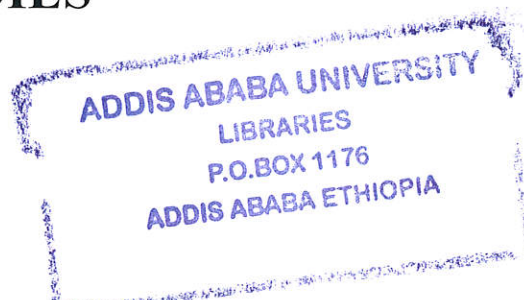


ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUTE STUDIES
COLLEGE OF EDUCATION AND BEHAVIORAL
STUDIES



LINKAGE BETWEEN PUBLIC TECHNICAL
VOCATIONAL EDUCATION AND TRAINING (TVET)
COLLEGES AND INDUSTRIES IN ADDIS ABABA CITY
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BY
TSEGAYE TEFERA

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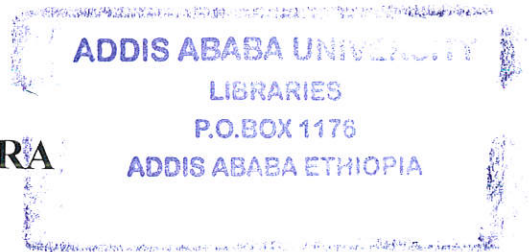
**A Thesis Presented to the School of Graduate Studies, Addis Ababa
University, in Partial Fulfillment of the Requirements for the Degree
of Master of Arts in Management of Vocational Education**

**BY
TSEGAYE TEFERA**

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Acronyms and Abbreviations

AAU	Addis Ababa University
ADEA	Association for Development of Education in Africa
CONFEMEN	Conference of Ministers of Education in Francophone Countries
MoFED	Ministry of Finance and Economic Development
MoE	Ministry of Education
MoTI	Ministry of Trade and Industry
NCVER	National Center for Vocational Education Research
NVQ	National Vocational Qualification
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
QCA	Qualification and Curriculum Authority
SME	Small and Medium Enterprise
TVET	Technical Vocational Education and Training
UNESCO	United Nations Educational Scientific and Cultural Organization
UNEVOC	UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training

Abstract

The purpose of this study was to understand and assess the linkage of public Technical Education and Training (TVET) Colleges with the Industry in Addis Ababa City Administration. To conduct this research, descriptive survey method was employed. The primary sources of data were 10 college deans, 32 department heads, 47 senior instructors, 6 vocational counselors 6 program coordinators, and 3 TVET Agency core process owners. Simple random sampling was used to select respondents of senior instructors and Purposive sampling was employed to select respondents of all other groups. Likewise, the collected data were analyzed quantitatively by using descriptive and inferential statistics, and qualitatively by using descriptive narration. Questionnaires were the main data gathering instruments while interview and document analysis were employed to enrich the data gathered through questionnaires. The finding of the study mirrors that the linkage between public TVET colleges and the industry is loose and TVET colleges are not in a position of applying linking mechanisms like developing collaborative strategic plan and curriculum , motility of industry experts and lecturers. The leadership quality of the TVET colleges was inefficient in developing linkage strategies, coordinating and monitoring the progress. Besides, TVET colleges as initiators of linkage lack to develop joint action plan. Moreover, there was an implementation bottleneck with respect to diversification of Training modality. Thus, evening class was the most frequently utilized mode of delivery for trainees who are day shift workers of the industries. Studies conducted to know the satisfaction level of the industry as a result of the TVET output and the current status of graduates were not successfully carried out by most sampled TVET Colleges. As a result, the current status of linkage between TVET and industry in Addis Ababa City Administration was found to be not promising. Thus, TVET colleges have to look critically the issue of linkage since there is a serious risk as it gets loose in addressing the relevance of the training they provide. However for successful TVET-Industry linkage to take place industries should be involved in the planning, implementation and evaluation of TVET program more specifically the strategic plan and curriculum activity; TVET colleges should emphasis on the flexibility of the training modes in order to give opportunity to the mass of industry employee; intensive training in upgrading the skill of the TVET management and awareness creation about mutual benefit of the TVET- industry linkage should be established; TVET colleges should conduct tracer studies about the employment status , and employers' satisfaction of their graduates so as to facilitate sufficient flow of information through structural feedbacks from industries to TVET colleges and vice-versa.

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Technical Vocational Education and Training (TVET) refers to a range of learning experiences which are relevant to the world of work and which occur in a variety of learning context, including educational institution and world of work place (UNEVOC, 2006). Stevens (2001) clarified the essence of TVET by stating that TVET encompasses programs providing participants with skills, knowledge, and attitude that enable them to engage in productive work, to adapt rapidly to changing market economies, and to participate as responsive citizens in their society. Quality TVET is also recognized to be key for enhancing economic competitiveness for contributing to the social inclusion, decent employment and income, and poverty reduction (ADEA, 2008). In relation to this fact, UNESCO (1979) stated that political leaders, economic planners and educators in many countries appear to consider the development of TVET as a keystone of educational system that can be adapted to the need of individuals in society in which he or she lives.

Although TVET has potential benefits as stated above, it has been criticized for some practical problems. Atchoarena and Dalluc (2002) summarized the problem in evaluating TVET in east Africa boldly as follows: Poor quality, very high cost, training not suited to the actual socio economic conditions, disregard of the informal sector's needs, and disregard of the labor market and the high unemployment rate among graduates.

However, these criticisms against TVET are likely to be reduced by creating productive linkage with the industry. NCVR (2005) indicated that effective industry vocational education linkages have benefits for industry, government, vocational institution and students. They can be useful mechanisms for identifying industry skill needs, and for developing appropriate guidelines and /or materials for the delivery of education, training, assessment to meet these needs. Taylor (2006) understood that partnership is

generally considered consistent with the public management approaches, which emphasized alliances, shared responsibility, increased transparency, and accountability for the result. Tessaring and Wannan (2004) argued that work place partnership is an innovative way to link companies and develop regional innovation centers, including vocational school, and higher education. In addition, partnership programs are helpful in making companies to be competitive in the market, in expanding employment opportunities for employees, and communication between employers and TVET providers (Hawley, 2006, Van Horn & Fichtner, 2003)

In Ethiopia, following many years of structural adjustment, TVET system has been a focus of educational policies and strategies. The current system is expected to enable trainees to get employment, either working as employees of company or as self-employed. The goal of the system is to create competent and capable work force to be the foundation of the economy and social development of the country. It is indicated that in the national TVET strategy the main objective of the training is to create a committed, motivated, adaptable and innovative work force contributing to poverty reduction, social and economic development through facilitating demand driven, high quality TVET relevant to all sectors of the economy, at all levels and to all people.

Thus, the potential to use our human resource for the competitive advantage in our industry depends upon our capacity, efficiency, willingness to deal with the problem and related issues of TVET. Hamel and Prahalad (1996) indicated the key to being productive in the future lies not in outdated management strategies ,but rather in area of strategic development and the application of an organization's 'brain power' and 'intellectual capital'. In their view an organizations competitive strength comprises the collective learning of its employees, particularly their ability to absorb knowledge and use it to the benefit of the core process of an organization.

Considering the aforementioned fact, the Ethiopian government sees TVET as an important factor in the process of human resource development in order to break the vicious cycle of poverty that the country has been entangled. In keeping with this goal, significant policies in developing our TVET system and to meet the sharply growing needs of skilled worker have been made. However, most of the developments and

endeavors lack strategic moves to link industry with TVET and very little has been done to study and analyze the effectiveness of the link in contributing for the mutual productivity of both parties.

1.2. Statement of the problem

TVET has a very significant role and contribution in bringing about sustainable development in any country. As a result many developing countries are emphasizing on TVET strategies and policies and overall development of the system as a whole. The New Educational Policy and Strategy; and the TVET Reform Strategy, are the breaks through that have undergone in Ethiopia.

Like the TVET in most African countries, TVET in Ethiopia has different drawbacks and problems. People argue that the quality of the program is poor, with very high cost, training not suited to the actual socioeconomic conditions, disregard of the informal sector's needs, and disregard of the labor market and the high unemployment rate among graduates (Atchoarena and Dalluc, 2002). These among other factors, is because of lack of effective linkage and partnership between the TVET institutions and the industry.

Solving these problems, theoretically, calls for the use of strong linkage of TVET institutes with the industry. Yet the fact is that apparently no strategic initiatives of linkage are used by TVET colleges contrary to the policy documents.

Since the current status of the industry in our country is just a beginning with an un-matured system and structure, the issue of TVET – Industry linkage is mostly expected to be initiated and coordinated by the TVET providers as they are relatively organized and main actors in the TVET system. In so doing it is expected that TVET institutions utilize the advantage in pursuit to strengthen their capacity and establishing system to contribute to the development endeavor that our country has targeted in order to eliminate absolute poverty, sustainable development and poverty reduction (MoFED: 2005 & 2002).

On contrary to the above fact it doesn't seem that TVET colleges have recognized the need to engage closely with the industry in which their students will find employment. In addition TVET colleges' management willingness to develop a new vision and introduce

new core tasks is not in built attitude in most TVET colleges. TVET colleges' management lacks the necessary flexibility required for the execution of linkage.

Moreover, TVET colleges lack a clear strategic orientation on what they expect from the linkage. They fail to define mission and objectives, and the activities that are required to achieve these objectives, to identify and use the linkage mechanisms efficiently.

This study focuses on selected TVET colleges Entoto, Addis Ababa Tegebare Id, Misrak, Nifas Silk Technical and Vocational Colleges. It intended to evaluate the forms of linkage between the TVET Colleges and the industry, examine the extent, motivating and impeding factors in the integration of the parties. The main focuses of the study are, therefore, to give response to the following basic questions:-

1. To what extents are linking mechanisms are applicable to improve TVET-Industry linkage in Addis Ababa City Administration?
2. Are there any motivating factors in linking TVET colleges with industry?
3. Do managers of TVET colleges have the necessary competencies to achieve strong linkage with the industry?
4. What are the impeding conditions in linking TVET colleges with the industry?
5. What should be done to alleviate the challenge?

1.3.Objectives of the study

1.3.1 General objective

The general objective of this study is to examine the linkage between TVET colleges and the industry from the side of selected TVET colleges in Addis Ababa City Administration. It is also designed to assess the existence and to examine the extent of motivating and impeding factors in the integration of the parties. Moreover, the study attempted to examine the policies, guide lines and frameworks as they are formulated to link the TVET colleges with the industry.

1.3.2 Specific objectives

More specifically the study:

- evaluates the existence and level of applicability of linkage mechanisms in selected TVET Colleges
- assesses the strategic importance of TVET- Industry Linkage
- pinpoints the benefits of TVET - Industry linkage to both parties
- identifies the opportunities and challenges of the linkage
- recommends on how TVET – Industry linkage can be improved

1.4. Scope of the study

Although linking public TVET colleges with the industries is the concern of both parties, to make the study manageable, the scope of this study takes a look at the issue of linkage from the side of the TVET colleges.

There are six Public Technical and Vocational Education Colleges in Addis Ababa City Administration. To make an in-depth investigation of the issue this study covered four purposively selected TVET Colleges in Addis Ababa. Two Colleges were randomly selected from older establishments and two from recently upgraded ones. The main reason for stratifying the selection is the expectation of the researcher that better experience and practices can be identified and shared from different perspective. Moreover it is possible to see the practice of linkage with industry of older TVET colleges in offering training and educational program at college level and those colleges, which are recently upgraded to TVET College Level. Below is list of the colleges:

- a. Entoto Technical and Vocational College
- b. Addis Ababa Tegebare Id Technical and Vocational College
- c. Misrak Technical and Vocational College
- d. Nifas Silk Technical and Vocational College

1.5. Significance of the study

As Technical and Vocational Training is essential for the fulfillment of individuals needs as well as the national growth, assessing practices, problems and recommending the leeway to challenge future uncertainty in TVET becomes unavoidable and necessary. In light of this observation, this study is seemed as “significant” based on the following reasons:

1. The findings are hoped to remind TVET college managers, strategic planners, and implementers and other concerned bodies about the necessity of the subject under study and help them to provide solution to the problems and tackle challenges related to TVET – Industry linkage.
2. The study may add current and fresh bits of information to the already existing literature and can be an additional reference material.
3. Since no detailed research has been conducted on the TVET – Industry linkage in the study area this study would help to create awareness to those people concerned with the problem and would serve as a springboard for further research.

1.6. Definition of Terms

- **Industry:** it is used broadly to include all labour market sectors. I.e. not just manufacturing or natural resources (Meredith, 2002)
- **Industry linkage:** Refers to any mechanism or strategy intended to promote interaction between the education system and the world of work (Meredith, 2002)
- **Quality:** is the level of excellence in performance which can be measured by establishing an acceptable criteria and standards of good performance

1.7. Organization of the Study

This thesis consists of five chapters. The first chapter deals with the background, statement of the problem, objectives, significance and scope of the study. Chapter two reviews literature related to the research topic. Methodological issues including description of the study area are presented in chapter three. The fourth chapter presented the analysis of the study and their interpretations. The final chapter consists of summary, conclusion and recommendations.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1. Conceptual Framework

Linkage between Technical Vocational Education and Training (TVET) colleges and Industries refers to activities which are mutually beneficial to both parties involved in the relationship. This can be that industries may provide TVET colleges with supervision, support, financial assistance in course establishment and curriculum development, while TVET colleges provide the industry with skilled labour, technology accumulation and transfer, research and education service to help them develop their business. By concentrating on the development of the all-round qualities of students, TVET helps to train technicians and specialists for industry. Industry provides field practice, training place for students, and resource for technicians and specialists to attend TVET colleges. The goal of this two-way participation is to improve workforce quality and ability to meet the demands of the market economy.

According to Poupar et al, in Atchoarena and Delluc (2002) international recommendations for the improvement of Technical Vocational Education and Training (TVET) system need to forge closer links between training and the labour market. This search for a better match between job and training is based on two- horned problem:

- The labour market today is often considered to be characterized by an acute shortage of skilled labour, as reported by many employers. Paradoxically, many economies suffer, at the same time, from rising unemployment, particularly among the young people leaving the education system.
- The pace of technological change requires workers to have new qualifications in order to perform the tasks required in modern jobs and thus to raise competitiveness.

These indicate that in order to be successful training providers should engage closely with the environment in which their students will find employment and industries have to recognize the added value of partnership with training providers.

Wolf in Al-Amyan (2004) stated linking education with industry as a mechanism can provide numerous benefits for employers, students, workers and the economy and the society. It is especially important for dissemination of applicable education and aligns graduate skills with industry demand. Moreover linking education with the industry improves educational planning, graduate employment and labour market function, student learning and motivation, and promotes sharing of resources between educational institutions and work place.

According to Meredith in Al-Amyan (2004) there can be two extremes of linkage strategy that can occur between training institution and industries. Tight linkage strategy aims to ensure that the graduate skills meet specific and requirements of the labour market or individual employer. It is appropriate where industry indicates demand for highly specific skill sets. In designing mechanism for tight linkage, the main concern is to demonstrate that graduate's skills match industry specifications. On the other hand loose linkage strategy is more appropriate where the educational program is not intended to satisfy specific skill demands, but rather to help graduate find and keep employment.

Thus, TVET colleges to address the need of the labour market and the demand of the industry need to establish tight linkage with the industry. This indicates that they should emphasis in collaborative design of curriculum in our case the occupational standards and the competencies their graduate should show in fitting the demand of the industry.

2.2. Mechanisms of Linking TVET Colleges with Industries

Since the major aims of TVET program is to prepare trainees for the world of work, establishing closer relationship with the industry is essential. This needs a joint action that the TVET colleges and the industry should have to take for the mutual benefits of both parties.

2.2.1 Developing Strategies

Although strategic plan is a common word in many organizations, most public service system tends to react to immediate problems. Consequently administrators often operate without clearly defined targets, so that output become casual and may not correspond to priorities (Gasskov, 2000). This clearly indicates that organizations should think of the future, practice strategic management of their organization by defining and implementing long-term choices regarding objectives, structures and internal policies.

According to Joy-Matthews (2004) provider and user of TVET should align their strategies and policies to reach a common aim and increase the effectiveness and efficiency of the national TVET system. These strategies and techniques are intended to help individuals, groups and organizations realize their full potential for working in a way that allow for individuality and yet enhance effectiveness within the particular context.

Colleges and industries should have to make strategic plans, which can enable them to systematically tackle the evil of the future. In our context, especially in government TVET Colleges where resource is limited and dominated by the government budget, the need for smartly designed plan with the cooperation of the industry is indispensable.

2.2.2. Curriculum Development

Involving enterprise in designing curricula is regarded as a crucial because this form of collaboration makes possible to train young people more effectively to the workplace.

According to UNEVOC (1997) creating strong relationship between TVET institutions and the business is recommended in order to ensure that the content of the course provided by TVET institutions matches industry and commercial requirements and it can evolve in line with the changing nature of demand on the job market.

Tony (1994) in line with this fact indicated that the vocation curriculum is a changing curriculum that provider of the training and the user of the training program should asses the gap and regularly update it for the mutual benefit.

These clearly indicates that TVET colleges should design their curriculum in line with the need of industry and individual students, and should update the curriculum regularly to accommodate advance in technology, learning and teaching methods, social and cultural development, job market needs and globalization.

Thus, TVET Colleges need to translate the Ethiopian Occupational Standards in to suitable program. The curriculum is considered as an important enabling element (MoE, 2007). It helps to facilitate the learning process in a way, that learners can acquire the set of occupational competencies (skills, knowledge and attitude) required at the work place and in Ethiopian occupational standards. The main responsibility of developing adequate curricula based on Ethiopian Occupational Standard (EOS) is assigned primarily and ultimately to the individual TVET-provider.

2.2.3. Curriculum delivery

Colleges of TVET should use a wide range of delivery methods including part time, full time, flexible learning; work based learning to accommodate the diverse needs of the learner and their learning styles. There has been significant research on developing new methods of delivering TVET programs. These include work based learning, Project /problem based learning, open/distance learning and learning contracts. The importance of considering the work place as a learning environment is emphasized as the tensions that arise for learners meeting the demand of academia in full time employment.

Bragg and Reger (2000) argue that work based learning specifies work related learning opportunity unique to the work place. It enables students to apply the academic and occupational knowledge, skills and attitude they have obtained in the class room.

This indicates that better connection between academic and occupational instruction and work-based learning can play an important role in strengthening the effectiveness of the work force.

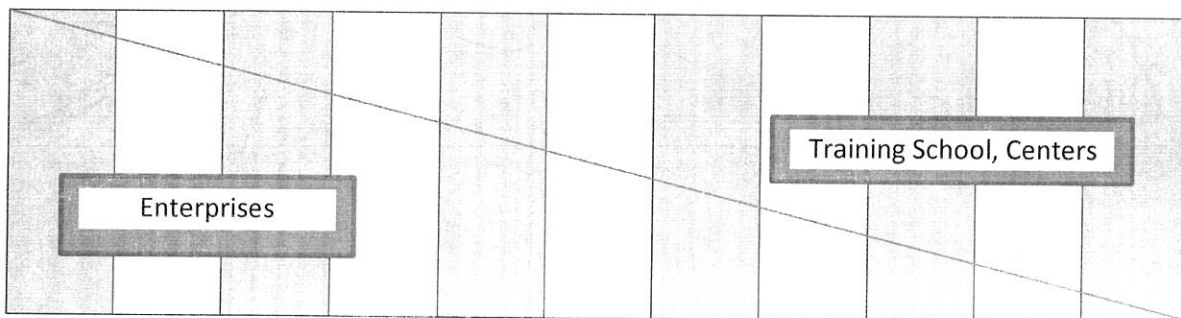
2.2.4. Partnership with industry

The term partnership in the field of Technical and Vocational Education and Training (TVET) it describes coordination mechanisms at the system level, as well as cooperation between school and business, at the institutional level.

According to Atchoarena in Chana et al.,(2009) some of the aims for establishing partnership in TVET are securing additional resource to finance TVET, improving the quality of program and contents, facilitating the transition from school to work and promoting continuing access of workers. Therefore TVET collages should use a wide range of methods including joint venture with industry and summer courses to link between the learning and the industry.

Successful partnerships between TVET colleges and industry are essential to the national economy. Good relationship between TVET colleges and industry facilitate the placement of students for training and provide case studies for enriching the delivery of the curriculum (Pagtakhn and Rock, 2002)

More specifically, CONFEMEN in Atchoarena and Delluc (2002) indicated that cooperation between technical school and enterprises can come in several forms, ranging from sandwich training to collaboration in research and development.



Work in the Enterprise/ On the job training	Work in the enterprise /class in the evening	Apprenticeship in the enterprise / 1 or 2 days in the vocational school	Dual training	Full-time TVE with internships in enterprises	Full -Time TVE
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Fig. 1. Illustrates the diversity of training modes based on the extent of cooperation between training institute and enterprises: Adapted from (Atchoarena and delluc, 2002)

The diagram shows the two extremes of training mode come closer in cooperating and the link between industry and training providers become stronger and lastly converge to the dual system.

2.2.5. Modes of Training in TVET

Vocational and Technical skills can be acquired by individual in many ways, public pre-employment training is only one way to enter skilled job. In modern sector, skills are obtained from initial and in-service trainings offered by private and public organizations.

2.2.5.1. School Based Training

As stated by Laugo, (1993), based on the balance between general education and vocational subjects in the curriculum, school based trainings can be classified as pre vocational and entry level skill. Accordingly, one can identify three main types of school based training: vocational streams or courses in main stream, secondary specialized technical or vocational and trade schools.

Middleton and et al, (1996) regarding the differences of school based training institution indicated that vocational instruction is provided in different quantity and degree of depth in various types of institutions. General education, vocational theory and practices are combined in schools.

A rationale for school based training is that it prepares for economies structural and technological changes by providing pertinent and broadening training.

2.2.5.2. In – firm internships for pupils

It can be described as a partial cooperation between TVET institution and business. They allow young trainees to absorb the social and occupational conditions of their chosen specialization via a first contact with the business world. Internships thus allow students to add hand – on experience to the preliminary theoretical training they receive in their institutions (Atchoarena and Delluc ,2002).

Laugo,(1993) emphasizes that in modern apprentice ship agreement is made, apprentice is paid a wage or subsistence allowance; the training provided is usually supplemented by courses in the trade theory and subjects in school; the apprentice is prepared for a trade and those who pass the test awarded a certificate. But, in traditional apprenticeship it is the apprentice who pays for the success of the master craft, the agreement, the training is not supported by trade theory and educational back ground is not a prerequisite.

In Ethiopia, with the commencement of modern vocational education and training, apprenticeship is introduced in the training system; it is also supported by proclamation:

Apprenticeship mean job training undertaken by trainee in an organization pursuant to an agreement conducted among training institution ,an organization and trainee to enable the trainees to put to practice the technical and vocational training acquired in training institution and to be acquainted with the work. (Negarit Gazeta 2004No392:2004 page 2554)

This mode of training emphasis the necessity of the linkage between vocational institution and the industry, the industry is expected to host students and share the experience of the real world and the training institutions equip the students with the theoretical and practical aspects of the trade.

2.2.5.3. Dual modes of training.

Grefe in Atchoarena and Delluc (2002) explained that dual training mode of training is based on the complementary between the enterprise and the school, in the sense that it involves not only the sum of the knowledge acquired in the class room plus the know-how acquired within the enterprise, but also the constant application of the knowledge acquired. The two milieus reinforce and complement each other to turn our trainees who are better qualified and better able to adapt to the business world

According to Middleton and et al., (1996) dual training system needs strong management to coordinate the employers training institutions to work towards the same goal. Moreover mutual incentives to employers, training institution and to make the program strong government support should be established.

Although dual training appears to be an effective means of familiarizing trainees very early with the condition of the work environment, there are many difficulties in applying this system. One of the reasons for this is it requires first and foremost that enterprises be willing to provide training and consider it as a long term investment in human resource development. If such training is to give young people a true impression experience in the company, careful organization of in firm training and supervision of trainees is also required.

From this fact, in maximizing the relevance of TVET training and in establishing strong link with the industry the Ethiopian TVET need to adapt the dual training mode. This can also be a tool to implement the cooperative training envisaged in the reformed Ethiopian TVET strategy.

2.2.6. Accreditation and Quality Assurance

Quality assurance is a planned and systematic review process of an institution or program to determine whether or not acceptable standards of education, scholarship and infrastructure are being met, maintained and enhanced (Materu, 2007). Thus, quality assurance is different from quality control in that it is before – and during the –event process and concerned with preventing faults occurring in the first place (Sallis, 1993; Venkataiah, 2004).

Harver & et al., (1992) indicated that accreditation of programs by professional body demonstrates that the program is relevant to the industry. The purpose of TVET is to provide relevant knowledge, skills and competencies for employment and income generation. If the skills are not acquired, i.e., if the quality is bad, the money is wasted. Quality assurance for institution is accomplished through registration, certification, and accreditation. Quality assurance for acquisition of individual skill is done through assessment and testing. Quality can be viewed in terms of inputs, processes, and outputs.

TVET colleges and Industries should have effective Quality Assurance system to insure that their products are fit for purpose and that their stakeholders are satisfied. The issue of quality assurance is becoming more important in the TVET sector. Institutions should

have clear missions, explicit quality assurance systems and be committed to improve quality.

2.3. Experience of Countries in TVET - Industry Linkage

Different countries worldwide: Developed and developing have practiced to create the linkage between their TVET providers and Industries. Thus, viewing the global and the local context of linkage between TVET providers and industry enable to understand the issue of linkage in broader sense. In countries like Germany the TVET providers and the industry have strong linkage on contrary to this in countries like France the linkage is comparatively weak. In Great Britain the industry is the main actor and the system is dominated by industry based training. From developing countries the experience of china shows strong linkage between providers and industries.

2.3.1. Germany- dual system

In Germany, the dual system training has been implemented long ago with very strong support by industries. As Schmidt and Alex (1997) explained, “the dual system is founded on close links between public and private training organizations, between statutory provision and provision governed by collective agreements, and between public training policy and private training investment.” They also listed significant characteristics that made the German’s Dual System being recognized and thus supported by German industries, as follows:

- participation of companies is voluntary,
- standards and content of training are agreed by employers and trade unions and then legally codified,
- cooperation between employers and trade unions at various levels supports and renews the system,
- independence of the system is preserved through corporate bodies (chambers),
- the system is financed mainly by corporate training providers, with supplementary funding coming from government,

- the provision of further education includes both general and occupation-related theoretical study.

Schmidt and Alex (1997) also argue that the success of the German's Dual System are mainly due to vocational qualification confers high standing in Germany , skilled blue- and white-collar workers and SME craftsmen enjoy a high status in society. In addition to this, VET is a primary political concern and the Dual System is not questioned by any major political party as the most suitable system of VET, likewise both employers and trade unions regard it as the stable basis of their VET policy relationship. Furthermore large research and development institutes offer database and advice to employers, trade unions and the government. These institutes provide a platform for joint planning and for the improvement and adaptation of vocational training. Moreover when planning VET, the government acts on the consensus principle, by building on the agreement of employers and trade unions, and employers and trade unions provide on-going renewal of the training content and the examination syllabus.

Thus, The German Dual system of vocational education clearly indicates the positive and open attitude of the industry and the training providers, the linkage they created in the training system. Furthermore, the vocational education laws as well as the training directives provide a national regulatory frame work, with the federal institute for the vocational education and training as the governing body.

2.3.2. France – a School-based system

Vocational education in France is primarily organized in full-time vocational schools which are the responsibility of the government. This is due to historical developments in France in which the government took over problematic functions. Full time vocational school became an option when industry and social partners would not take responsibility for vocation education. A consequence of integration of vocational education into the general education system is the hierarch of general and vocational education, the latter having a lower reputation (Chana , et al, 2009).

Thus, France traditionally has school- based vocational education system in which the links with the industry are comparatively weak. In this system, a strong centralization can be identified. Since the state is responsible for all regulation concerning vocational education and training. Apart from that tradition French vocational training is integrated to the general training. In cultural context, technical and vocational education and training is seen as less desirable than general secondary and tertiary education .However, it can be stated that a trend towards a cooperative model of vocational education is in evidence, making vocational training more practical while conducting it outside the general education system.

2.3.3. Great Britain – an industry based system

Chana et al., (2009) stated that the vocational education system in Great Britain is based on the philosophy that anyone can obtain any vocational qualification, regardless of the when, where, and how. These National Vocational Qualifications (NVQs) can be issued by a variety of organizations; the governing body is the Qualification and Curriculum Authority (QCA).

The qualifications assess the actual skills of the student and are based on the principle of combining different learning unites without restrictions in regard to the time frame. Vocational education is conducted, in parts, by further education institutions, vocational education providers, or the employers. Most further education institutions are polytechnics with diversity in various vocational fields. In Great Britain, the Qualification and Curriculum Authority (QCA) is the governing body for vocational education and training on a national level. However due to the philosophy applied in the development of the National Vocational Qualification (NVQs), there is no national frame work regulating the partnership between industry and vocational training Institutions. Nevertheless, the output-oriented and qualification based approach of the NVQ system intend to produce skilled workers who meet the requirements of the labour market. The British example shows that, as stated at the beginning, it is not advisable to force partnership upon the stack holders involved in vocational education and training (Chana, et al, 2009)

2.3.4. China

Today, government policy continues to guide the provision of vocational education in China. There is a focus on being responsive to the need of the labour market, preparing students for occupation and employment, and combining work place practice and production with study (Chana & etal, 2009). In china the importance of combining practical work-based training with the education, close linkages with school and enterprise and encouraging students to participate in work based training are bonded by directives. So far, China has achieved considerable success in developing closer tie between vocational education and Industry. The following models of vocational education –industry collaboration are used to develop the linkages in China (NCVER, 2005):

2.3.4.1. The “mutual Cooperation between Enterprise and school” model

In this model enterprise take the initiative to look for a suitable school partner. In doing so, it searches for well-established vocational education school that offer relevant specialized training. The aim is to improve enterprise industrial production process, and provide benefits for both enterprise and school.

2.3.4.2. The “Training by order” model

In this model of collaboration the school chooses its enterprise partner, and signs an agreement to provide human resource training. The enterprise is involved in school management, and provides assistant with funding, equipment and workplace practice. It also provides a number of specialist teachers. The school establishes specialized courses and training programs, develops curriculum to meet the enterprise training objectives, and organizes the teaching required. The school also participates in the development of new technology and products, and in service training and consultancy.

2.3.4.3. The “Zero period of adaptation” model

In this model of collaboration the Vocational Education School identifies the knowledge and skill requirements of the enterprise, and then makes full use of enterprise resource to provide an appropriate training program to produce graduate for industry who can move

directly into positions without any other specific orientation requirements. This includes restructuring courses and curriculum, training new types of specialist teachers and establishing field practice placement within and outside school.

2.3.4.4. The “combined School – Factory” model

In this model the Vocational Education School uses its specific expertise and resources to run a combined school factory enterprise which meets the needs of the local economy. In this way the needs of both teaching and industrial production are fulfilled. In being focused on industrial production, teachers help to increase school profits, while the experience they acquire in this process in turn provide them with useful information for further developing their teaching expertise and improving the content of the curriculum.

2.4. The Current developments of policies on TVET-Industry linkage in Ethiopia

Ethiopia's TVET has made significant progress in providing competent, motivated, adaptable and innovative workforce which contributed to poverty reduction and social and economic development in Ethiopia. Moreover, TVET has greatly contributed to the establishment of the concept of citizenship.

Ethiopian Government in recognizing the contribution and the key role of TVET in achieving the plan for Accelerated Development to End Poverty (PASDEP), The Industrial Development Strategy and other sector development strategies has embarked in massive expansion of formal TVET between 1996/7 and 2004/5, which has resulted in the increase of the number of formal none agricultural TVET institutions from 17 to 199, and enrollment 3,000 to 106,305. Thirty-one percent of students in the latter were trained in non-government TVET institutions. Around 60% of formal TVET is provided in the form of regular programmes and 40% in evening classes. However, despite the enormous expansion, formal TVET only caters for less than 3% of the relevant age group. Enrolment figures in formal TVET programmes show a fair gender balance with 51% female students and 49% males. In 2004/05, another 42,000 trainees were enrolled in

agriculture TVET programmes and another 10,000 in teacher training institutes. (MOE, 2008)

Despite all its achievements, TVET still confronts problems, challenges, and criticisms that are precipitated and exacerbated by social and economic circumstances. The biggest problem facing Ethiopia's TVET are the quality of its graduates and the lack of conformity of their number and training with the requirements of social and economic development and the labour market. In addition, there are no clear assessments of the need for skilled labour. This is combined with surplus of graduates in certain specialization, such as accounting, marketing, purchasing, and secretarial, which results in unemployment and acute shortages in other specialties, such as technology. Overcrowding of trainees in limited infrastructure, shortage of skilled manpower, and shortage of learning materials are usually observed. More over need for informal education and affirmative programs for the socially disadvantaged, including adults and the illiterate is at its emerging stage. It seems that all the problems and challenges indicated are because of under implementation of the policies. These facts align to the common African saying, we are very good at drawing up strategies and plans but when it comes to implementation, there is always difficulty (UNESCO, 2009).

Today, government policies and strategies continue to guide the provision of TVET in Ethiopia. According to Ministry of Education, (2008) the vision, mission and objective of TVET Strategy is stated as:

Technical and Vocational Education and Training (TVET) in Ethiopia seeks to create competent and self-reliant citizens to contribute to the economic and social development of the country, thus improving the livelihoods of all Ethiopians and sustainably reducing poverty. The overall goal of the National TVET Strategy is to create a competent, motivated, adaptable and innovative workforce in Ethiopia contributing to poverty reduction and social and economic development through facilitating demand driven, high quality technical and vocational education and training, relevant to all sectors of the economy, at all levels and to all people in need of skills development.

Specifically, the National TVET Strategy (MOE,2008) aims to: a) Create and further develop a comprehensive, integrated, outcome based and decentralized TVET system for

Ethiopia b) Strengthen working organizations in view of making TVET institutions centers for Technology Transfer C) Create a coherent framework for all actors and stakeholders in the TVET system d) Improve the quality of TVET (formal and non-formal) at all levels and make it responsive to the needs of the labour market e) Facilitate the expansion of relevant TVET offers in Ethiopia which are crucial to national development f) Strengthen the private training market and encourage enterprises to participate in the TVET system g) Build the necessary human capacities to effectively manage and implement TVET In pursuing the objectives stated above,

In summary, the reformed TVET objectives indicate that there is a focus on being responsive to the need of the labour market, preparing students for occupation and employment, and combining work practice and within school learning. It also stress that combining workplace training with the theoretical training is basic and crucial in outcome based TVET system. Subsequent the strategy repeatedly underscore the importance of combing practical work – based training with TVET education of close linkage between TVET providers and industry, and of encouraging students to participate in work based training. It also highlighted the importance of Innovations, Technological accumulation, adaptation and transfer to farther develop, promote and apply new technologies in training and in industrial services.

Thus, in order to implement these goals, in the phase of accelerating industrialization and modernization, the quality of vocational training in particularly has to be improved. Vocational training should be linked with market demand in the economic structure transfer and labour structure in terms of quantity, quality, level and occupational structure of our industries.

Looking inside the industry strategy of the Ethiopian government it is possible to conclude that the linkage between Industry-TVET is essential if TVET is to adapt to the changing structure of the industry.

The Industry Development Strategy of the country has put in place the principles that primarily focus on the promotion of agricultural-led industrialization, export-led development, and expansion of labour intensive industries. These principles are inter-

dependent and inter-linked one with another. The strategy has also set the other principles that clearly stated the pivotal contribution of the private sector, the leadership role of the government, and the integrated and coordinated participation of the public at large in nurturing the strategy (MoTI ,2002)

Our industries may have the opportunity of becoming competitive by utilizing the abundant and hardworking force Ethiopia has. On the other hand Our TVET is expected to promote this abundant and hardworking force into productive citizens. It is agreed that the presence of abundant labour force alone could not be served as a means of reaching to the desired goal. Therefore, conducting a strong manpower development is essential to be competitive in the global labour market and accelerated and increased development of skilled workers, to meet these demands.

Focusing on the TVET reform enables to meet the needs of changing occupations and changing labour markets and it is of great significant. This opens up diverse pathway to employment, increased student access to different jobs. Furthermore, a focus on training responsiveness to the changing economy will also enable the reallocation and adjustment of human resource. This mean that existing workers in the town, city and in rural can upgrade their skills to move into alternative jobs, these can help to alleviate any difficulty and social problem.

In recent year Regional governments, Regional TVET Agencies, and TVET Providers are in a position of implementing the reformed TVET strategy of the federal government. It is necessary to faithfully implement the national government requirements regarding the partnership between TVET and the industry. It is also essential to promote these and other TVET reforms, and have consequently to accumulate experience. At the same time, strategies for further development of TVET have to be incorporated into local economic and community development plans, and in the restructuring of local industries. These strategies have to lay down a solid foundation for the development of strong linkages between industry and TVET.

2.4.1. Cooperative Training as an emerging model in TVET-Industry linkage in Ethiopian TVET

The National Technical Vocational Education strategy indicates that elements of cooperative TVET are included in the formal TVET programmes in the form of workplace internships of several months. This represents an important step forward in making the TVET system more relevant. However, cooperative training should be deepened to fully utilize its advantages for the TVET system. To this end, maximum flexibility is given to TVET providers to negotiate and develop relationships with individual employers, groups of employers or business/sector associations about the organization of cooperative delivery schemes.

According to MoE(2007) the envisaged cooperative training (CT) brings TVET institutions and enterprises together with training taking place in both venues: in school environment and place of work. This it is expected that the CT model brings enterprises into the training process, promises to improve the relevance of training offered to the market needs. Enterprise and TVET institutions are expected to cooperate in planning, implementing, and assessing the CT.

2.4.1.1. Planning Phase

Enterprises are asked to state their expectations for training outcomes: what skills knowledge and attitudes do they wish trainees to acquire at the end of their training. These expectations help set occupational standards and develop curricula to meet the standards. Enterprises are further expected to contribute their expertise to how the desired training outcomes will be achieved.

2.4.1.2. Implementation Phase

Enterprise participates in implementation by providing practical training in their premises. They communicate with TVET institutions and other enterprise regarding the achievement of training objectives, further training, and other issues.

2.4.1.3. Assessment phase

Enterprises take part in the committees that perform the final assessment of training outcomes. e.g through occupational assessment.

Furthermore TVET providers are encouraged to venture into more agreements with industries that represent the target labour market for a large group of trainees. As a rule, providers will have the freedom to develop cooperative TVET programmes in accordance with specific needs and potentials of companies and trainees, as long as the training is oriented on the occupational standards and will enable trainees to achieve the necessary competences of a qualification or part of a qualification.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

This study is aimed at investigating the linkage of some selected public TVET colleges with industries in Addis Ababa. To achieve the purpose, appropriate methods will be used to collect data related with the problem under investigation.

3.1. Research Method

The descriptive survey type of research was employed for the study. Because the method provides the opportunity to describe the condition or relationships that exist opinions that are held, processes that are going on, effects that are evident, or trends that are developing. It is primarily concerned with the present, although it often consider past events and influences as they relate to the current conditions (Best & Kahn, 2003). To achieve the objective of the study related literature and documents will be reviewed. Moreover, necessary data will be gathered through interview and questionnaire.

3.2. Sources of Data

In this study, both the primary and secondary sources were used to get adequate information about the current status of linkage with particular reference to public TVET Colleges in Addis Ababa

1. **Primary Sources:** were used to get first-hand information concerning the linkage TVET colleges have with industry in Addis Ababa. Accordingly, college deans, department heads, senior instructors, vocational counselors, program coordinators and Addis Ababa TVET Agency core process owners were relevant sources of the study.
2. **Secondary Sources:** were used to strengthen the primary sources. Hence, government documents such as TVET strategy documents, statistical annual abstract reports, Public TVET colleges' Strategic Plan, curriculum, journals and articles were assessed to avoid inadequacies of the data.

3.3. Samples and Sampling Techniques

In Addis Ababa City Administration there are six public Technical and Vocational Education Training (TVET) colleges providing training program. From these colleges, four TVETs were selected using purposive sampling techniques.

Top level administrative bodies College Deans, Department Head, Senior Instructors, Vocational Counselors, and Program Coordinators of the selected TVET Colleges were the main targets of this research. These people are basically responsible for the formulation and implementation of strategic plans and determining over all approaches of the colleges, their intention and commitment matters most in the practice of linking the college with the Industry. Moreover Addis Ababa TVET Agency core process owners were also informants for the study.

Table 1. Target Population and Sample of the study

Sample of the study	Respondents	Population size of the study			Sample size of the study			Percent
		M	F	Total	M	F	Total	%
Entoto TVET College	Deans	3	-	3	3	-	3	100
	Department heads	7	2	9	7	2	9	100
	Vocational Counselors	2	-	2	2	-	2	100
	Program Coordinators	2	-	2	2	-	2	100
	Senior Instructors	33	13	46	10	4	14	30
Addis Ababa Tegebareed TVET College	Deans	2	1	3	2	1	3	100
	Department heads	7	3	10	7	3	10	100
	Vocational Counselors	2	-	2	2	-	2	100
	Program Coordinators	1	-	1	1	-	1	100
	Senior Instructors	40	20	60	12	6	18	30
Misrak TVET College	Deans	1	2	3	2	1	3	100
	Department heads	5	3	8	5	3	8	100
	Vocational Counselors	1	-	1	1	-	1	100
	Program Coordinators	1	-	1	1	-	1	100
	Senior Instructors	30	13	43	9	4	13	30
Nifas Silk TVET College	Deans	1	2	3	1	2	3	100
	Department heads	4	4	8	4	4	8	100
	Vocational Counselors	1	-	1	1	-	1	100
	Program Coordinator	2	-	2	2	-	2	100
	Senior Instructors	37	16	53	11	5	16	30

- 61(30% of 202) Senior Instructors of the Four TVET Colleges (Entoto Technical and Vocational College 46 of 30%= 14, Addis Ababa Tegebared Technical and Vocational College 60 of 30%=18 and Misrak TVET College 43 of 30%=13, Nifas Silk TVET Colleg 53 of 30%=16)
- 6 Vocational Counselors, (Entoto Technical and Vocational College =2, Addis Ababa Tegebared Technical and Vocational College =2 and Misrak TVET College =1, Nifas Silk TVET Colleg=1)
- 12 Deans of four selected colleges ((Entoto Technical and Vocational College =3, Addis Ababa Tegebared Technical and Vocational College =3 and Misrak TVET College =3 Nifas Silk TVET Colleg=3)
- 6 Program Coordinator, (Entoto Technical and Vocational College =2, Addis Ababa Tegebared Technical and Vocational College =1 and Misrak TVET College =1, Nifas Silk TVET Colleg=2)
- 4 core process owners from TVET agency are purposively selected for interview.

3.4. Data Gathering Methods and Tools

The instruments used to gather data were questionnaires, structured interview, and document analysis. With respect to this, Cresswell (2003) stated that employing multiple data collection instruments help the researcher to combine, strengthen and amend some of the inadequacies and for triangulation of the data. Accordingly, questionnaires were used as the main data gathering instruments whereas structure interview and document analysis were used to enrich the data obtained through questionnaires.

3.4.1. Questionnaires

Questionnaire was used to collect relevant and first-hand information from informants. One type of questionnaire was prepared for college deans, Department heads, Senior Instructors, Vocational Counselors and Program Coordinators in English. This was based on the logic that English is used as a medium of instruction and by assuming that the qualification and educational level of respondents were adequate enough to understand the questions and respond to them. Within the questionnaires, open and close ended questions were included. The researcher preferred questionnaires as the main data

gathering instruments because it is easier to handle and simpler for respondents to answer within short period of time (Koul, 2008). Besides, it allows respondents to respond to questions confidentially and enables the researcher to use representative samples as sources of data to avoid exposing to biases. Therefore, a total of 120 copies of questionnaires were prepared and distributed to 12 deans, 35 department's heads 61 senior instructors 6 vocational counselors and 6 program coordinators. Out of this figure, a total of 101 (84.16%) copies of questionnaires were properly filled and returned on time. The analysis was also made by using the responses 101 respondents.

3.4.2. Interview

Structured interview was conducted with four core process owners of Addis Ababa City TVET Agency officials to enrich the data obtained through questionnaires. The reason why structured interview was used is that it is based on a strict procedure and a highly structured interview guide which is not as such different from open-ended questionnaires. It is advisable to use structured interview because the procedure to be used is standardized and is determined in advance of the interview (Koul, 2008).

3.4.3. Document Analysis

Document analysis was also used to gather necessary information about linkage endeavors made in TVET colleges to strengthen the data obtained through questionnaires. Due to this reason, college strategic plan, curriculum documents, journals, articles and statistical annual abstract reports were seen. With respect to this, Best and Kahn (2003) stated that document analyses are important and relevant sources of data and useful in yielding information and exploring educational practice.

3.5. Procedures of Data Collection

Before the actual study was carried out, a pilot study or try out of instrument was made on General Winget TVET College. The purpose of the pilot study was to make necessary clarification on the questionnaire items and to identify some approaching techniques that could help to collect data for the actual research. Accordingly, the questionnaires were distributed to 2 deans, 4 departments heads, 10 senior instructors, 1 vocational counselor

and 1 program coordinator. The questionnaires designed to be filled by the above respondents have got a reliability of Cronbach's Alpha=0.74. This shows that the questionnaire designed is reliable. On the basis of the feedbacks obtained from a pilot study, some improvements were made on instructions and sequences of few items. Therefore, the questionnaires were corrected, refined and made ready for the final study without omitting any item from the questionnaires.

3.6. Methods of Data Analysis

The data obtained through questionnaires which are liable to quantitative analysis were analyzed using percentages, means, standard deviation and one way ANOVA followed by discussion of the most important points. The data gathered through open – ended questions, Interview and document investigations were analyzed qualitatively through descriptive narration for the purpose of triangulation.

According to Kumar (1996), percentages play a more important role when two or more responses of samples are being compared. This is done by standardizing the variation in the number of respondents in each sample or population group, which normally varies against a fixed number that is 100. Besides, with regard to mean, it is a sort of an average or typical value of the items in a series, which help to summarize those series in terms of their average value. Moreover, the researcher used one way ANOVA at $\alpha=0.05$ level of significance to determine the differences between the responses of the sample groups on the same issue. On the other hand, Best and Kahn (2003) stated that the data gathered by the use of tools such as interviews and those extracted from documents are liable to qualitative analysis.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter analyzes and discusses the data collected from the respondents to seek appropriate answers for the basic questions raised at the beginning of the research. To this effect, 120 copies of questionnaires were distributed. Out of these questionnaires, 101 (84.16%) were returned and analyzed respectively. The rest 11 copies were not collected and 8 copies have been found incomplete to give the required information.

4.1. Characteristics of Respondents

The following description of the characteristics of target population gives some basic information about the sample population involved in the study.

Table 2: Distribution of respondents

No	Personal Data		Respondents											
			College Dean		Department Head		Senior Instructor		Vocational Counselor		Program Coordinato		Total	
			No	%	No	%	No	%	No	%	No	%	No	%
1	Name of college	Entoto TVET	3	30	7	21.9	12	25.5	2	33.3	2	33.3	26	25.7
		Tegbare Id TVET	2	20	8	25	12	25.5	2	33.3	1	16.7	25	24.8
		Misrak TVET	3	30	9	28.1	11	23.4	1	16.7	1	16.7	25	24.8
		Nifas Silk TVET	2	20	8	25	12	25.5	1	16.7	2	33.3	25	24.8
2	Sex	Male	7	70	21	65.6	33	70.2	6	100	6	100	73	72.3
		Female	3	30	11	34.7	14	29.8	-	-	-	-	28	27.7
3	Age	23-27	-	-	8	25	7	14.9	2	33.3	-	-	17	16.8
		28-32	1	10	4	12.5	9	19.1	-	-	1	16.7	15	14.9
		33-37	3	30	10	31.2	14	29.8	1	16.7	3	50	31	30.7
		38-42	2	20	3	9.4	8	17	-	-	-	-	13	12.9
		>42	4	40	7	21.9	9	19.1	3	50	2	33.3	25	24.8
4	Level of Education	BA/BSc	3	30	21	65.6	33	70.2	5	83.3	6	100	68	67.3
		MA/MSc	7	70	11	34.4	14	29.8	1	16.7	-	-	33	32.7
5	Service Year	6-10	-	-	6	18.8	7	14.9	2	33.3	1	16.7	16	15.8
		11-15	4	40	13	40.6	17	36.2	1	16.7	2	33.3	37	36.6
		16-20	2	20	7	21.9	12	25.5	-	-	1	16.7	22	21.8
		21-25	3	30	5	15.6	8	17	1	16.7	2	33.3	19	18.8
		26-30	-	-	1	3.1	2	4.3	1	16.7	-	-	4	4
		>31	1	10	-	-	1	21	1	16.7	-	-	3	3
Total			10	10	32	100	47	100	6	100	6	100	101	100

As shown in table 2, item 1, most of the respondents 73(72.3%) in the four TVET colleges are male. This indicates the participation of females in the TVET colleges is low. Concerning the age composition of the respondents Item 3, the majority of College deans 4(40%) and vocational counselors 3 (50%), were over 42 years, department heads 10 (31%), senior instructors 14 (29.8 %) and program coordinators 3 (50%) were in the age range of 33-37years. This indicates that the age maturity level of college dean and vocational counselors is much greater than the rest of the groups.

Item 4 of the same table displays the qualification of the respondents. It shows that most of the respondents 68(67.3%) are first degree holders. Item 5 indicates that the service year of most of the respondents' 37(36.6%) ranges between 11-15 years. These indicate that the respondents have enough experience and educational level to respond to the issue under investigation.

4.2. Strategic Plan Development and Implementation

An effective linkage starts with the joint planning activity between the TVET colleges and the industry at large. Linkage in most cases is determined by how TVET colleges involve industries during the implementation stage. Thus to know the applicability and the significance of agreement between the respondents, data were collected from college deans, department heads, senior instructors, vocational counselors and program coordinators. A five – point rating scale (very low=1, low=2, Medium =3, High =4, very high =5) was used to gather data from respondents. The ideal mean for each indicator is 3.00. Furthermore, one way ANOVA test at significant level $\alpha p = 0.05$ was used to know the significance of difference among respondents. If the p value is less than or equal to 0.05 then there is significant difference somewhere among groups. If the p value is greater than 0.05 there is no significant difference among groups.

Table 3: Mean Distribution of respondents and summary of one way ANOVA with regard to TVET College Strategic Plan Development & Implementation

No	Item	Res	N	Mean	St.D	Source of variation	Sum of square	df	Mean square	F	Sig
1	To what extent do you involve the industry in developing the college strategic plan?	CD	10	2.70	.675	Between Groups	6.257	4	1.564	3.021	.021
		DH	32	1.97	.822	Within Groups	94.340	96	.983		
		SI	47	1.89	.699	Total	55.960	100			
		VC	6	1.83	.408						
		PC	6	2.33	.516						
		Total	101	2.02	.748						
2	How do you rate the degree of your agreement to "the college strategy is aligned to the demand of the industry?"	CD	10	3.60	.699	Between Groups	28.667	4	7.167	6.137	.000
		DH	32	3.19	1.148	Within Groups	112.105	96	1.168		
		SI	47	2.30	1.102	Total	140.772	100			
		VC	6	3.50	.837						
		PC	6	3.50	1.225						
		Total	101	2.85	1.186						
3	How do you rate the involvement of the industry in implementation of your college strategic plan?	CD	10	3.40	.843	Between Groups	31.394	4	7.848	14.322	.000
		DH	32	1.72	.772	Within Groups	52.606	96	.548		
		SI	47	1.72	.649	Total	84.000	100			
		VC	6	2.83	.753						
		PC	6	2.50	1.049						
		Total	101	2.00	.917						
4	How do you rate the role of your college strategic plan in creating link with the industry?	CD	10	3.90	.738	Between Groups	25.988	4	6.497	9.526	.000
		DH	32	2.81	1.030	Within Groups	65.477	96	.682		
		SI	47	2.47	.718	Total	91.465	100			
		VC	6	4.00	.632						
		PC	6	3.00	.632						
		Total	101	2.84	.956						

Key: Res= Respondents, CD=College Dean, DH=Department Head, SI=Senior Instructor, VC=Vocational Counselor, PC= Program coordinator, df= degree of freedom; F= calculated; Sig=significant alpha at p= 0.05

The one way between group analysis of variance to explore the respondents opinion about the extent of industry involvement in developing TVET college strategic plan(Item 1), alignment of the strategy with the demand of the industry (item 2), Involvement of the industry in implementation of the strategic plan (Item 5) and the role of the strategic plan in linking TVET colleges with the industry(Item 4) showed that there was statistical significant difference at $p = 0.05$ for all groups of respondents at level $p=0.021$, $p=.000$ $p=.000$ $p=.000$ for Item 1,2,3,4 respectively. The effect size, calculated using eta squared was 0.11, 0.20, 0.37, 0.28 for Item 1,2,3,4 respectively this indicates large effect.

Post -hoc comparison using Tukey HSD test indicated that the mean score in item 1 for College Dean ($M=2.7,SD=0.675$) was significantly different from department heads ($M=1.97;SD=0.822$) and Senior instructors($M=1.89; SD=0.699$). Vocational Counselor ($M=1.83; SD=.408$ and program coordinators ($M=2.33;SD=0.516$) did not significantly different from either groups.

In Item 2 Senior instructors ($M=2.30, SD=1.102$) was significantly different from department heads ($M=3.19; SD=1.148$) and College Dean ($M=3.60; SD=.699$). Vocational Counselor ($M=3.50; SD=.837$) and program coordinators ($M=3.50; SD=1.225$) did not significantly differed from either groups.

In item 3 College Dean ($M=3.40, SD=.843$) and Vocational Counselor ($M=2.83; SD=.753$) on the one hand were significantly different from department heads ($M=1.72; SD=.772$), and senior instructors ($M=1.72; SD=.649$) on the other hand. Program coordinators ($M=2.50; SD=1.049$) were not significantly different from either groups.

In item 4 College Dean ($M=3.90, SD=.738$) and Vocational Counselor ($M=4.00; SD=.632$) on the one hand were significantly different from department heads ($M=2.81; SD=1.03$), and senior instructors ($M=2.47; SD=.718$) on the other hand. Program coordinators ($M=3.00; SD=.632$) were not significantly different from either groups.

Moreover, the mean for all respondents is below the ideal mean = 3, this indicates most of the respondents indicated their negative opinion about the issues raised.

According to the document analysis made in the colleges the strategic plan in all TVET colleges were a draft document and it didn't indicate the involvement of the industry in the planning process. All of the committee members were found to be from the TVET colleges.

Furthermore, the interview with two of the Addis Ababa TVET agency core process owners indicated the involvement of the industries is very low and planning process is mostly dominated by the colleges. In addition to this the role of the plan in linking the two parties was weak. While one of the interviewee reported that most of the TVET colleges don't have strategic plan. These responses were almost similar to the TVET colleges' respondents collected through questionnaire.

Depending on the above evidence it is possible to conclude that the industries are not involved in strategic planning, implementation and the role of the strategic planning in linking TVET colleges with the industry is low.

4.3. Involvement of the industry in curriculum development

One mechanism of linkage can be how the industries involve in the curriculum development; the data were collected from respondents to evaluate the extent of industries involvement in curriculum development of the TVET colleges. A five – point rating scale (Very low=1, Low=2, Medium =3, High=4, Very high =5) was used to gather data from respondents. The ideal mean for each indicator is 3.00.

Table 4. Frequency, percentage and Mean distribution of respondents with regard to Involvement of the industry in curriculum design

No	Item	Res	Very high		High		Medium		Low		Very low		Mean
			f	%	f	%	f	%	f	%	f	%	
1	Development of occupational standards	CD	-	-	3	30	1	10	3	30	3	30	2.40
		DH	-	-	2	6.2	1	3.1	20	62.5	9	28.1	1.88
		SI	-	-	-	-	3	6.4	28	59.6	16	34.0	1.72
		VC	-	-	-	-	2	33.3	2	33.3	2	33.3	2.00
		PC	-	-	-	-	3	50.0	2	33.3	1	16.7	2.33
		Total	-	-	5	5	10	9.9	55	54.5	31	30.7	1.89
2	Developing unities of competencies	CD	-	-	-	-	-	-	4	40.0	6	60	1.40
		DH	-	-	-	-	-	-	27	84.4	5	15.6	1.84
		SI	-	-	-	-	-	-	37	78.7	10	21.3	1.79
		VC	-	-	-	-	-	-	5	83.3	1	16.7	1.83
		PC	-	-	-	-	-	-	6	100	-	-	2.00
		Total	-	-	-	-	-	-	79	78.2	22	21.8	1.78
3	Reviewing /updating occupational standards	CD	-	-	-	-	-	-	4	40.0	6	60.0	1.40
		DH	-	-	-	-	-	-	26	81.2	6	18.8	1.81
		SI	-	-	-	-	-	-	34	72.3	13	27.7	1.72
		VC	-	-	-	-	-	-	6	100	-	-	2.00
		PC	-	-	-	-	-	-	5	83.3	1	16.7	1.83
		Total	-	-	-	-	-	-	75	74.3	26	25.7	1.74
4	Accreditation of occupations	CD	-	-	-	-	-	-	-	-	10	100	1.00
		DH	-	-	-	-	-	-	9	28.1	23	71.9	1.28
		SI	-	-	-	-	-	-	9	19.1	38	80.9	1.19
		VC	-	-	-	-	-	-	1	16.7	5	83.3	1.17
		PC	-	-	-	-	-	-	1	16.7	5	83.3	1.17
		Total	-	-	-	-	-	-	20	19.8	81	80.2	1.20

Key: Res= Respondents, CD=College Dean, DH=Department Head, SI=Senior Instructor, VC=Vocational Counselor, PC= Program coordinator

As shown in Table 4, item1 illustrates that 62.5%, 59.6%, department heads, senior instructors respectively reported that the participation of the industry in developing occupational standards was low. Accordingly, the mean values of responses of college deans, department heads, senior instructors, vocational counselors and program coordinators were 2.40, 1.88, 1.72, 2.00, and 2.33 respectively. This shows that they lie

below the ideal mean ($M=3.00$) which in turn indicates that respondents were not satisfied with the participation of the industry.

Likewise, the majority, 84.4 % and 78.7%, 83.3%, 100% of department heads, senior instructors, vocational counselors and program coordinators respectively reported against item 2 of the same Table that the extent of participation in developing units of competency was low on the other hand 60% of college deans indicated the extent is very low. The mean values of response of college deans, department heads, senior instructors, vocational counselors and program coordinators were 1.40, 1.84, 1.79, 1.83, 2.00 respectively which lie below the ideal mean ($M=3.00$). This reflects that the industries were not satisfactorily participating in developing the units of competency expected of the output of the colleges.

Similarly, department heads (81.2 %), senior instructors (72.2%), vocational counselors (100%) and program coordinators (83.3%) indicated that the extent of involvement of industries in reviewing /updating occupational standards was low and (60%) college deans reported it was very low. Consequently, The mean values of response of college deans, department heads, senior instructors, vocational counselors and program coordinators were 1.40, 1.81, 1.72, 2.00, 1.83 respectively which lie below the ideal mean ($M=3.00$).

Moreover, the majority of respondents, College deans (100%) department head (71.9 %), senior instructors (80.9%), vocational counselors (83.3%) and program coordinators (83.3%) respectively remarked that the involvement of the industry in accreditation of occupations was very low.

To the open ended question regarding problems in participating the industry in curriculum development most of the respondents indicated that lack of awareness, communication and commitment were frequently observed. Moreover, the issue of curriculum development contrary to the strategic document is left for MOE and TVET agency. In addition to this most of the industries don't consider the issue of curriculum

development as their concern and even they don't respond whenever called for discussion.

According to the document analysis made in the colleges, most of the colleges currently assume the occupational standard as a curriculum document and no separate and compiled curriculum document was found.

From the above evidences, one can conclude that extent of industry involvement in developing and accrediting curriculum of the TVET College was not promising. This was asserted by the majority of the respondents.

4.4. Curriculum delivery modes

The data were collected from respondents to evaluate the applicability of different curriculum deliver modes in linking TVET colleges with the industry. A three- point rating scale ranging from (Inapplicable =1, Applicable =2,highly applicable =3) was used to collect information. If the calculated mean value of responses of respondents lie below 2.00, the applicability of delivery mode is not appreciated by respondents and if the mean value lies above 2.00, its applicability is appreciated by respondents because the ideal mean value for each indicator is 2.00.

Table 5: Frequency, percentage and Mean distribution of respondents with regard to Curriculum delivery activity modes that motivate linkage with the industry

No	Item	Res	Highly Applicable		Applicable		Inapplicable		Mean
			f	%	f	%	f	%	
1	Evening classes	CD	3	30	7	70	-	-	2.30
		DH	11	34.4	13	40.6	8	25	2.09
		SI	10	21.3	25	53.2	12	25.5	1.96
		VC	3	50	3	50	-	-	2.50
		PC	3	50	2	33.3	1	16.7	2.33
		Total	30	29.7	50	49.5	21	20.8	2.09
2	Virtual learning environment and flexible learning modes	CD	-	-	2	20	8	80	1.20
		DH	1	3.1	15	46.9	16	50	1.53
		SI	2	4.3	23	48.9	22	46.8	1.57
		VC	-	-	1	16.7	5	83.3	1.17
		PC	-	-	2	33.3	4	66.7	1.33
		Total	3	3	43	42.6	55	54.5	1.49
3	Work-based training provided by the industry to students	CD	6	60	4	40	-	-	2.60
		DH	8	25	19	59.4	5	15.6	2.09
		SI	12	25.5	26	53.3	9	19.1	2.06
		VC	1	16.7	4	66.7	1	16.7	2.00
		PC	1	16.7	4	66.7	1	16.7	2.00
		Total	28	27.7	57	56.4	16	15.8	2.12
4	Using "Live Projects" from the industry to enrich in school delivery	CD	4	40	3	30	3	30	2.10
		DH	3	9.4	23	71.9	6	18.8	1.91
		SI	7	14.9	31	66	9	19.1	1.96
		VC	-	-	4	66.7	2	33.3	1.67
		PC	-	-	5	83.3	1	16.7	1.83
		Total	14	13.9	66	65.3	21	20.8	1.93

Key: Res= Respondents, CD=College Dean, DH=Department Head, SI=Senior Instructor, VC=Vocational Counselor, PC= Program coordinator

Table 5 item 1 shows the majority, 7 (70%) of college dean, 13 (40.6%), 25(53.2%) senior instructor, 3(50%) of vocational counselors remarked that evening class was applicable while 3 (50%) of program coordinator rated that it is highly applicable. The mean values rated by college dean, department head, vocational counselor, program coordinator were found to be 2.3, 2.09, 2.50, and 2.33 respectively. These mean values

are much greater than the ideal mean value ($M= 2$). This shows that Evening class program as mode of curriculum delivery was used by the colleges.

Similarly, item 2 of the same Table shows that 8(80%) of college dean, 16 (50%) of department heads, 5(83%) of vocational counselors,4(66.7%) of program coordinator remarked that virtual /flexible learning mode was inapplicable while 23(48.9%) of senior instructors confirmed that it is applicable. The mean values of responses of college dean, department heads, senior instructors, vocational counselor, and program coordinators were found to be 1.20, 1.53, 1.57, 1.17, and 1.33 respectively. This depicts that virtual/flexible learning as mode of delivery in widening the opportunity of TVET training was inapplicable in the TVET colleges.

Moreover, item 3 of Table 5 asserts that 19(59.4%) of department heads, 26(53.3%) of Senior instructors , 4(66.7%) vocational counselors,4(66.7%) of program coordinator indicated the applicability of work based training by the industry to the students whereas 6(60%) of college deans suggested that it is highly applicable . The calculated mean values of responses of college dean, department heads, senior instructors, vocational counselor, and program coordinators were found to be 2.60, 2.09, 2.06, 2.00, and 2.00 respectively. This shows that the mean values of responses of all the respondents lie above the ideal mean which in turn mirrors that this method was applicable.

On the other hand, item 4 of the same Table shows that the majority, 23(71.9%) of department heads, 31(66%) of Senior instructors, 4(66.7%)vocational counselors, 5(83.3%) of program coordinator expressed the applicability of live project from the industry whereas 3(30%) and 4(40%) of college deans suggested that it is applicable and highly applicable respectively. The mean values of the responses of department heads, senior instructors, vocational counselor, and program coordinators were found to be 1.91, 1.96, 1.67, and 1.83 respectively and responses of the college deans had $M=2.10$. This reflects that most of the mean values of responses lie below the ideal mean ($M= 2.00$).

The concept of using wide range of delivery method to address the diverse need of the industry was not yet applicable in the TVET colleges.

4.5 Experience Sharing as Linking Factor

The data were collected from respondents to evaluate different experience sharing modes in linking TVET colleges with the industry. A three - point rating scale ranging from (Inapplicable =1, Applicable =2, highly applicable =3) was used to collect information. The calculated mean value below 2.00 is not appreciated and above 2.00 is appreciated. The ideal mean value for each indicator is 2.00.

Table 6: Frequency, Percentage and Mean distribution of respondents with regard to experience sharing as linking factor that motivate linkage with the industry

No	Item	Res	Highly Applicable		Applicable		Inapplicable		Mean
			f	%	f	%	f	%	
1	Inviting experts from industry to give lectures	CD	1	10	5	50	4	40	1.70
		DH	3	9.4	10	31.2	19	59.4	1.50
		SI	2	4.3	20	42.6	25	53.2	1.51
		VC	-	-	3	50	3	50	1.50
		PC	-	-	2	33.3	4	66.7	1.33
		Total	6	4.9	40	39.6	55	54.5	1.51
2	Placing lecturers in industry to gain industrial experience	CD	1	10	3	30	6	60	1.50
		DH	4	12.5	13	40.6	15	46.9	1.66
		SI	1	2.1	18	38.3	28	59.6	1.43
		VC	-	-	3	50	3	50	1.50
		PC	1	16.7	4	66.7	1	16.7	2.00
		Total	7	6.9	41	40.6	53	52.5	1.54
3	Offering students industrial placement opportunity	CD	6	60	4	40	-	-	2.60
		DH	8	25	20	65.5	4	12.5	2.12
		SI	14	29.8	24	51.1	9	19.1	2.11
		VC	1	16.7	4	66.7	1	16.7	2.00
		PC	1	16.7	4	66.7	1	16.7	2.00
		Total	30	29.7	56	55.4	15	14.9	2.15
4	Organizing educational visits	CD	1	10	5	50	4	40	2.60
		DH	2	6.2	16	50	14	43.8	1.70
		SI	2	4.3	22	46.8	23	48.9	1.62
		VC	-	-	3	50	3	50	1.55
		PC	-	-	3	50	3	50	1.50
		Total	5	5	49	48.5	47	46.5	1.50

Key: Res= Respondents, CD=College Dean, DH=Department Head, SI=Senior Instructor, VC=Vocational Counselor, PC= Program coordinator

As shown in Table 6, item 1, 2, 4, the calculated grand mean value of responses of respondents was found to be 1.51, 1.54, and 1.50. This shows that it lies below the ideal mean (M=2.00) which in turn indicates that the respondents asserted inviting experts from the industry to give lecture, placing lecturers in industry to gain industrial experience and organizing educational visit is inapplicable in TVET Colleges.

On the other hand, in the same table item 2 the grand mean values of response was 2.15 which lies within the ideal mean (M=2.00). This reflects that offering industrial placement opportunity for students is an applicable method.

From the above evidences, one can conclude that the applicability of diversified experience sharing to link TVET colleges with the industry was in its rudimentary stage. This was asserted by the negative opinion of the majority of the respondents.

4.6. Extent of Linkage between TVET Colleges and Industry

The data were collected from respondents to evaluate the extent of linkage between TVET colleges and the industry. A four-point rating scale ranging from (not linked =1, loosely linked =2, moderately linked =3 and highly linked=4) was used to collect information. If the calculated mean value of responses of respondents lie below 2.5, the extent of linkage is not appreciated by respondents and if the mean value lies above 2.5, its applicability is appreciated by respondents because the ideal mean value for each indicator is 2.5

Table 7. Frequency, Percentage and Mean distribution of respondents with regard to the extent of linkage

No	Item	Res	Strongly Linked		moderately linked		loosely linked		Not linked		Mean
			f	%	f	%	f	%	f	%	
1	How do you rate the extent of Your college – industry linkage?	CD	1	10	6	60	3	30	-	-	2.80
		DH	3	9.4	8	25	13	40.6	8	25	2.19
		SI	6	12.8	13	27.7	22	48.6	6	12.8	2.40
		VC	-	-	4	66.7	2	33.3	-	-	2.67
		PC	-	-	2	33.3	1	16.7	3	50	1.83
		Total	10	9.9	33	32.7	41	40.6	17	16.8	2.36

As shown in Table 7, item1 illustrates that 6(60%) College deans and 4(66.7%) vocational counselors reported that TVET colleges are moderately linked with the industry. Accordingly, the mean values of responses of college deans, department heads, senior instructors, vocational counselors and program coordinators were 2.8, 2.19, 2.40, 2.67, and 1.83 respectively. The grand mean was found to be 2.36. This shows that it lies below the ideal mean ($M=2.5$) which in turn indicates the occurrence of loose linkage between the TVET colleges and industries.

Response to the open ended question regarding the main activities to be done in building tight link with industry, most of the respondents indicated that TVET colleges have to rethink their strategic approaches and identify opportunities of mutual benefit in creating linkage with the industries. They should have to consider TVET –Industry linkage as a strategic instrument and link this to economic, employment, education, training, and research and development strategies. Furthermore awareness-raising activities on the benefits of TVET- Industry linkage and the dissemination of good practice should be incorporated into TVET colleges’ strategies.

The interview made with three Addis Ababa City Administration TVET Agency core process owners regarding the linkage between TVET colleges and Industries indicated that:

Weak link between TVET colleges and industries was the missing gap observed and it is also the main barrier for the ineffectiveness of the TVET training. In most cases TVET colleges are observed rendering service without the consideration of the industry in their locality on the other hand especially for apprenticeship and cooperative training case, they look for industries which were not proactively linked.

Therefore, the result of the data collected by the questionnaire and the interview indicate that the situation of TVET – Industry linkage was sporadic action and an endeavor made for seasonal demands of the colleges.

4.7 Factors Affecting Linkage

In order to know and evaluate factors affecting linkage in their Colleges respondents were asked using a five – point rating scale (Strongly Disagree=1, Disagree=2, Undecided =3, Agree =4, Strongly Agree =5) was used to gather data from respondents. The ideal mean for each indicator is 3.00.

Table 8: Frequency, percentage and Mean distribution of respondents with factors affecting linkage

No	Item	Res	Strongly agree		Agree		Undecided		Disagree		Strongly disagree		Mean
			f	%	f	%	f	%	f	%	f	%	
1	Lack of institutional Strategy	CD	2	20	3	30	0	0	3	30	2	20	3.00
		DH	6	18.8	19	59.4	2	6.2	2	6.2	3	9.4	3.72
		SI	11	23.4	20	42.6	9	19.1	4	8.5	3	6.4	3.68
		VC	3	50	2	33.3	-	-	-	-	1	16.7	4.00
		PC	1	16.7	4	66.7	1	16.7	-	-	-	-	4.00
		Total	23	22.8	48	47.5	12	11.9	9	8.9	9	8.9	3.66
2	Lack of guiding rules and procedures	CD	1	10	4	40	1	10	3	30	1	10	3.10
		DH	4	12.5	20	62.5	5	15.6	2	3.1	2	6.2	3.72
		SI	6	12.8	27	57.4	10	21.3	1	4.3	1	4.3	3.70
		VC	1	16.7	3	50	1	16.7	-	-	1	16.7	3.50
		PC	-	-	4	66.7	2	33.3	-	-	-	-	3.67
		Total	12	11.9	58	57.4	19	18.8	6	5.9	6	5.9	3.63
3	Industries don't consider TVET as investment in human resource development.	CD	1	10	3	30	-	-	6	60	-	-	2.90
		DH	8	25	5	15.6	2	6.2	16	50	1	3.1	3.09
		SI	5	10.6	15	31.9	3	6.4	18	38.3	6	12.8	2.89
		VC	1	16.7	1	16.7	2	33.3	1	16.7	1	16.7	3.00
		PC	1	16.7	2	33.3	-	-	1	16.7	2	33.3	2.83
		Total	16	15.8	26	25.7	7	6.9	42	41.6	10	9.9	2.96
4	TVET colleges consider knowledge acquired in the class room is sufficient for employment	CD	-	-	-	-	-	-	7	70	3	30	1.70
		DH	-	-	10	31.2	2	6.2	8	25	12	37.5	2.31
		SI	2	4.3	16	34	1	2.1	15	31.9	13	27.7	2.55
		VC	-	-	1	16.7	1	16.7	2	33.3	2	33.3	2.17
		PC	-	-	2	33.3	-	-	4	66.7	-	-	2.67
		Total	2	2	29	28.7	4	4	36	35.6	30	29.7	2.38

Key: Res= Respondents, CD=College Dean, DH=Department Head, SI=Senior Instructor, VC=Vocational Counselor, PC= Program coordinator

Table 8 item 1 shows that the majority, 48 (47%) of respondents agreed that lack of institutional strategy was the factor that affect linkage in their college while 23(22.8%) of respondents highly agreed. The grand mean value rated was found to be 3.66. It is much greater than the ideal mean value (M= 3). This shows that lack of well-established institutional strategy to link the institutions and the college was a factor affecting the linkage between the parties.

Similarly, item 2 of the same Table shows that 58(57.4%) of respondents agreed that lack of guiding rule in TVET colleges affected linkage. Likewise the grand mean value was 3.63. This depicts that lack of guiding rules and procedures that can facilitate the linkage with the industry was not developed.

Moreover, item 3 of Table 8 asserts that the calculated mean value of responses was found to be 2.96. This shows that the mean values of responses of all the respondents lie slightly below the ideal mean which in turn mirrors that the respondents suggested that industries don't consider TVET as investment in human resource development .

On the other hand, item 4 of the same Table shows that the grand mean value of the responses was found to be 2.38. It lies below the ideal mean (M= 3). This reflects that TVET colleges consider the insufficiency of the training acquired in class room for employment

The interview made with three Addis Ababa City Administration TVET Agency core process owners regarding factors affecting linkage between TVET colleges and Industries indicated that:

Both TVET Colleges and industries did not have a well-established awareness about the contribution of linkage in delivery of relevant training. TVET Colleges are mostly observed obsessed in the traditional teaching activities than to be worried about the contribution of the industries in reducing mismatch between learning outcome and the requirement of the labour market.

Thus, the result of the data collected by the questionnaire and the interview indicate that lack of well-established institutional strategy, guiding rules and procedures that can facilitate the linkage with the industry, and awareness are the imminent factors affecting linkage between TVET colleges and industries.

4.8. Quality of leadership in linking TVET colleges with the industry

Respondents were asked their responses about quality of leadership. a five – point rating scale (Very good =5, Good =4, Fair =3, Poor=2, Very poor=1). The responses of respondents were transformed in to mean. The ideal mean value is 3.00 for each indicator.

Table 9: Mean distribution of respondents with quality of leadership

No	Item	CD	D H	SI	VC	P C	Grand Mean
1	Developing Joint action plan with the industry	3.20	2.91	2.85	2.50	2.67	2.87
2	Coordinating the implementation of the linkage strategy	2.80	2.75	2.57	2.67	3.00	2.68
3	Monitoring and Evaluation of the progress of the program	3.00	2.91	2.96	3.00	3.17	2.96
4	Participating the industry in decision making	2.80	2.53	2.49	2.67	3.00	2.57
5	Creating open, transparent, and positive work environment with the industry	3.20	2.72	2.74	2.83	2.83	2.79
6	Research and problem – solving coordination	2.90	2.69	2.83	3.33	2.67	2.81

Key: Res= Respondents, CD=College Dean, DH=Department Head, SI=Senior Instructor, VC=Vocational Counselor, PC= Program coordinator

As shown in Table 9 item 1, responses of college dean rated the highest mean values as 3.20. On the other had the mean value responses of department heads , senior instructors, vocational counselors ,and program coordinators was found to be 2.91, 2.85, 2.50 ,2.67 respectively with the grand mean value of 2.87. This competency of TVET management is pointing negatively towards developing joint action plan with the industry. From this, it is possible to say that TVET leadership dominated by fragmented partial plans of action which don't recognize the side of the industry.

On the other hand, item 2 of Table 9 shows that coordinating the implementation of the linkage program, scheduling and controlling was negatively perceived by college deans,

department heads, senior instructors, and vocational counselors with the mean values of 2.80, 2.75, 2.57, 2.67, respectively but program coordinators perceived it positively with the mean value of 3.00. The grand mean value was found to be 2.68. This indicates that the quality of management in coordinating the linkage program was poor.

Likely, in item 3 of the same Table, Monitoring and Evaluation of the progress of the linkage in TVET colleges was not appreciated by respondents. Their grand mean value was 2.96. Therefore, it could be difficult for TVET colleges to create strong link with the industry without a strong follow up and evaluation of the linkage endeavor.

Similarly, item 4 of the same Table indicates that most of the respondents viewed participating the industry in decision making negatively. Besides, their grand mean value was 2.57. This shows that this role of leadership and management was not implemented to the expectation of the beholders.

Likewise, item 5 of Table 9, shows that the commitment of leadership and managements of the sampled TVET in creating open, transparent, and positive work environment with the industry was not appreciated by all of the respondents except college deans. Accordingly, the mean values of their responses were found to be college deans (3.20) Department heads (2.72) Senior instructors (2.74) Vocational counselors (2.83) and Program coordinators (2.83) . Moreover, the grand mean value (2.78) lies below the expected average mean (3).

Furthermore, in Table 9 item 6 depicts that the researching and problem- solving skills of TVET colleges managers under investigation were not appreciated by all respondents except vocational counselors. The mean values of responses of College dean, department heads, senior instructors, vocational counselors and program coordinators were found to be 2.90, 2.69, 2.83, 3.33, 2.67 respectively and their grand mean value was 2.81. Therefore, it could be difficult for TVET colleges to create strong link with the industry without inquisitive and systematic skill of challenging the reality through rigorous research.

4.9. Training process in TVET Colleges

In order to know the frequency of utilization of training process in the TVET colleges, respondents were asked using a five point rating scale (strongly agree =5, Agree = 4, Undecided =3, Disagree =2, strongly disagree =1). The mean values of responses of respondents also indicate how frequently each method of teaching was utilized. The ideal mean value is 3.00 for each item.

Table 10: Frequency, percentage and Mean distribution of respondents with regard to training process of TVET Colleges

No	Item	Res	Strongly agree		Agree		Undecided		Disagree		Strongly disagree		Mean
			f	%	f	%	f	%	f	%	f	%	
1	TVET colleges mostly focus on theoretical and conceptual part of the training	CD	4	40	5	50	1	10	-	-	-	-	4.30
		DH	12	37.5	4	12.5	5	15.6	11	34.4	-	-	3.53
		SI	20	42.6	4	8.5	11	23.4	12	25.5	-	-	3.68
		VC	2	33.3	-	-	3	50	1	16.7	-	-	3.50
		PC	3	50	1	16.7	1	16.7	1	16.7	-	-	4.00
		Total	41	40.6	14	13.9	21	20.8	25	24.8	-	-	3.70
2	Industries actively participate in training students Practical aspects of the world of work	CD	1	10	5	50	-	-	3	30	1	10	3.20
		DH	2	6.2	10	31.2	4	12.5	14	43.8	2	6.2	2.88
		SI	-	-	14	29.8	5	10.6	26	55.3	2	4.3	2.66
		VC	-	-	1	16.7	3	50	2	33.3	-	-	2.83
		PC	-	-	3	50	1	16.7	2	33.3	-	-	3.17
		Total	3	3	33	32.7	13	12.9	47	46.5	5	5	2.82
3	Students have enough opportunity to participate in practical training (70%)	CD	2	20	3	30	2	20	3	30	-	-	3.40
		DH	3	9.4	15	46.9	5	15.6	4	12.5	5	15.6	3.22
		SI	5	10.6	21	44.7	8	17	4	8.5	9	19.1	3.19
		VC	-	-	3	50	1	16.7	-	-	2	33.3	2.83
		PC	-	-	5	83.3	-	-	1	16.7	-	-	3.67
		Total	10	9.9	47	46.5	16	15.8	12	11.9	16	15.8	3.23
4	The training stimulate creativity and innovative skill of the students	CD	1	10	5	50	2	20	2	20	-	-	3.50
		DH	3	9.4	7	21.9	3	9.4	16	50	3	9.4	2.72
		SI	4	8.5	12	25.5	10	21.3	16	34	5	10.6	2.87
		VC	-	-	3	50	-	-	2	33.3	1	16.7	2.83
		PC	-	-	3	50	1	16.7	2	33.3	-	-	3.17
		Total	8	7.9	30	29.7	16	15.8	38	37.6	9	8.9	2.90
5	Effective implementation of cooperative Training	CD	-	-	-	-	-	-	3	30	7	70	1.30
		DH	-	-	-	-	2	6.2	12	37.5	18	56.2	1.50
		SI	-	-	-	-	3	6.4	20	42.6	24	51.1	1.55
		VC	-	-	-	-	-	-	3	50	3	50	1.50
		PC	-	-	-	-	-	-	3	50	3	50	1.50
		Total	-	-	-	-	5	5	41	40.6	55	54.5	1.50

Key: Res= Respondents, CD=College Dean, DH=Department Head, SI=Senior Instructor, VC=Vocational Counselor, PC= Program coordinator

As shown in Table 10, item1 illustrates that the mean values of responses of college deans, department heads, senior instructors, vocational counselors and program coordinators were 4.30, 3.53, 3.68, 3.50, and 4.00 respectively. This shows that they lie above the ideal mean ($M=3.00$) which in turn indicates that respondents positively showed their agreement with the focus of TVET colleges on theoretical and conceptual part of the training.

Likewise, in Item 2, the mean values of response of college deans, department heads, senior instructors, vocational counselors and program coordinators were 3.20, 2.88, 2.66, 2.83, and 3.17 respectively with grand mean of 2.82. Which lie below the ideal mean ($M=3.00$). This reflects the respondents' disagreement with the active participation of the industries in practical training of the students.

Similarly, regarding the opportunity for students for practical training, the mean values of response of college deans, department heads, senior instructors, vocational counselors and program coordinators were 3.40, 3.22, 3.19, 3.83, 3.67 respectively, which lie above the ideal mean ($M=3.00$). This indicates that students have enough opportunity for practical training.

Moreover, in item 4, the mean values of response of college deans, department heads, senior instructors, vocational counselors and program coordinators were 3.50, 2.72, 2.87, 2.83, and 3.17 respectively with grand mean of 2.90. Which lie below the ideal mean ($M=3.00$). These, asserts the negative responses to the role of vocational education in stimulating creativity and innovative skill of the students.

Furthermore, in item 5, the mean values of response of college deans, department heads, senior instructors, vocational counselors and program coordinators were 1.30, 1.50, 1.55, 1.50 and 1.50 respectively with grand mean of 1.50. Which lie below the ideal mean ($M=3.00$). These, shows cooperative training is not effectively being implemented by the TVET colleges.

To the open ended question regarding mechanisms in improving the effectiveness of cooperative training in TVET Colleges, most of the respondents indicated that there must be strong awareness creation about the role and contribution of the training modality, the system of implementation and the procedural activities like creating agreement, the expectation from the industry and to the industry in turn should be clearly agreed up on. Moreover, TVET colleges should work on their responsibility in identifying and negotiating, with suitable industries on organization of cooperative training and reach on agreement.

From the above evidences, one can conclude that most of the training processes that can enable TVET Colleges to create link were not practiced and implemented in the TVET colleges. This can indicate the potentials of the training delivery in creating linkage with industries were not utilized in the TVET colleges.

4.10 Study Made to Know Satisfaction Level of the Industry

College deans, Department heads, senior instructors, Vocational counselors and Program coordinators were asked whether or not studies were carried out in their respective Colleges. Besides, the satisfaction level of the industries from the feedback was investigated.

Table 11: Frequency, percentage and Mean distribution of respondents regarding the satisfaction level of industry with TVET Program and demand for TVET colleges graduates

No	Item		Respondents											
			CD		DH		SI		VC		PC		Total	
			f	%	f	%	f	%	f	%	f	%	f	%
1	Study made to check industries' opinion and satisfaction about college graduates skills	Yes	5	50	14	43.8	26	55.3	1	16.7	2	33.3	48	47.5
		No	5	50	18	56.2	21	44.7	5	83.3	4	67.7	53	52.5
2	Satisfaction level of the Industry regarding TVET colleges' program	Very high	-	-	-	-	-	-	-	-	-	-	-	-
		High	1	10	9	28.1	10	21.3	2	33.3	1	16.7	23	22.8
		Medium	6	60	15	46.9	25	53.2	3	50	5	83.3	54	53.5
		Low	1	10	8	25	12	25.5	1	16.7	-	-	22	21.8
		Very low	2	20	-	-	-	-	-	-	-	-	-	2
3	Demands for TVET graduates by the industries	Very high	-	-	2	6.2	2	4.3	-	-	-	-	4	4
		High	5	50	3	9.4	6	12.8	-	-	-	-	14	13.9
		Medium	4	40	11	34.4	24	51.1	2	33.3	3	50	44	43.8
		Low	1	10	10	31.2	8	17	4	66.7	3	50	26	25.7
		Very low	-	-	6	18.8	7	14.9	-	-	-	-	13	12.9

Key: CD=College Dean, DH=Department Head, SI=Senior Instructor, VC=Vocational Counselor, PC= Program coordinator

Table 11 item 1 shows the responses of respondents whether or not their College had undertaken study to know the industries' opinion and satisfaction. Hence, the majority, 5(50%), 18(56%), 5(83.3%) 4(67.7%) of college dean, Department heads, vocational counselor, and program coordinators respectively reported that their College had not undertaken a study. However, some respondents, 26 (53.3%) of senior instructors assured that their College had undertaken study to know industries' opinion and satisfaction.

In line with this, item 2 of the same Table reveals the extent of agreement of respondents up on the satisfaction of the industries regarding their college training program. As a consequence, the majority, 6 (60%), 15(46.9%), 25(53.2), 3(50%), 5(83.3%) of college dean, Department heads, senior instructors, vocational counselor, and program coordinators suggested the level of satisfaction of the industries about their program is medium.

Similarly, item 3 of Table 9 describes the responses of respondents regarding the demand for their graduate. Accordingly, the majority, 5(50%) of college dean reported that the demand for their graduates was found to be “high” whereas 11(34.4%), 24(51.1%),3(50%) of department heads, senior instructor and program coordinators respectively evaluated that it was “medium” and 4(66.7%) of vocational counselors responded that the demand for the graduates of the TVET college was “low”.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this chapter, summary of the major findings of the study, conclusions drawn on the basis of the findings and recommendations that are assumed to be useful in alleviating problems related to improving and ensuring the current status of TVET – Industry Linkage with particular reference to Technical and Vocational Education Training Colleges in Addis Ababa City Administration are presented.

5.1 Summary

The main purpose of this study was to understand and assess the current status of TVET-Industry linkage by taking into account Linkage indicators with particular reference to public TVET colleges in Addis Ababa City Administration. To achieve the purposes of the study, the following research questions were raised to be answered in the course of the study:

1. To what extents are linking mechanisms are applicable to improve TVET-Industry linkage in Addis Ababa City Administration?
2. Are there any motivating factors in linking TVET colleges with industry?
3. Do managers of TVET colleges have the necessary competencies to achieve strong linkage with the industry?
4. What are the impending conditions in linking TVET colleges with the industry?
5. What should be done to alleviate the challenge?

To collect relevant data on the topic, the study was carried out in four TVET colleges in Addis Ababa. Descriptive survey approach was employed as a method of the study. The sources of data were College deans, Department heads, senior instructors, vocational counselors, and program coordinators of the four TVET Colleges. To seek answers to the above research questions, the data were gathered through questionnaires, and document analysis. The questionnaires were filled and returned by 10 college deans, 32 department

heads,6 Vocational Counselors ,6 program coordinators which are purposively selected and 47 senior instructors who were selected by using simple random sampling.

The interview was also conducted with three Addis Ababa City Administration TVET Agency core process owners who were selected by using purposive sampling technique. Besides, document investigation was made on college strategic plan, curriculum. The data obtained through the above instruments were analyzed quantitatively using percentages, means, standard deviation and one way ANOVA, and qualitatively using descriptive statements. Finally, based on the analysis of the data, the following major findings were obtained from the study:

1. The finding of the study shows that the involvement of the industries in strategic plan development, implementation, were below what was expected. In addition to this, it was found that the strategic plan doesn't align to the demand of the industry. Furthermore, the role of the strategic plan is found to be inadequate to contribute its parts in linking the colleges with the industry.
2. The finding of the study points out that the involvement of industries in designing curriculum was not promising in developing strong link with TVET colleges. Lack of awareness, communication and commitment were impeding factors. Furthermore, there is no common understanding about curriculum. This is showed by the document analysis made in the colleges most of the colleges currently assume the occupational standard as a curriculum document and no separate and compiled curriculum document was found.
3. The mode of curriculum delivery was dominated by evening classes on the side of the TVET colleges and work based learning. On the other hand, delivery methods like virtual leaning and reflections from the real industry projects were not well practiced.
4. The finding of the study shows that with the exception of offering students industrial placement opportunity other exchange activities like inviting experts from industry to give lectures, placing lectures in industry to gain industrial experiences and organizing educational visits were found to be inadequate to develop an effective experience sharing .

5. The finding of the study illustrates that the linkage between TVET Colleges and industry was loose.
6. As pointed out in the study, the majority of respondents confirmed that lack of institutional strategy and guiding rules and procedures are the main impeding factors for loose linkage between TVET colleges and industry.
7. The quality of leadership and management of TVET colleges with respect to linking TVET College was found to be unsatisfactory.
 - The finding of the study depicts that the management of TVET Colleges were incompetent enough in developing joint action plan with the industry, coordinating the implementation of the linkage strategy, monitoring and evaluation of the progress of the program and participating the industry in decision making. Moreover, they had failed to accomplish their tasks such as creating positive working environment, conducting research and problem – solving activities.
8. The finding of the study illustrates that TVET colleges had faced an implementation bottle neck with respect to the teaching – learning process.
 - The finding of the study shows that industries did not actively participate in training students practical aspects of the work
 - As pointed out in the study, the majority of respondents confirmed that the trainings do not stimulate creativity and innovative skills of the students
 - Although cooperative training is a strategic issue in creating linkage with the industry, most of the respondents indicated that it was ineffective in Addis Ababa City Administration TVET colleges.
9. The majority of the respondents suggested that studies were not conducted to know the opinion and satisfaction level of the industries sufficiently by sampled TVET colleges. This in turn mirrors that there were no sufficient flow of information through structural feedbacks from industries to TVET colleges and vice-versa.

5.2 Conclusions

From the major findings of the study, the following conclusions were drawn:

Based on the findings of the study we can arrive at a conclusion that practically TVET colleges and industries are not strongly linked. There is a significant gap in applying basic mechanisms that can enforce the involvement of the two parties. Industries are not involved in developing, implementing, monitoring and evaluation of TVET colleges' strategic plan. These have resulted the mismatch to address the demand of the industry.

In the process of curriculum development, the need of the industries were not assessed thoroughly and prioritized with the participation of the industry. In short, the training program development has top-down nature and expert-centered. It was likely to be assumed that experts would make the best judgment about the demand of the industry. Moreover, TVET colleges are not in a position to know the feedback regarding their training. Furthermore, the endeavor made to attract the industry to involve in the TVET colleges training delivery seems neglected.

Other institutional factors such as the quality of leadership, lack of institutional strategy, guiding rules and procedures, lack of awareness and frequent communications have great impacts on linking TVET colleges with the industry.

5.3 Recommendations

Based on the above conclusions, the following recommendations were made to be looked critically by the concerned bodies to alleviate the problems of TVET –Industry linkage

1. The involvement of the industry in the strategic planning process of the TVET colleges should be enhanced. Joint participatory planning approach with the industry, helps not only to prepare the plan that meets the demand of the industry, but also increase to win the motivation, sense of ownership and shared responsibility of the industry. Thus, TVET colleges should involve the industry in their strategic plan development.
2. Curriculum development requires full participation of the industry, in occupational standard development and identification of the units of competency. To this end,

creating awareness about the Ethiopian TVET occupational frame work is of timely essential. Therefore, TVET colleges should have to practice collaborative curriculum development with the industry.

3. According to the Ethiopian TVET strategy (MOE: 2008), TVET providers are allowed to negotiate and develop relationships with individual employers, groups of employers or business/sector associations about the organization of cooperative delivery schemes. However, the study revealed that the ineffectiveness of cooperative training implementation. Thus, to alleviate this problem TVET Colleges should fully commit in terms of strategy and resource to establish a well-organized cooperative training scheme.
4. The study also revealed that there is impotency in applying different training delivery schemes so as to address the demand of the industry. Thus, flexible training delivery modes like virtual learning should be arranged for the industry employee to help them learn better in the training program by TVET Colleges.
5. The quality of leadership and management of TVET colleges with respect to linking TVET College was found to be unsatisfactory. Therefore, on-job training should be arranged to equip them with skills of developing joint action plan , coordinating the implementation of the linkage strategy, monitoring and evaluation of the progress of the program , participating the industry in decision making, creating positive working environment and conducting research and problem – solving activities.
6. The fundamental objective of creating strong link with the industry is to increase the relevance of technical and vocational education. However, TVET colleges have little awareness and commitment in establishing linkage and follow up the progress. Hence, a continuous awareness creation work has to be done through the TVET Agency.
7. Finally, having structural and timely feedbacks from industry contribute its parts to the success of TVET colleges in improving TVET -- Industry linkage. So that TVET colleges had better conduct tracer studies to have data about the employment status of graduates, their academic standings and employers` satisfaction.

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Appendix - A
ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF BUSINESS EDUCATION

QUESTIONNAIRE: To be filled by College Deans, Department Heads, Senior Instructors, Vocational Counselors, and Program Coordinators.

The purpose of these questionnaires is to collect relevant data to the study entitled the “linkage between Technical Vocational Education and Training (TVET) and Industry in Addis Ababa city government”. Since the success of this study depends on your genuine responses, you are kindly requested to be honest towards all items provided in this questionnaire. The information you supply will remain confidential.

Please note the following points before you start filling the questionnaires:

1. You do not need to write your name on the questionnaires;
2. Read all the instructions before attempting to answer the questions;
3. There is no need to consult others to fill the questionnaires;
4. Please provide appropriate response by using a tick mark “√” or “X” to choose one of the suggested scales. But kindly write your opinion briefly for the short answer questions on the space provide
5. Please do not leave the question un answered.

Thank you for your cooperation!

Section One: General Information and Personal Data

1. Indicate your response either by using a tick mark (✓) in the box provided or by giving short answers on the space provided.

1.1. Name of TVET College _____

1.2. Sex: Male Female

1.3. Age : 18-22 23-27 28-32 33-37 38-42 above 42

1.4 Work experience A. <5 years B. 5-10 years C. 10-15 years

D. 11-20 years E. 20-25 years F. 25-30 years G. >30

1.5 Educational background Diploma First Degree Second Degree

Other specify _____

1.6 Current work position

College Dean Department Head Senior Instructor Vocational counselor Program Coordinator

2. To what extent do you involve the industry in developing the college strategic plan?
- A. Very low B. low C. Medium D. High E. Very High
3. How do you rate the degree of your agreement to “the college strategy is aligned to the demand of the industry?”
- A. Very low B. low C. Medium D. High E. Very High
4. To what extent the industry involve in the implementation of your college strategic plan?
- A. Very low B. Low C. Medium D. High E. Very High

5. How do you rate the role of your college strategic plan in creating link with the industry? A. Very low B. Low C. Medium D. High E. Very High
6. Please, indicate the level of Industry participation in the following curricular development issues in your college by making a “✓” mark to your corresponding answer. 5=Very high, 4=high, 3=Medium, 2=low 1= Very low

NO	Linking through Curriculum Design	5	4	3	2	1
6.1	Development of occupational standards					
6.2	Developing units of competencies					
6.3	Reviewing /updating occupational standards					
6.4	Accreditation of occupations					

7. What basic problems you observe in participating the industry in the process of curriculum development?

8. Please, indicate the applicability of the following training modes that motivates linkage with the industry in your college? Use (“✓”) mark to the corresponding answer. 3= Highly Applicable 2=Applicable 1=In Applicable

No	Training activities	1	2	3
8.1	Evening classes mode			
8.2	Virtual learning environment and flexible learning modes			
8.3	Work-based training provided by the industry			
8.4	Using “Live Projects” from the industry to enrich your delivery			

9. Please, indicate the applicability of industry linking factors in your college? Use (“√”) mark to the corresponding answer. 3= Highly Applicable 2=Applicable 1=In Applicable

No	Experience shringing activities	1	2	3
9.1	Inviting experts from industry to give lectures			
9.2	Placing lecturers in industry to gain industrial experience			
9.3	Offering students industrial placement opportunity			
9.4	Organized educational visits to industries			

10. How do you rate the extent of your College – industry linkage?

- A. Strongly Linked B. moderately linked C. loosely linked
 D. not linked

11. What are the main motivations for your college in creating linkage with the industry?

12. Please, indicate factors affecting linkage between your college and Industry by making a “√” mark to your corresponding answer. 5= strongly agree (SA) 4= Agree (A) 3= Undecided (UD) 2= Disagree (DA) 1= Strongly Disagree (SDA)

No.	Causes of loos linkage	Rating Scales				
		5	4	3	2	1
12.1	Lack of institutional Strategy					
12.2	Lack of guiding rules and procedures					
12.3	Enterprises don't consider TVET as investment in human resource development.					
12.4	TVET colleges consider knowledge acquired in the class room is sufficient for employment					

13. What mechanisms your College uses in order to maintain adequacy of educational facilities and infrastructures as required fitting the demand of the industry?

14. How do you rate the quality of leadership and management in your college to create strong link with the industry? Use tick “✓” mark to the corresponding answer

5= Very Good 4= Good 3= Fair 2= poor 1= very poor

No.	Quality of Leadership and Management	Rating Scales				
		5	4	3	2	1
14.1	Developing Joint action plan with the industry					
14.2	Coordinating the implementation of the linkage program, scheduling and controlling					
14.3	Monitoring and Evaluation of the program					
14.4	Participating the industry in decision making					
14.5	Creating open, transparent, and positive work environment with the industry					
14.6	Research and problem – solving coordination					

15. How do you rate the degree of your agreement on the current training process of your college? Use tick Mark “✓” to your corresponding answer.

5= strongly agree, 4= Agree 3= Undecided 2= Disagree 1= Strongly Disagree

No.	Training Process	Rating Scales				
		5	4	3	2	1
15.1	The college mostly focus on theoretical and conceptual part of the training					
15.2	The industry actively participate in training students Practical aspects of the world of work					
15.3	Students have enough opportunity to participate in practical training (70%)					
15.4	The training stimulate creativity and innovative skill of the students					
15.5	Effective Implementation of cooperative training					

16. What mechanisms do you suggest in improving the effectiveness of cooperative training in your college?

17. Does your college undertake study to check industries' opinion and satisfaction about your college graduates skill in meeting the industries demand?

A. Yes B. No

18. How do you rate the satisfaction level of the industry regarding your programme?

A. Very high B. high C. Medium D. Low E. Very low

19. To what extent does your college graduates are demanded by the industry?

A. Very high B. High C. Medium D. Low E. Very low

20. In your view what do you think are the main activities to be done in building tight link with industry?

Thank you again!

Appendix - B

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF BUSINESS EDUCATION

Interview Guiding Questions: To be administered to Addis Ababa TVET Agency
Core process owners

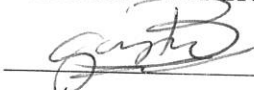
The following interview guiding questions are designed to know the current state of TVET industry linkage in Addis Ababa city Administration. It also intends to identify the major factors influencing TVET –Industry linkage.

1. Do TVET Colleges involve Industries during Strategic Planning & Implementation? How do you rate the role of the TVET Colleges Strategic plan in linking the two parties?
2. How do you explain the current situation TVET colleges - Industry linkage in the city?
3. From your experience in your city, what are the major factors influencing Industry TVET – Linkage?
4. What measures do you suggest to be taken to improve Industry –TVET Linkage?

Thank you!

Declaration

This thesis is my original work and has not been presented in any other University, and that all sources consulted for the thesis have been properly acknowledged.

Name TSEGAYE TEFERA
Signature 
Date April 29, 2011

Approval

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

Name GIRMA ZEWDIE (ASSO. PROFESSOR)

Signature _____

Date _____