6		
	C. No follow up in the training	17	34.69	24	92.3		
	D Inappropriateness of the training with the major fields of study	8	16.32	4	15.38		
	E. Supervisors assigned was less qualified	3	6.12	2	7.69		
	F. Others						
	Total•						

*The question treated only by deans/principals

• More than one response was possible

Table XX, was intended to examine the extent of stakeholders participation on the training programs. Consequently, majority (75 percent) of the deans/principals confirmed that no participation at all. Like wise the remaining, 25 percent responded that it was low.

In connection to this, the interview held with the employers also substantiates this fact. They stressed that their role were limited only in accepting the apprentices. Besides, they were not consulted in advance to train the apprentices; the institutes send the apprentices when the need arise. On top of this, the officials also reported that there were attempts to involve the stakeholders in matters related to TVET, at the beginning of the program, but it did not continue.

Therefore, it is possible to deduce that the role of government is still dominant, whereas the participation of stakeholders is very low.

At the end of year two trainees were expected to get practical training through apprenticeship training for 312 hours. This helps trainees to apply their skills and knowledge in to practice; at the same time it enables them to introduce themselves with the world of work. In relation to this, respondents were asked as to what extent is the importance of apprenticeship program. To this end, 61.51 per cent of trainers and 47.06 per cent of graduates suggested that its importance was medium. Conversely, almost half (49.02 per cent) of graduates responded that it was high.

To test the difference in opinion between the two groups of respondent, further statistical analysis was employed, i.e. Chi-square. As can be observed from the Table, the obtained value of the $\chi^2 = 30.2636$ was by far greater than the Table value (5.99), we can conclude that there is statistically significant difference between the two groups of respondent in evaluating the importance of apprenticeship training to the over all training program.

Based on the foregoing question respondents were also requested to explain their reason as to why the importance of the apprenticeship program was low or medium. To this end, majority (92.30 per cent) of the graduates stated that it was due to lack of follow up during the training. Like wise, 46.93 per cent of trainers and 34.60 per cent of graduates affirmed that it was due to prohibition of trainees in using machines and tools in the organizations. Following these, lack of resources, incongruence of the training with their major fields of study and incompetence of trainers were the other reasons.

Moreover, the interview made with the employers disclosed that there was no continuous follow-up on the part of the organizations and the institutions. The only follow up or monitoring method was the evaluation result filled at the end of the program. Even some of the organizations did not have confidence of the trainees and they did not allow using machines and tools. This was possibly due to fear of wastage of resources and to some extent lack of insurance on the part of trainees. Besides, due to the assignment of more trainees to the

organization, they were enforced to train the trainees on shift basis. This was below the allotted hours. Delay in the assignment of the organization also affects the duration of the program. Some apprentices have also faced difficulties in searching the organizations.

Hence, we can conclude that the trainees did not get sufficient skills and experience from the apprenticeship training.

3.8. Employment Preference and Employability of graduates

The following five Tables attempt to assess the employment preference and employability of graduates.

Table XXI

Employment Preference of Respondents and Graduates Job Opportunities

No.	Items	Respondents					
		Trainees		Graduates		Trainers	
		No.	%	No.	%	No.	%
1	Which type of work do you like?						
	A. Office work	144	61.01	27	52.94		
	B. Manual work	92	38.99	24	47.06		
	Total	236	100	51	100		
2	In what sector do you like or expect to be permanently employed?						
	A. Government	86	36.44	4	7.84		
	B. Non government organizations	48	20.34	12	23.53		
	C. Private organizations	37	15.68	12	23.53		
	D. Self-employed	65	27.54	23	45.10		
	Total	236	100	51	100		
3	A chance of job opportunities for TVET graduates...						
	A. High			10	19.61	3	5.77
	B. Moderate			22	43.14	32	61.54
	C. low			19	37.25	17	32.69
	Total			51	100	52	100
4	If low, why?						
	A. No. of graduates' exceeds vacancies.			10	52.63	14	82.35
	B. Lack confidence on the part of employers			6	31.58	5	29.41
	C. The fields are not related to the world of work.			4	21.05	8	47.05
	D. Others			2	10.53	2	11.76
	Total*						

* More than one response was possible.

TVET, as its name implies, is more of manual work and employment oriented. Hence, the trainees should not depend only on government employment; rather they have to be also self-employed. In line to this, Table XXI, tries to show work favored by respondents, employment preference and employment opportunities. Accordingly, as can be observed from Table XXI of item 1, 61.01 per cent of trainees and 52.94 per cent of graduates favored office work. The remaining, 38.99 per cent of trainees and 47.06 per cent of graduates preferred manual work. Based on the findings, one can imagine that majority of the trainees and graduates did not understand the objectives of TVET programs. This could be possibly due to lack of proper guidance at the out set of the training and lack of continuous public promotion on the part of the government.

Item 2 of the same Table, indicates the employment preference of graduates and trainees. Accordingly, 36.44 per cent of the trainees expected permanent employment in government offices, whilst 45.10 per cent of the graduates preferred self-employment. The most interesting finding in this regard is that only 7.84 per cent of the graduates favored government employment. One of the expected reasons for the variation in respondents' preference emanates from their closeness to the world of work. Because graduates were at the fore front, they can realize the importance of self-employment more than the trainees. Conversely, trainees were glad to be employed in the government to secure their career.

Item 3 of Table XXI treats the extent of employment for 10+2 TVET graduates. To this end, 43.14 per cent of graduates and 61.54 per cent of trainers suggested that it was medium. The Table further shows respondents ranging from 32-37 per cent confirmed that it was low. On the other hand, only 5.77 per cent of trainers and 19.61 per cent of graduates attested that there were high employment opportunities for 10+2 TVET graduates.

Regarding item 4 of the same Table, respondents were also asked as to why the job opportunities for 10+2 TEVT graduates were low. Consequently, most (82.35 per cent of trainers and 52.63 per cent) of graduates pointed out that the number of graduates exceeds the available vacancies. Following this, lack of confidence on the part of the employers and trades are not related to the world of work accounted to less than 50 per cent of the respondents.

However, the interview conducted with the officials and majority of the employers suggested that employment opportunity for TVET graduates, particularly for the sample fields of study was not low, unless the graduates preferred office work and high pay. The respondents also add that in other occupations there is an over production of graduates which was specially pronounced in the business areas.

Concerning the interest of the employers in hiring the TVET graduates, all of them confirmed that they were interested to hire. But due to lack of experience and limited vacancies for certificate holders, none of the organizations involved in hiring 10+2 graduates from the sample fields of study, except one organization. Of course, there were accountants and secretaries hired in the organizations.

In general, from the above finding, we can conclude that a considerable number of trainees preferred white collar jobs which are not in line with the objectives of TVET programs. Moreover, the job opportunities for TVET graduates is limited to small privately owned organizations and self-employments

The following Table shows the number of 10+2 graduates in different fields of study from 2003- 2005 in the regular program.

Table XXII

Number of 10+2 Graduates by their trade (2003-2006)

No.	Fields of study	Occupation	10+2 Graduates				
			1995E.C	1996E.C	1997E.C	1998E.C	Total
1	Textile and garment technology	Textile Technology	76	40	79	83	278
		Tailoring	28	55	84	36	203
		Dress Making	0	28	37	0	65
2	Construction technology	Drafting	333	345	162	208	1048
		Surveying	327	236	179	109	851
		Road Construction	220	153	123	100	596
		Building Construction	391	256	245	188	1080
		Woodwork	224	224	147	66	661
3	Industrial technology	General Mechanics	429	292	187	77	985
		Machine Technology	264	112	45	57	478
		Auto Mechanics	587	3	256	175	1021
		Electronics	406	218	111	99	834
		Electricity	582	328	264	206	1380
		Total	3867	2290	1919	1404	9480

Source: Computed from report of CGAAEB

As can be observed from Table XXII, the numbers of graduates in the three fields of study decreased from 3867 in 1995 E.C. to 1404 in 1998 E.C. However, the decrement of graduates did not follow similar pattern through out the consecutive years. Moreover, this data seems inconsistent with the finding in Table XXI of item 4, the number of graduates exceeds the available vacancies. As far as Addis Ababa is concerned such number of graduates below 2000 annually can not considered excess, because there are a lot of constructions and projects that can absorb the graduates.

As the researcher reviewed the report from the city government of Addis Ababa social and labor affaires there are 328 and 128, 10+2 TVET graduates registered job seekers in 1997 E.C. and 1998 E.C. respectively in the ten sub cities. To some extent this indicates that the number of job seekers was not high as compared to the number of graduates.

Table XXIII

Trainees Interest toward Self-Employment

No.	Item	Trainees	
		No.	%
1	Do you have interest to start your own business?		
	A. Yes	173	73.3
	B. No	63	26.7
	Total	236	100

In addition to the resource related factors, the individual interest toward self-employment have a significant role to become a competent and successful entrepreneur. With this understanding in mind the trainees were asked their inclination toward self-employment. Consequently, the data from Table XXIII revealed that majority (73.30 per cent) of the trainees have interest toward self-employment. The rest, 26.70 per cent of the trainees did not have interest to become self-employed.

From these finding it is possible to deduce that if fertile conditions were arranged from the government, institutions and society the graduates could be engaged in self-employment.

In the following table an attempt was made to identify the major barriers to self-employment.

Table XXIV

Why Self-Employment is Difficult?

No.	Reasons	Respondents													
		Trainees(N=27)							Graduates(N=40)						
		1	2	3	4	5	Mean	Rank	1	2	3	4	5	Mean	Rank
	Rank according their priority														
1	A. Lack of finance	17	4	5	0	1	1.67	1	24	14	0	2	0	1.5	1
	B. Lack of materials	5	8	8	2	4	2.7	3	2	12	18	8	0	2.8	2
	C. Lack of entrepreneurial skill	0	4	3	17	3	3.7	4	4	5	12	16	3	3.22	4
	D. Lack of working places	6	6	8	5	2	2.66	2	5	8	7	10	8	3.05	3
	E. Lack of interest	3	0	0	4	20	4.40	5	6	0	0	0	34	4.4	5
	Total														

N.B. All the respondents did not react to the question properly, hence number of respondents was not same to the number of respondents replied "No" in table xxiii.

As mentioned in the previous discussion, self-employment demands certain support from different parts. In connection to this, trainers and graduates were asked to identify the major barriers that hindered from becoming self-employed. Accordingly, as indicated in Table XXIV, all respondents agreed that lack of finance was the major problem. As shown the mean value of financial problem (1.67 for trainees and 1.5 for the graduates) varied from the other problems. This implies that financial problem was a serious problem of all the factors. Next to finance, lack of material and lack of working places were cited as the second and third problems, however, they were ranked differently by both groups.

The Table further shows, lack of entrepreneurial skill and lack of interest were the last two reasons. As can be seen from the mean value of respondents, lack of interest (4.4) was far from the other mean values. This implies that lack of interest was the least factor that hinders the self-employment activities. Besides, this finding is consistent with Table XXIII; majority of the trainees had interest toward self-employment. Similarly, this finding is inconformity with the literatures and study conducted by CSA in 2004; the lack of finance and working places were the major problems in self-employment.

Generally, form the above finding one can deduce that the factors that affect self-employment were external factors, which are beyond the graduates' capacity.

Table XXV

Employability of Graduates

No.	Items	Graduates	
		No.	%
1	Why did not you get a job?		
	A. Due to lack of information	0	0
	B. Lack of vacancies in the field I trained	6	26.09
	C. Low salary/pay	5	21.74
	D. Lack of work experience	12	52.17
	E. Due to lack of sufficient skill	0	0
	Total	23	100
2	Are you searching a job since you graduated?		
	A. Yes	20	86.95
	B. No	3	13.05
	Total	23	100
3	If yes, through……..		
	A. Registering in employment agencies	17	85
	B. Vacancy notices	14	70
	C. Personal contact with employment agency	2	10
	D. Family effort	0	0
	E. Other	0	0
	Total*		
4	For how long you worked since you graduated?		
	A. Below six months	6	11.77
	B. One year	10	19.61
	C. 1-2 year	12	23.53
	D. I did not work since I graduated	23	45.09
	Total	51	100

* More than one response was possible

As can be observed from Table XXV of item 1, lack of work experience for the TVET graduates was the major obstacle raised by the graduates in finding a job which accounted for almost half (52.17 per cent) of the respondents. This opinion was consistent with the employers' opinion. The employers confirmed that they do not have a vacancy that attract a TVET graduate below diploma and zero year work experience. On the other hand, lack of vacancies in the field they were trained and low pay were the second and third reason which accounted for 26.09 per cent and 21.74 per cent respectively.

On the contrary, none of the graduates mentioned lack of skill and lack of information was a serious problem for finding a job. This finding seems inconsistent with the finding in item 4 of Table XXI. According to the researchers view, since the unemployed graduates were closest to

the grass root and it was affirmed by the employers the lack of work experiences is the significant factor for the lack of job, particularly for the sample fields of study.

Except for quite few portion (13.05 per cent) of unemployed graduates, majority (86.95 per cent) of them were searching jobs since they graduated.

Concerning the employment methods, as indicated in item 3 of Table XXV registering through employment agencies and vacancy notices were the dominant method used by the unemployed graduates to search a job which accounted for 85 per cent and 70 per cent consecutively.

As to employment duration, graduates were asked about the interval between graduation and employment entry; consequently 45.09 per cent of the graduates reported that they did not work at all since they graduated. Conversely, 23.53 per cent of graduates have worked for about one to two years. Like wise, 19.62 per cent of the graduates worked for one year. And the remaining 11.77 per cent of graduates worked for less than six months.

As a whole, from the above findings it is possible to conclude that lack of work experience and limited vacancies in the fields were the major factors that affect the employability of the graduates.

In addition to close-ended questions and interviews held with respondents, two basic open-ended questions were also provided to all respondents. These were:

- What are the major problems that hindered the effective implementation of TVET programs?
- What possible suggestions would you forward to make effective the training programs and increase the employability of the graduates?

Accordingly, the major ones are depicted hereunder.

Major problems that affect the TVET programs

- More number of trainees in the class /workshop, which is beyond the capacity of the workshops and resources.
- Lack of machines and equipment which are used for practical works and delay in maintenance.
- Lack of raw materials.
- Lack of competence and encouragement from the trainers.
- Improper utilization of time.
- Poor management systems.
- Lack of positive relationship between the trainees and trainers.
- More time spend on theory.
- Lack of interest on the part of trainees and trainers.
- Weak connection between the institutions and organization offering apprenticeship training.
- Lack of follow up to the apprentices from both parts.

Basic comments and suggestions

- Limit the number of trainees per workshop/class.
- In advance preparation of apprenticeship training from both parts, i.e. the institutions and the organizations.
- Enrollment should be based on interest.
- Organizing the graduates to become self-employed.
- On time maintenance of the available machines.
- Continuous public promotion on the part of the government regarding the program.

CHAPTER FOUR

4. Summary, Conclusion and Recommendations

This final chapter of the study deals with the summary of findings, conclusions arrived at based on the major findings, and recommendations which the researcher assumes to be practical are also forwarded.

4.1. Summary of the Findings

The study was aimed at assessing the present status of TVET institutions in Addis Ababa in relation to their contribution to employment opportunities. To this end, to meet the intended objective the study was guided by basic research questions. Factors that affect the status of TVET institutions, application of LMIS, job opportunity of graduates, trade demanded in the labor market, resources and employability of graduates were raised in the course of the study.

The study employed descriptive survey method. To address the basic research questions relevant literatures were reviewed. The subjects of the study were 236 trainees, 52 trainers, 51 graduates, 15 employers, and 3 officials from the education bureau. It was conducted in four government TVET institutions in Addis Ababa. The simple random, purposive, available and stratified sampling techniques were used to incorporate pertinent respondents in to the sample.

Questionnaire, interview, observation and document analysis were used to obtain the relevant information from the respondents and institutions under study.

The data obtained was analyzed using various statistical tools, such as percentage, weighted mean, chi-square, rank order correlation and independent sample t-test. As the result of the data analysis the summary of the findings is presented in the following orders:

1. Characteristics of respondents
2. Factors that affect the status of TVET institutions
3. Trainers competence and trainings
4. Feasibility of the training programs
5. Application of LMIS
6. Employability of graduates
7. Suggestions and problems forwarded by the respondents

Characteristics of respondents

- With regard to respondents' characteristics, the result indicated that the overwhelming majority of trainees, graduates and trainers were male. This implies that the participation of female was low. Among other things, the low participation of female in the sample fields of study was attributed to the wrong perception of the society towards technical and vocational training fields. The society assumes that the construction and industrial technology trades are not suitable for female. This perception was also shared by the female trainees. Most of the female trainees were interested to become nurse, lawyer and economist.

- As far as age is concerned, almost all (93.64 per cent) of the trainees and nearly half (60.78 per cent) of the graduates were in the proper age for secondary education, that is below 20 years. Similarly, more than 70 per cent of the trainers' age was below 45 years.

- Regarding work experience of the trainers it was found that most (94.23 per cent) of the trainers work experience was below ten years. This was possibly due to the fact that technical and vocational training is a fairly recent phenomenon in the country.

Factors that affect the status of TVET institutions

- The study attempted to look in to some of the factors that contribute to the over all implementation of the training programs. Accordingly, a considerable number of trainers and trainees (36.53 per cent and 27.54 per cent respectively) did not have interest in the training programs. Inconvenience of the working environment due to poor management of the institutions was at the top of the reasons for lack of interest on the part of trainers. On the other

side, lack of interest from the beginning was the dominant reason for those trainees who do not have interest in their fields of study. Besides, 43.22 per cent of the trainees joined the training due to lack any other options. Hence, this implies that a significant number of trainees joined the training programs on the basis of factors other than their interest.

- One of the most important aspects of the training that should be assessed was the adequacy and availability of resources and their relevance to the intended purpose; in this respect the following major findings were obtained:
    - As the findings of the study disclosed, the adequacy of human resources in the institutions were medium. The same is true for machines and tools. Conversely, the provision of finance was found to be low.
    - Besides, the study revealed that not only the available machines and tools were inadequate but also they are not appropriate to the level of trainees and trainers capacity. The respondents confirmed that the appropriateness of the available machines and tools were found medium. On top of these, the availability of resources was not considered during the planning of trainees' enrollment.
    - Majority of the trainees and 41.18 per cent of graduates asserted that the allotted time for 10+2 program was not adequate to acquire the necessary skills and knowledge. On the contrary, 75 per cent of the trainers responded that the allotted time is sufficient.

- Although the provision of vocational advice was a prerequisite for the success of trainees' career development, the finding showed that more than 60 per cent of the trainees and graduates did not get any information regarding the choice of their trades and career development before and after they joined the institutions. For those who get vocational advice their sources were their parents, friends and the staff. Thus, the information obtained from them is deemed to be unreliable in view of obtaining accurate and complete occupational information. Surprisingly, only 12.36 per cent of trainees and 18.18 of graduates replied that they got vocational advice from vocational counselors. Hence, the result of these findings indicates that the vocational and counseling services in the institutions were very weak.

- Although, the success of the training programs depend on the multifaceted efforts of different sectors and organizations, the present participation of employers in the TVET institutions was found to be very low. The employers indicated that their participation was limited only to train the apprentices.

- Concerning the importance of apprenticeship to the over all program, most (61.54 per cent) of the trainers and 47.06 per cent of the graduates asserted that it was medium. On the contrary, only 5.77 per cent of the trainers and 49.02 per cent of graduates responded that it was high.

Lack of follow-up, shortage of resources and prohibition of trainees in using machines and tools were the major problems in the apprenticeship training programs. Moreover, the program was not started on time and more apprentices were assigned to one organization.

Trainers' competence and trainings

The extent of trainers' competence and training was one important component included in the study. Consequently, the following findings were drawn from the analysis:

- However, the TVET strategy stipulates that trainers ought to have a minimum of first degree in their respective fields of study to teach in the colleges, the finding showed that still there are a considerable number (36.54 per cent) of trainers who had college diploma.

- Concerning further training, majority of the trainers have joined further short term training to up-grade their qualification. Similarly, most (78.85 per cent) of the trainers had got a pedagogical training. However, still almost one-forth of the trainers did not get further training and pedagogical training. Of course, it is important to note that majority of the diploma trainers attended in service training to up-grade their qualification.

- As to trainers' competence, it was found that majority (63.56 per cent) of the trainees and all of the deans/principals asserted that trainers' competence was satisfactory.

Feasibility of the training programs

- Based on the result of the analysis, majority of the respondents confirmed that the trades provided in the institutions are relevant to the world of work. Besides, most of the graduates were engaged in the jobs related to their major fields of study.

- For majority (52.55 per cent of trainees and 63.64 per cent of graduates) of the respondents, the correlation between theory and practice during their training session was found to be medium. Only 30.08 per cent of the trainees' 18 .18 per cent of graduates confirmed that it was high.

- According to most of the trainees' the skill they acquired in the institutions was not sufficient to start their own business or get employed in other organizations. This implies that trainees did not acquire sufficient skill. This was due to the fact that more time was spent on theory rather than practice, machines and tools were not relevant to the practical work in the world of work, and teachers' incompetence.

- Regarding the fields of study prioritized in the labor markets, the result indicates that construction, industrial and business were the three most prioritized fields in the labor market, followed by textile and home science.

Application of LMIS and need assessment

- Though, the finding shows the trades provided in the institutions are related to the labor market, majority of the trainers and all officials asserted that there was no need assessment. Enrollment of trainees was decided based on the capacity of the institutions and number of students who did not join to the preparatory program. The finding further indicates that lack of finance was one of the main problems to conduct need assessments.

- Though, it was conducted in scattered manner and not formal the study revealed that the tracer study was the only source for LMIS. The institutions did not follow-up their graduates. Hence, it is difficult to get a clear picture about the employability of graduates.

Employability of graduates and employment preferences

- As far as employment preference is concerned, nearly half (56.78 per cent) of the trainees' expected to be permanently employed in the government and non-government organizations. Conversely, majority (45.10 per cent) of the graduates were inclined to become self-employed. One of the possible explanations for this could be their closeness to the working environment.

- About 61.01 per cent of trainees and 52.94 per cent of graduates preferred office work than manual work. Thus, we can infer that the trainees' did not understand the core objective of TVET program.

- The ultimate objective of TVET was to expand the employment opportunities of the youth. To this end, the job opportunities for TVET graduates were found to be moderate. On the other side, a considerable number of respondents confirmed that it was low. The lack of confidence on the part of the employers and more number of graduates for the available vacancies were cited as major reasons for the low job opportunities for TVET graduates.

Problems and suggestions forwarded by the respondents

- Finally, according to the open-ended questions provided to the respondents most of them identified the following major problems that affect the effective implementation of the training programs:
  - In adequacy of the workshops and lack of maintenance.
  - More number of trainees' in the class/workshops.
  - Improper utilization of time.
  - Lack of follow-up in the apprenticeship program.
  - Lack of interest on the part of the trainers' and trainees'.
  - Poor management system in the institutions.

- Weak relationship between the institutions and organizations (employers).

- In response to the above problems respondents mentioned some of the suggestions as follows:
  - Limit number of trainees' and enrollment should be based on interest and ability.
  - In advance preparations need to be made for the apprenticeship trainings.
  - Organized the graduates to become self-employed.
  - The machine and hand tools should be maintained on time.

4.2. Conclusion

Based on the forgone major findings, the following conclusions are drawn.

At the out set, the establishment of TVET was linked to the enhancement of employment opportunities to the youth. To this effect, the TVET institutions should be well equipped with the basic resources so as to produce competent graduates.

Though, the trainees' left with few months to complete their course still a considerable number of trainees did not have interest to the training they are pursuing. Similarly, some trainers also share this problem. Moreover, the study shows that guidance and counseling services of the institutions was very weak. Hence, eligible trainees joined to the institutions either blindly or by consulting unreliable source of information. This in turn affects their choice of occupation and career developments. On top of these, attitudinal and guidance service problems, the study had explored that certain human, material, financial and managerial problems tend to militate against the status of TVET programs.

Technical and vocational training does not offer job to the graduates, rather it equips the trainee's with basic skills and knowledge which enable him/her to compete in the world of work. Unfortunately, majority of the trainees' trained in the institutions did not have confidence on the skill they acquired to do a job. This was mainly due to weak correlation between the theory and practice in the training sessions and inadequacy of the apprenticeship training. The insufficient acquisition of skill and knowledge is a worrisome indicator of their

low preparation and incompetence in competing for the jobs available in the labor market and to be engaged in self-employment. The lack of finance, material and working places are the major factors that deter graduates to be involved in self-employment.

Besides, the partnership between the institutions and employers was not based on close co-operation and shared responsibilities. The TVET programs are still supply driven; government controlled and financed the institutions.

In general, due to the aforementioned problems the present status of TVET institutions in Addis Ababa is not satisfactory to produce the desired skilled and competent work force to the labor market. This in turn affects the employability of graduates

4.3. Recommendations

This part of the study attempts to forward actions to be taken in light of the forgone major area of concern presented in the findings and conclusions.

1. Developing a positive attitude towards a training program have an indispensable role in the over all achievements of the training objectives. However, a considerable number of trainees' lack interest towards their training. In relation to this, the guidance and counseling services of the institutions need to inform, advice and motivate the trainees' in the institutions. Besides, the city government of Addis Ababa on collaboration with the education bureau, employers, MSE, and chamber of commerce need to promote the public at large and the trainee in particular about the programs.

2. Among other things the feasibility of the training programs depend upon the trainee's practical know how acquired during the training. Not only how to do things but also what to do. Therefore, it is important to strike the balance between theory and practice in the training institutions. To this effect, in addition to the proper training of trainers the raw materials, machines and hand tools need to be available in the institutions.

3. According to the national TVET strategy it was planned to provide high quality of training in different forms and levels to large number of trainers, but with a diminishing dependency on government budget in the long term. However, still the institutions are at the shoulder of government for resources. Hence, in general, to provide quality training and enhance their institutional sustainability the institutions advisable to establish a closer relationship with the employers. Moreover, the institutions need to be engaged in producing saleable products, because this can strengthen their financial resources and it can absorb some of the graduates with in the production centers.

4. As it is pointed out, if TVET institutions have to play a pivotal role in employment expansion, the training has to be effective. This was mainly achieved through practical secessions and apprenticeship training. However, the present status of the apprenticeship program is facing a problem. Hence, to address this problem:

   A. The city government should take the initiative and involve the employers in discussions related to the TVET programs in general and apprenticeship training in particular. This helps in obtaining valuable inputs from the employers regarding the programs.
   B. The institutions and the education bureau better to prepare in advance the trainees' and select the appropriate organizations offering apprenticeship training. This minimized wastage of time in searching the organizations and the trainers would not suffer in searching the organizations personally.
   C. a strict follow-up of the apprentices during the training from both sides is necessary. The summative evaluation is not enough to measure their performances.
   D. Moreover, the government needs to develop an enforcing device to assign and train the apprentices in the employing organizations, particularly in the public enterprises.

5. It is undeniable that self-employment requires finance, material resources and working places in addition to the entrepreneurial skill. Therefore, it is suggested that the education bureau in collaboration with the Micro and Small scale Enterprises (MSE) arrange the financial resources on soft loan basis and the working places as soon as they graduated. This would be preferable to arrange before the trainees left their institutions. Because, this enhance the employability of graduates and encourage others to become self-employed. Ultimately, this shades a light on the trainee's employment opportunities who are pursuing the training. Moreover, it is advisable to follow-up the graduates.

6. The existence of sound management in any organization has a paramount importance in performing the day to day activities of the organization smoothly. In light of this fact, the management of the TVET institutions is advisable to make efforts to create conducive work environment that enable trainers and trainees feel free to participate actively in the institutions matter and aired their views. This also helps in developing sense of owner ship among the community of the institutions.

7. However, it is not possible to procure the latest machines or equipments for the training as the need arises, the available machines and tools should be properly maintained on time.

8. On top of the in adequacy of financial resources the institutions were suffered to obtain their allotted budget on time. This is mainly due to lengthy process of disbursement and purchasing. Hence, institutions (particularly the middle level TVET) need to be given autonomy over their financial resources to respond more effectively to their training needs.

9. Although the available trades are related to the world of work, if it is not supplemented by a regular need assessment it may cause market saturation in some trades. Hence, the education bureau and the institutions are better conduct a need assessment on regular

basis to protect the undesired effects of training programs. Moreover, is advisable to focus on the demand driven training policy rather than supply driven.

10. Finally, since the study is not an end on the TVET and employment opportunities further in depth study need to be conducted focusing on the employment prospects of technical and vocational trainings.

BIBLIOGRAPHY

BOOKS

AACG (2005). **TVET Strategy**. Addis Ababa: Artistic Printing Enterprise.

Abramson et al., (1979*)*. **Hand Book of Vocational Education Evaluation**. California: Sega Publication Inc.

Aggarwal J.C. (2004). **Development and Planning of Modern Education** (8th eds.).Delhi: Vikas Publishing House Ltd.

Ahier Jhon and Rob Moore, "*Big Pictures and Fine Details: School Work Experience Policy and the Labor Market in the 1990s"* In: Ahier John and Geoff Esland (eds.) (1999). **Education, Training and the Future of Work I: Social, Political, and Economic Context of Policy Development.** London: The Open Univesity..

Atchoarena David and Andre Delluc (2002).**Revisiting Technical and Vocational Education in Africa**. France: UNESCO Publishing.

Atchoarena David and Paul Esquieu (2002**). Private Technical and Vocational Education in Sub Saharan Africa**. France: UNESCO Publishing.

Barlow Melvin, "*Vocational Education as A Social Movement*" In: Kazanas et al,. (1973).**The Philosophy and Foundation of Vocational Education**. New York: Library of Congress Cataloging Publication Data.

Blaug Mark (1987). **Education and the Employment Problem in Developing Countries.** Geneva: ILO

Carony Martin, "The Great Work Dilemma, Education, Employment and Wags in the New Global Economy" In: Ahier John and Geoff Esland (eds.) (1999). **Education,Training and the Future of Work I : Social, Political, and Economic Context of Policy Development.** London: The Open Univesity.

Chakrapanik C. (1995). **Unemployment Stress: A Study of Educated Unemployment**. Delhi: Vikas Publishing House Ltd.

Council of Church for Britain and Ireland, "*The Changing Nature of Work*" In: Ahier John and Geoff Esland (eds.) (1999). **Education, Training and the Future of Work I: Social, Political, and Economic Context of Policy Development.** London: The Open University.

Elliot, F.R. (1999). *Economic Restructuring and Un-employment: A Crises for Masculinity.* In: Ahier John and Geoff Esland (eds.) (1999). **Education,Training and the Future of Work I : Social, Political, and Economic Context of Policy Development.** London: The Open Univesity. Pp.199-218

ESAURP (1993). **Technical Education and Labor Market in Eastern and Southern African Countries.** Dare Selam: Tanzania Publishing House Ltd.

FDRE (1999). **Reports on the 1999 National Labor Force Survey.** Addis Ababa: CSA.

FDRE (2004). **Statistical Abstracts**. Addis Ababa: CSA

FDRE (2004). **Urban Bi-Annual Employment Unemployment Survey.** Addis Ababa: CSA.

FDRE (2004).**TVET Proclamation No. 391/2004**. Addis Ababa: Selam Printing Enterprise.

Finch Courtis R. and R. John Crunkilton (1988).**Curriculum Development in Vocational and Technical Education: Planning Content and Implementation** (3rdEds.). Washington D.C: Allyn and Bacon Inc.

Gasskov Vladmir (2000).**Managing Vocational Training Systems: A Hand Book for Senior Administrators.** Great Britain: ILO.

Gill et al., (2000). **Vocational Education and Training Reform: Matching Skill to Market and Budget**. New York: World Bank. Oxford University Press.

Good, C.V. (1973). **Dictionary of Education** (3rd ed.). New York: McGraw Hill Book Company.

Grubb, W. Norton and Paul Ryan (1999).**The Role of Evaluation for Vocational Education and Training**. Geneva: British Library Cataloging in Publication Data

Hanson, J.C. (1997). **A Dictionary of Economics and Commerce (5th eds.).** London: The English Language Book Society and McDonald and Evans Ltd

ILO (1979). **Follow up of the World Employment Conference: Basic Needs**. Geneva: ILO.

Kazanas, H.C. (1973) *"A Model for Reorganizing the Comprehensive High School"* In: Kazanas et al, (1973).**The Philosophy and Foundation of Vocational Education**. New York: Library of Congress Cataloging Publication Data.

Kazanas, H.C. and L.C. Wolf (1973). *"Development of the Work Habits in Vocational Education: What the Literature indicates."* In: Kazanas et al, (1973).**The Philosophy and Foundation of Vocational Education.** New York: Library of congress Catalog in Publication Data. pp.28-38

Keree B.Wanjala (1996).*"Technical and Vocational Education in Africa": A Synthesis of a Case Studies*. In: **The Development of Technical and Vocational Education in Africa.** UNESCO: Dakar. pp. 9-39

Levine, Daniel U. and Robert, J. Havghurst (1992).**Society and Education**. New York: Library of Congress Cataloging in Publication Data.

Carton Mitchel (1984**). Education and the World of Work**. Paris: UNESCO.

Middleton et al. (1993). **Skill for Productivity: Vocational and Education Training in Developing Countries.** New York: Oxford University. World Bank

MoE (2002).**Education Sector Development Program (ESDP-II).** Addis Ababa: United Press Plc.

MoE (2003). **Financing TVET in Ethiopia: National Strategy to Raise Resources.** Addis Ababa: Berhane Selam Printing Entrprise.

MoE (2005). **Educational Statistics Annual Abstract.** Addis Ababa: Orion Printing Press

Sanyal Bikas C. (1987). **Higher Education and Employment**: An International Comparative Analysis. Paris: UNESCO. The Flamer Press.

TGE (1994). **Education Sector Strategy**. Addis Ababa: Central Printing Press.

Thuy Phan, et al., (2001).**The Public Employment Service in a Changing Labor Market.** Geneva: ILO.

Tozers et al., (1995). **School and Society: Historical and Contemporary Perspective** (2nd eds.). New York: McGraw Hall Inc.

UNESCO (1975). **Education on the Move**. Paris: The UNESCO Press.

UNESCO (1979). **Trends Issues in Technical and Vocational Education**. France: UNESCO.

UNESCO (1996). **The Development of Technical and Vocational Education in Africa.** Senegal.

UNESCO (1997). **Training of Teachers in Technical and Vocational Education in Africa.** Dakar: UNESCO

UNESCO (2002). **The Need of Youth**. Paris: UNESCO

UNESCO (2004). **Promoting Skill Development: Report of Interregional Seminar**. Paris: UNESCO.

Vanables, P.F.R. (1956). **Technical Education: its Aims, Organization and Further Development.** London: The Open University.

Vanables, P.F.R. (1959) **British Technical Education**. London: Longmans, Green and Co. Ltd.

Whim Hoppers and Komba Donatus (Eds)(1995). **Productive Work in Education and Training: A State of the Art in Eastern Africa**. Netherlands: CESO Papers back No.21

Woolfe Ray, et al., (1987). **Guidance and Counseling in Adult and Continuing Education.** England: British Library Cataloging in Publication Data.

World Bank (1993). **Caribbean Region: Access, Quality Efficiency in Education.** Washington D.C.: The World Bank.

World Bank (2005). **Education in Ethiopia: Strengthening the Foundation for the Sustainable Progress**. Washigton D.C.: World Bank.

Ziderman Adrian (2003). **Financing Vocational Training in Sub Saharan Africa.** Washington, D.C.: World Bank.

JOURNALS

Arum Richard and Yossi Shavit (1995)."*Secondary Vocational Education and the Transition from School to Work*". **Sociology of Education,** Vol.68,'No.3 ,pp.187-204

Bentley J.H. (1937). "*The Vocational Guidance of Youth*". **Annuals of the American Academy of Political and Social Science.** Vol. 194, pp.31-41.

Braun Frank (1987)."*Vocational Training as a Link Between the School and the Labor Market: The Dual System in the Federal Republic of Germany*". **Comparative Education.** Vol. 20, No. 1, pp.123-145.

Deissinger Thomas (1996)."*Germany's Vocational Training Act: Its Function as an Instrument of Quality Control with a Tradition-Based Vocational Training System*". **Oxford Review of Education.** Vol.33, No. 3, pp.317-336.

Girma Zewdie et al., (1994)."*The Training and Placement of Vocational Secondary school Teachers in Ethiopia*" **Ethiopian Journal Education,** Vol.15 ,NO.2, PP.1-31.

Henze Jurgen (1984)."*Development in Vocational Education since 1976*" **Comparative Education**. Vol. 20, No.1, pp.117-137.

Lewis Theodore and Morgan V. Lewis (1985)."*Vocational Education in the Common Wealth Caribbean and the United States*". **Comparative Education.** Vol.21, No.2, pp.157-171.

McCormick Kevin (1988)."*Vocational and the Japanese Educational System*". **Comparative Education**. Vol. 24, No. 1, pp.37-51.

N'ije Omar et al., (1995)."*Researching Technical Training Needs and Manpower in the Gambia*". **Journal of Practice in Education for Development**. Vol.1, No. 2, pp.21-25.

Negatwa Teklehaimanot (1989)."*Evaluation the Effectiveness of Curriculum Materials of Vocational Courses*". Hudders Field.

Norman Andres (1988)." *Technical Secondary School and the Labor Market: Some Result from a Tracer Study in Kenya*". **Comparative Education**. Vol. 24, No. 1, pp.19-35.

Teklehaimanot Haileselassie (2002)." *Misconception on TVET in Ethiopia*" **IER** Flambeau, Vol.10, No.1, (pp.1-15). AAU Printing Press.

Tilak, G. Jandhyala (1988)."Voctional *Education in South Asia: Problems and Prospects*". **International Review of Education**. Vol.34, No. 2, pp.244-257.

Tilak, G. Jandhyala (2002)."*Vocational Education and Training in Asia*". New Delhi: **National Institute of Educational Planning and Administration.**

Urevbu Andrew,O. (1988)."*Vocationalization the Secondary School Curriculum: The African Experience*" **International Review of Education**. Vol. 34, No.2, pp.258-270.

Wanna Leka (1998)."*The Current Status of Vocational/Technical Education in Ethiopia: Problems and Prospects*" In: **Quality Education in Ethiopia**. Addis Ababa: Institute of Educational Research. AAU, PP.55-64.

Wanna Leka (2002)."*Primary Eucation as a basis for Vocational/Technical Education and Training: An Issue that Deserve Attention*" In: **Quality of Primary Education in Ethiopia.** Addis Ababa: **IER**. AAU, PP.209-218.

Weizhi Zhaung (1991). "*The Position and Role of Vocational Universities in the Vocational/Technical Educational System.*" **Chinese Education**: Vol.24, No. 2, pp.13-20

Yekunoamlak Alemu (2002)."*The Practice of Vocational Training at Primary and Secondary School of Ethiopia.*" In: **Quality of Primary Education in Ethiopia.** Addis Ababa: **IER,** (pp.219-234). AAU Printing Press.

UN PUBLISHED AND INTERNET MATERIALS

Ayalew Shibeshi (2000)."*Educational Policy Management of Change*" AAU (Unpuplished, Teaching Material)

Cotton Kathleen (2001).*Developing Employability Skills*. File:///E:/2.Developing%20Employability%20Skills.htm

Getachew Heluf (2005)."*Training in Technical Education and Employment Prospects; The Case of Oromia*". Addis Ababa University: (un published MA Thesis).

MoE (2006). *National TVET Strategy*. Addis Ababa: EMPDA (Draft for discussion)

Overtoom Christine (2000). *Employability Skills: An Update*. www.osu.edu/

Robinson, P. (2000) *What are employability skills? A Fact Sheet*. www.aces.edu/crd/workforce/publication/employabilty-skill.PDF.

Yekunoamlak Alemu (2000) "A Comparative analysis of Vocational Training and Employment Opportunities Government and non Government Training Centers in Ethiopia" AAU: M.A Thesis (Unpublished)

Yekunoamlak Alemu (2006) "Net Working between Vocational Training and Employment in Ethiopia. Unpublished Dissertation, Klaggenfurt: Alphen - Andria University of Klanggenfurt.

Annex-1a

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF EDUCATIONAL PLANNING AND MANAGEMENT

Questionnaire to be filled by trainers, Deans and Vocational counselors

The purpose of this questionnaire is to collect data on the status of TVET colleges and their contribution to employment in Addis Ababa. Hence, your genuine, frank and timely response are vital in determining the success of this study.
So, I kindly request your contribution in filling the questionnaire honestly. All responses are confidential.

Instructions:

A. No need of writing your name.
B. For alternative responses, please mark your response by using a "✓" in the corresponding boxes.
C. Please be as brief as possible in answering the open ended questions.

Thank you in advance for taking time to complete this questionnaire!

Part one: Personal Data

1. Name of the TVET college you are working _____
2. Sex A. Male ☐ B. Female ☐
3. Age A. 20-30 years ☐ B. 31-35 years ☐ C. 36-40 years ☐
   D. 41-45 years ☐ E. above 45 years ☐
4. Year of service A. In TVET institutions _____years
   B. In other organizations _____years
   If, you have work experience in other please specify_____
5. Your current position_____
6. Qualification A. Diploma ☐ B. BSc/BA ☐
   C. MA/MSc ☐ D. PhD ☐ E. other_____
7. Major field of study _____
8. The field you are teaching now (for trainers) _____
9. Have you ever joined further training to up grade your qualification?
   A. Yes ☐ B. No. ☐
   If "yes ", for how long? _____days, _____weeks,_____ months,_____ years
10. Have you ever trained pedagogical training? A. Yes ☐ B. No. ☐

Part Two: General questions

1. Do you have interest working in TVET colleges? A. Yes ☐ B. No. ☐
   If your response is "No", indicate your reasons by ranking each of the following possible factors (1 for the major reason, 2 for the next reason,... and 5 for the last reason).
   A. Because the working environment is not conducive ☐
   B. Because it is tedious work ☐
   C. Because of limited job opportunities ☐
   D. Because of low social status given to TVET by the public ☐
   E. Because of limited opportunity for further education ☐
   F. Others, specify and rank_____ ☐

2. The following are a number of points indicating the existence of resources to run the TVET programs. Hence, in your opinion rate the items in 5-points according their adequacy and/or availability.

1 for very low, *2* for low, *3* for medium, *4* for high, *5* for very high

2.1	**Adequacy of human resources**	1	2	3	4	5
A	Trainers					
B	Qualification of trainers					
C	Tool persons					
D	Vocational counselors					
E	Support staffs					

2.2	**Availability of training materials and facilities**	1	2	3	4	5
A	Machines and equipments					
B	Hand tools					
C	Training models/charts					
D	Consumable row materials					

2.3	**Provision of financial resources**	1	2	3	4	5
A	Recurrent budget for obtaining row materials					
B	Capital budget for purchasing machines and equipments					
C	Budget for project works					
D	Budget for field visit					

2.4	**Appropriateness of the available machines and tools**	1	2	3	4	5
A	Appropriateness to the local situation					
B	Appropriateness to the level of trainees					
C	Appropriateness to the level of trainers					
D	Up-to-date ness					

3. Is the time allotted for the training is program (10+2) is sufficient to acquire the required knowledge and skills? A. Yes ☐ B. No. ☐

4. Do you think the trades provided in the colleges are relevant to the world of work?

   A. Yes ☐ b. No. ☐

5. In your opinion, which field of study is more preferable in the labor market (rank in their order of priority 1 for the best preferable,... and 5 for the least preferable in the given box)

   A. Industrial Technology ☐ C. Construction ☐
   B. Business ☐ D. Textile technology ☐
   E. Home Science ☐

6. In your view, what is the competency of your trainees? A. Very satisfactory ☐

   B. Satisfactory ☐ C. Not satisfactory ☐

   If your response is "Not satisfactory", what are the possible factors (you can choose more than one alternatives)?

   A. Trainees do not have interest in the training ☐
   B. The curriculum is not relevant to the level of the trainees ☐
   C. The allotted time is not enough to mastery the courses ☐
   D. Trainers do not have the required knowledge and skills ☐
   E. Lack of adequate resources ☐
   F. If other, specify _____ ☐

7. Does your college conduct training need assessment? A. Yes ☐ B. No. ☐

   If your response is "yes", how often are you assessing the labor market?

   A. Annually ☐ B. Every three year ☐ C. Every five year ☐
   D. If other mention_____

8. What mechanisms are you using to get timely and adequate labor market information (only for deans/principals)?

   A. Tracer study ☐ B. Labor market monitoring ☐
   C. Need assessment ☐ D. All ☐ E. Other mention _____

9. In your opinion, what is the competency of trainers, counselors and supporting staffs (only for deans/principals)?

   A. Very satisfactory ☐ B. Satisfactory ☐ C. Not satisfactorily ☐

10. How do you evaluate the participation of stakeholders in general and employers in particular in planning the training being offered in your college?(only deans)

A. High ☐ B. Moderate ☐

C. Low ☐ D. No participation at all ☐

11. In your view, how do you evaluate the chance of job opportunities for TVET graduates?

A. High ☐ B. Moderate ☐ C. Low ☐

If your answer is "Low", what are the possible reasons?

A. The number of graduates is greater than the available vacancies. ☐

B. Lack confidence on the part of employers due to graduates' lack of knowledge and skills. ☐

C. The field of studies is not related to the world of work. ☐

D. Mention if others_____

12. In your opinion, how do you rate the contribution of the apprenticeship training to the over all training programs?

A. High ☐ B. Moderate ☐ C. Low ☐

If you response is "Moderate or low", what are the problems?

A. The organizations /companies do not have sufficient resources. ☐

B. Not allowing trainees on machines and tools. ☐

C. No follow up in the training. ☐

D. In appropriateness of the training with their major field of study. ☐

E. Supervisors assigned were less qualified. ☐

F. Mention if others_____

13. Did your college give vocational guidance (advice) to the trainees?

A. Yes ☐ B. No. ☐

If your response is "yes", was the advice? A. Very satisfactory ☐

B. Satisfactory ☐ C. Unsatisfactory ☐

14. Do you believe the knowledge and skills the trainees gained from the training is adequate to start their own business or employed in other organization?

A. Yes, it is adequate ☐ B. Not adequate ☐

If your response is "Not adequate", what are the major factors?

A. The training is not related to the world of work. ☐

B. More time is spent on theory. ☐

C. The machines and tools available in the institutions are not related to the practical work.☐

D. Mention, if others_____

15. Currently which of the following approach is used in planning the training programs (only for deans/principals)? For example, trainees enrollment

A. Planned and approved by the officials in the Education Bureau. ☐

B. Planned by the college deans and approved by the Education Bureau. ☐

C. Planned by the departments and approved by the college dean and later by the Education Bureau. ☐

D. Planned and approved by the college deans. ☐

16. Does the enrollment of trainees consider the availability of resources and infrastructure?

A. High consideration ☐ B. Moderate consideration ☐

C. Low consideration ☐ D. No consideration at all ☐

17. In your college, what are the major problems that affect the proper implementation of the training programs?

_____

_____

_____

_____

18. What alternatives do you suggest to improve the implementation of the training programs and employability of the graduates?

_____

_____

_____

_____

Thanks again

Annex-1b

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF EDUCATIONAL PLANNING AND MANAGEMENT

Questionnaire to be filled by trainees (10+2)

The purpose of this questionnaire is to collect data on the status of TVET colleges and their contribution on employment in Addis Ababa. Hence, your genuine, frank and timely response are vital in determining the success of this study.
So, I kindly request your contribution in filling the questionnaire honestly. All responses are confidential.

Instructions:

A. No need of writing your name.
B. For alternative responses, please mark your response by using a "✓" in the corresponding boxes.
C. Please be as brief as possible in answering the open ended questions.

Thank you in advance for taking time to complete this questionnaire!

Part one: Personal Data

1. Name of the TVET college you attend _____
2. What is your age? A. 15-20 ☐ B. 21-25 ☐ C. 26-30 ☐
   D. 30 years and above ☐
3. Sex A. Male ☐ B. Female ☐
4. When did you complete your high school? _____
5. What is your major field of study? _____
6. Now you are A. 1st year ☐ B. 2nd year ☐

Part two: General Questions

1. When you completed your secondary education (grade 10), what you wanted to be?

A. Natural Scientist	☐	F. Lawyer	☐
B. Social Scientist	☐	G. Economist	☐
C. Agriculturalist	☐	H. Business Manager	☐
D. Health Professions	☐	I. Technician	☐
E. Engineer	☐	J. If other, specify_____	

2. Do you like your field of study? A. Yes ☐ B. No. ☐

If "No", why?

A. Lack of job opportunities in the field ☐

B. I did not have interest from the begging ☐

C. Lack of encouragement from the trainers ☐

D. Shortage of resources in the institutions ☐

E. If other, mention.....

3. Is the training you are pursuing now, your A. 1st choice ☐ B. 2nd choice ☐

C. 3rd choice ☐ D. 4th choice ☐ E. Beyond 4th choice ☐

4. Did you get any information on career possibilities and choice of trade before you join the TVET colleges? A. Yes ☐ B. No. ☐

5. Did you get vocational advice after you join the TVET colleges?

A. Yes ☐ B. No. ☐

If your response to question No. 5 is yes, you get it from

A. Parents ☐ B. Your friend ☐ C. Vocational counselor ☐

D. Staff of the college ☐ E. If other specify_____

6. Was the advice... A. Very satisfactory ☐ B. Satisfactory ☐

C. Unsatisfactory ☐

7. The following are a number of points indicating the existence of resources to run the TVET programs. Hence, in your opinion rate the items in 5-points according their adequacy and availability. *1* for very low

2 for low, *3* for medium, *4* for high, and *5* for very high

7.1	**Adequacy of human resources**	1	2	3	4	5
A	Trainers					
B	Qualification of trainers					
C	Tool persons					
D	Vocational counselors					
E	Support staffs					

7.2	Availability of training materials and facilities	1	2	3	4	5
A	Machines and equipment					
B	Hand tools					
C	Training Charts/models					
D	Consumable raw materials					

7.3	Provision of financial resources	1	2	3	4	5
A	Recurrent budget for obtaining row materials					
B	Capital budget for purchasing machines and equipments					
C	Budget for project works					
D	Budget for field visit					

7.4	Appropriateness of the available machines and tools	1	2	3	4	5
A	Appropriateness to the local situation					
B	Appropriateness to the level of trainees					
C	Appropriateness to the level of trainers					
D	Up-to-date ness					

8. Is the time allotted for the training is program (10+3) is sufficient to acquire the required knowledge and skills? A. Yes ☐ B. No. ☐
9. Do you think the trades provided in the colleges are relevant to the world of work?
   A. Yes ☐ b. No. ☐
10. In your view what is the competencies of your trainers? A. Very satisfactory☐
    B. Satisfactory ☐ C. Not satisfactory ☐
11. Why did you pursuing the training (you can give more than one answers)?
    A. I like the profession ☐
    B. Influenced by parent ☐
    C. It has better employment opportunity ☐
    D. Influenced by friends ☐
    E. I do not have other option ☐
    F. If any other, specify_____
12. In what sector like or expect to be permanently employed when you have completed your training?
    A. Government ☐ B. NGO's ☐
    C. Private organizations ☐ D. Self-employed ☐
13. Which type of work do you like? A. Office work ☐ B. Manual work ☐
14. Is the skill and knowledge in the training sufficient to start your own business or employed in other organizations? A. Yes ☐ B. No ☐

If "No", why?

A. Training not related to the world of work ☐

B. More time spent on theory ☐

C. Machines and tools in the institutions are not related to the practical work ☐

D. If other, mention.....

15. What is the extent of correlation between theory and practice?

A. High ☐ B. Medium ☐ C. Low ☐

16. Would you like to be self-employed? A. Yes ☐ B. No. ☐

If your response is "No", which of the following factor discourage you?

(Rank 1-5 according their importance, 1 for the major factor that discourage you and 5 to the least factor)

A. Lack of capital ☐ B. Lack of material ☐

C. Lack of entrepreneurial skill and additional trainings ☐

D. Lack of working places ☐ E. Lack of interest ☐

17. In your college, what are the major problems that affect the proper implementation of the training programs?

_____

_____

_____

_____

18. What alternatives do you suggest to improve the implementation of the training programs and employability of the graduates?

_____

_____

_____

_____

Thanks again

Annex-1c

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF EDUCATIONAL PLANNING AND MANAGEMENT

Questionnaire to be filled by 10+2 Graduates (2005 and 2006 graduates)

The purpose of this questionnaire is to collect data on the status of TVET colleges and their contribution on employment in Addis Ababa. Hence, your genuine, frank and timely response are vital in determining the success of this study.
So, I kindly request your contribution in filling the questionnaire honestly. All responses are confidential.

Instructions:

A. No need of writing your name.
B. For alternative responses, please mark your response by using a " ✓" in the corresponding boxes.
C. Please be as brief as possible in answering the open ended questions.

Part One: Personal Data

1. Name of the TVET college you graduated from and year_____
2. Sex A. Male_____ B. Female_____
3. What is your age? A. 15-20 ☐ B. 21-25 ☐ C. 26-30 ☐ D. 30 years and above ☐
4. Major field of study _____
5. Occupational status: Employed ____ Unemployed ___Self-employed _____
6. Type of work you are doing now (if employed) _____

Part two: General Questions

1. When you completed your secondary education (grade 10), what you wanted to be_____

A. Natural Scientist ☐	F. Lawyer ☐
B. Social Scientist ☐	G. Economist ☐
C. Agriculturalist ☐	H. Business Manager ☐
D. Health Professions ☐	I. Technician ☐
E. Engineer ☐	J. If other specify_____

2. Was the training you were attended , your__? A. 1st choice ☐ B. 2nd choice ☐ C. 3rd choice ☐ D. 4th choice ☐ E. Beyond 4th choice ☐
3. Did you get any information on career possibilities and choice of trade before you join the TVET colleges? A. Yes ☐ B. No. ☐
4. Did you get vocational advice after you join the TVET colleges?
   A. Yes ☐ B. No. ☐

If your response to question No. 5 is "yes", form where did you get_____?

A. Parents ☐ B. Your friend ☐ C. Vocational counselor ☐

D. Staff of the college ☐ E. If other specify_____

5. Was the advice__? A. Very satisfactory ☐ B. Satisfactory ☐
   C. Unsatisfactory ☐
6. Is the time allotted for the training is program (10+2) is sufficient to acquire the required knowledge and skills? A. Yes ☐ B. No. ☐
7. Are the TVET colleges equipped with necessary resources? For instance, trainers, machines, equipments, text books, etc. A. adequate ☐
   B. Moderate ☐ C. Not adequate ☐
8. Do you think the trades provided in the college are relevant to the world of work?
   A. Yes ☐ B. No. ☐
9. I s the job you are doing now related to your profession?(for employed)
   A. Yes ☐ B. No. ☐

I f your response is "yes", What is the level of correlation between the theory you learned in the institutions and the practical work in the world of work ?

A. High ☐ B. Medium ☐ C. Low ☐

10. In your view, how do you evaluate the chance of job opportunities for TVET graduates?
    A. High ☐ B. Moderate ☐ C. Low ☐

If your answer is "Low", what are the possible reasons?

A. The number of graduates is greater than the available vacancies. ☐
B. Lack confidence on the part of employers due to graduates' lack of knowledge and skills. ☐
C. The field of studies is not related to the world of work. ☐
D. Mention if others_____

11. In your opinion, which field of study is more preferable in the labor market (rank in their order of priority 1 for the best preferable... and 5 for the least preferable)

A. Industrial Technology ☐ C. Construction ☐
B. Business ☐ D. Information technology ☐
E. Home Science ☐

12. In your opinion, how do you rate the contribution of the apprenticeship training to the over all training programs?
    A. High ☐ B. Moderate ☐ C. Low ☐

If you response is "Moderate or low", what are the problems?

A. The organizations /companies do not have sufficient resources. ☐
B. Not allowing trainees on machines and tools. ☐
C. No follow up in the training. ☐
D. In appropriateness of the training with their major field of study. ☐
E. Supervisors assigned were less qualified. ☐

F. Mention if others_____

13. What factors might induce you to be self-employed, please prioritize how important you think each of these factors is?
    A. Financial incentive in the form of soft loan .☐
    B. Material support. ☐
    C. Additional entrepreneurial training and skill.☐
    D. Provision of working places ☐
    E. Interest ☐
14. In which sector would you like to work? A. Private organization ☐
    B. NGO's ☐ C. Government organizations ☐ D. Self-employed ☐
15. Which type of work do you like? A. Office work ☐ B. Manual work ☐
16. Why have you failed to get a job (for unemployed)?
    A. Lack of information ☐ B. No vacancies related to my field ☐
    C. Low salary ☐ D. Lack of work experience ☐
    D. If others, mention _____
17. Are you searching a job(for un employed)? A. Yes ☐ B. No. ☐
    If your response to question number 17 is "yes", through what mechanisms?
    A. Employment agencies ☐
    B. Vacancies ☐
    C. Personal contact ☐
    D. By parents and friends ☐
    E. If others, mention_____
18. For how long do you engage in job?
    A. 6 months ☐ B. 1 year ☐
    C. 1-2 years ☐ D. Not employed since I graduated ☐
19. In your opinion, what are the major problems that affect the proper implementation of the training programs?

    _____
    _____
    _____
    _____

20. What alternatives do you suggest to improve the implementation of the training programs and employability of the graduates?

    _____
    _____
    _____
    _____

Thanks again

Annex- 2b

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF EDUCATIONAL PLANNING AND MANAGEMENT

Interview guide for officials/experts in the TVET commission of Addis Ababa

Personal Data

1. What is your position in the office? _____
2. What is your year of service? In TVET commission _____
   In other_____
3. Have you get any refresher course? Yes/No
   If yes, for how long?
4. What is your qualification? _____

General Questions

1. Do you think the resources allocated to TVET colleges are sufficient to achieve the desired goals?
2. Does your organization conduct training need assessment?
3. In your opinion, is there sufficient job opportunity for TVET graduates?
4. Does your organization involve the stakeholder, particularly the employer or organizations providing apprenticeship training to the trainees?
5. In your view which field of study is prioritized by the labor market? Why?
6. In your opinion, how do you evaluate the competence of the trainers and supporting staff of TVET colleges?
7. To what extent your organization arrange conditions for TVET graduates to start their own business or self-employed?
8. In your opinion, what are the major problems that affect the proper implementation of the training programs?
9. What alternatives do you suggest to improve the implementation of the training program and employability of graduates?

Annex- 3

Observation check list to supervise the TVET colleges

1. Name of the TVET college _____
2. Year of establishment _____
3. Geographical setting - Addis Ababa

   Sub city _____

   Kebelle _____

Key: 1- Not satisfactory 2- Barely satisfactory 3- Satisfactory
4- More than satisfactory 5- Excellent

	General condition of the TVET colleges						
		1	2	3	4	5	Remark
4.1	Attractiveness of the college (Sport field, tree, fence, etc.)						
4.2	Access to future expansion						
4.3	Access to water supply						
4.4	Access to electric supply						
4.5	Availability of student services (Cafeteria, Toilet, etc.)						
4.6	Cleanliness of the compound						

No	Item	Available		Adequate		Convenient		Remark
		Yes	No	Yes	No	Yes	No	
5.1	Equipment / Machines							
5.2	Space 3-6 M2 /students							
5.3	Hand tools							
5.4	Light							
5.5	Electric supply							
5.6	Row materials							
5.7	Teaching aids							
5.8	Space for storage							
5.9	Safety precaution, Example, Fire extinguisher, first aid kit							
5.10	Ventilation							

No	Item	Available		Adequate		Convenient		Remark
		Yes	No	Yes	No	Yes	No	
6.1	Classroom size 2 M2/student							
6.2	Chairs							
6.3	Tables							
6.4	Black or White board							
6.5	Light							
6.6	Ventilation							
6.7	Display corner							
6.8	Windows							

No	Item	Available		Adequate		Convenient		Remark
		Yes	No	Yes	No	Yes	No	
7.1	Tables							
7.2	Chairs							
7.3	Text books							
7.4	Professional journals							
7.5	Space							

N	Item	Available		Adequate		Convenient		Remark
		Yes	No	Yes	No	Yes	No	
8.1	Computers with different packages							
8.2	Computer professionals							
8.3	Internet access							
8.4	Tables							
8.5	Chairs							

Annex- 4

A Guide for documentary analysis

This guide will be filled by college deans/vice deans. It is aimed to obtain relevant data pertaining to status of TVET college students and graduates.

1. Name of the college _____
2. Number of –classrooms _____
   _workshops _____
4. Student enrollment by field and sex (only 10+2 programs)

Year	No	Occupation	Number of students by year					
			Year one		Year two		Total	
			M	F	M	F	M	F
1996	1	Industrial technology						
	2	Construction tech.						
	3	Business						
	4	Textile technology						
	5	Home science						
		Total						
1997	1	Industrial technology						
	2	Construction tech.						
	3	Business						
	4	Textile technology						
	5	Home science						
		Total						
1998	1	Industrial technology						
	2	Construction tech.						
	3	Business						
	4	Textile technology						
	5	Home science						
		Total						
1999	1	Industrial technology						
	2	Construction tech.						
	3	Business						
	4	Textile technology						
	5	Home science						
		Total						

Annex-5

List of Sample Organizations offering Apprenticeship Trainings

No.	Name of the Organizations	Sub-City	Location
1	Moha Soft Drinks Industry P.L.C.	Lideta	Mola-Maru
2	Birhane Selam Printing Enterprise	Arada	Arat kilo
3	Federal Micro & Small Enterprises Development Agency	Kirkos	Mexico
4	National Metal and Woodworks P.L.C	Gulele	Dej. wube
5	Ethiopian Chip wood and Furniture Factory S.c.	Nefas-silk	Saris
6	Awash Construction Share Company	Nefas-silk	Saris
7	Teklehaimanot Garage	Kirkos	Kera
8	Tana Engineering P.L.C.	Kirkos	Genet Hotel
9	National Tobacco Enterprise	Lideta	AU
10	Ethiopian Mapping Agency	Kirkos	Sheraton
11	Ethiopian Road Authority	Kirkos	Mexico
12	Ethiopian Electric Power Authority	Arada	Piaza
13	Arada Sub-City Housing Development Agency	Arada	Minilik
14	Anbesa Garage	Bole	Amce
15	Addis Ababa Water and Sewerage Service	Kirkos	Megenanga

Group Statistics

	Respondents	N	Mean	Std. Deviation	Std. Error Mean
H1	1.00	236	2.9619	1.07715	.07012
	2.00	52	3.2500	1.11803	.15504
H2	1.00	236	3.5212	.95180	.06196
	2.00	52	3.0769	.94653	.13126
H3	1.00	236	2.5169	1.18669	.07725
	2.00	52	2.5769	1.14354	.15858
H4	1.00	236	1.9364	.98509	.06412
	2.00	52	2.6731	1.14996	.15947
H5	1.00	236	2.0127	1.13917	.07415
	2.00	52	2.9231	1.13494	.15739
M1	1.00	236	2.9831	1.23069	.08011
	2.00	52	2.8269	1.11533	.15467
M2	1.00	236	3.3136	1.18644	.07723
	2.00	52	3.0192	.98000	.13590
M3	1.00	236	2.8008	1.16261	.07568
	2.00	52	2.4038	1.08934	.15106
M4	1.00	236	3.0127	1.42465	.09274
	2.00	52	2.8462	1.03629	.14371
F1	1.00	236	2.5339	1.26614	.08242
	2.00	52	2.8269	1.16688	.16182
F2	1.00	236	2.4237	1.22670	.07985
	2.00	52	2.3077	1.03920	.14411
F3	1.00	236	2.1568	1.11699	.07271
	2.00	52	2.3077	1.02016	.14147
F4	1.00	236	1.6017	.99051	.06448
	2.00	52	1.5577	.82637	.11460
A1	1.00	236	2.8263	1.16670	.07595
	2.00	52	2.6731	.92294	.12799
A2	1.00	236	2.9068	1.17772	.07666
	2.00	52	3.0000	1.06642	.14789
A3	1.00	236	3.0381	1.20399	.07837
	2.00	52	3.1538	1.01720	.14106
A4	1.00	236	2.8432	1.25681	.08181
	2.00	52	2.7115	1.10855	.15373

Independent Samples Test

Annex-6b

t-test for Equality of Means										
		Levene's Test for Equality of Variances		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	SIG						Lower	Upper
H1	Equal variances assumed	1.493	.223	-1.734	286	.084	-.28814	.16615	-.61516	.03889
	Equal variances not assumed			-1.693	73.328	.095	-.28814	.17016	-.62724	.05097
H2	Equal variances assumed	1.825	.178	3.050	286	.003	.44426	.14567	.15755	.73098
	Equal variances not assumed			3.061	75.444	.003	.44426	.14515	.15514	.73339
H3	Equal variances assumed	.183	.670	-.332	286	.740	-.05997	.18063	-.41551	.29556
	Equal variances not assumed			-.340	77.131	.735	-.05997	.17639	-.41121	.29126
H4	Equal variances assumed	3.283	.071	-4.731	286	.000	-.73664	.15571	-1.04313	-.43015
	Equal variances not assumed			-4.286	68.437	.000	-.73664	.17188	-1.07958	-.39370
H5	Equal variances assumed	.278	.598	-5.220	286	.000	-.91037	.17440	-1.25363	-.56710
	Equal variances not assumed			-5.233	75.350	.000	-.91037	.17398	-1.25693	-.56380
M1	Equal variances assumed	1.031	.311	.842	286	.401	.15613	.18551	-.20900	.52126
	Equal variances not assumed			.896	80.773	.373	.15613	.17418	-.19046	.50272
M2	Equal variances assumed	8.224	.004	1.667	286	.097	.29433	.17653	-.05314	.64179
	Equal variances not assumed			1.883	87.284	.063	.29433	.15631	-.01635	.60500
M3	Equal variances assumed	.000	.990	2.254	286	.025	.39700	.17615	.05028	.74372
	Equal variances not assumed			2.350	78.736	.021	.39700	.16896	.06068	.73333
M4	Equal variances assumed	18.599	.000	.797	286	.426	.16656	.20888	-.24458	.57770
	Equal variances not assumed			.974	98.609	.333	.16656	.17103	-.17282	.50594
F1	Equal variances assumed	3.034	.083	-1.531	286	.127	-.29302	.19134	-.66964	.08359
	Equal variances not assumed			-1.614	79.728	.111	-.29302	.18160	-.65443	.06838

F2	Equal variances assumed	4.227	.041	.634	286	.527	.11604	.18313	-.24442	.47649
	Equal variances not assumed			.704	85.377	.483	.11604	.16476	-.21152	.44359
F3	Equal variances assumed	.335	.563	-.895	286	.371	-.15091	.16856	-.48270	.18087
	Equal variances not assumed			-.949	80.286	.346	-.15091	.15906	-.46744	.16561
F4	Equal variances assumed	1.821	.178	.298	286	.766	.04400	.14757	-.24646	.33446
	Equal variances not assumed			.335	86.519	.739	.04400	.13149	-.21737	.30537
A1	Equal variances assumed	3.541	.061	.887	286	.376	.15319	.17266	-.18666	.49305
	Equal variances not assumed			1.029	90.794	.306	.15319	.14882	-.14244	.44882
A2	Equal variances assumed	1.867	.173	-.525	286	.600	-.09322	.17750	-.44259	.25615
	Equal variances not assumed			-.560	80.827	.577	-.09322	.16658	-.42466	.23822
A3	Equal variances assumed	.845	.359	-.644	286	.520	-.11571	.17967	-.46936	.23794
	Equal variances not assumed			-.717	85.577	.475	-.11571	.16137	-.43653	.20511
A4	Equal variances assumed	2.826	.094	.698	286	.486	.13168	.18868	-.23970	.50307
	Equal variances not assumed			.756	82.542	.452	.13168	.17414	-.21471	.47807

Annex-7

Respondents by Occupation

No.	Occupations	Respondents		Remarks
		Trainees	Graduates	
1	Electricity	41	13	
2	Electronics	31	3	
3	Auto machine	29	2	
4	General mechanics	28	2	
5	Machine technology	20	0	
6	Building construction	25	14	
7	Road construction	18	3	
8	Surveying	27	8	
9	Drafting	25	3	
10	Wood work	15	8	
11	Textile	15	0	
	Total	**276**	**54**	

Declaration

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

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Signature-  ...

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Date- July 20, 2007