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AN INVESTIGATION OF SKILLS' MISMATCHES IN TECHNICAL AND VOCATONAL EDUCATION IN TVET COLLEGES OF NIFAS SILK LAFTO SUB-CITY, ADDIS ABABA.

A THESIS SUBMITTED TO THE DEPARTEMENT OF EDUCATIONAL PLANNING AND MANAGEMENT OF AAU, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN EDUCATIONAL PLANNING AND MANAGEMENT

BY

GETACHEW KETEMA ARAGAW

ADVISOR: BEFEKADU ZELEKE (Asso. Prof)

MAY/2022 GC

ADDIS ABABA, ETHIOPIA

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School of Graduate Studies

College of Education and Behavioral Studies

Department of Educational Planning and Management

Getachew Ketema Aragaw

This is to assure that the thesis prepared by Getachew Ketema Aragaw that entitled**: "An investigation of Skills' mismatch in Technical and Vocational Education in TVET colleges of Nifas Silk Lafto Sub-city, Addis Ababa"** and submitted in partial fulfillment of the requirements for the degree of Masters of Arts in Educational Leadership and Management is by the rules and regulations of the University and meets the accepted standards to originality and quality.

Signed by the Examining Committee:

Befekadu Zeleke (Asso. Prof)	_____	_____
Advisor	Signature	Date
_____	_____	_____
Internal Examiner	Signature	Date
_____	_____	_____
External Examiner	Signature	Date
_____	_____	_____
Chairperson of Department	Signature	Date

STATEMENT OF DECLARATION

I declare that this presented by me entitled "Skills' mismatches in technical and vocational education in TVET colleges in Nifas Silk Lafto Sub-city of Addis Ababa" is my investigation and has not previously been submitted for a degree or similar award at the University of Addis Ababa or any other institution. To the best of my knowledge and belief, no material in this thesis has been previously published or written by another person, except where due reference is made.

Name: Getachew Ketema Aragaw

Signature: - _____

Date:-_____

Addis Ababa University, Ethiopia

Date of submission May, 2022

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

Name:-Befekadu Zeleke (Associate Professor)

Signed: - _____

Date:-_____

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ABBREVIATION AND ACRONYMS

AAGR	Average Annual Growth Rate
CBE	Competence-Based Education
CBET	Competence-Based Education and Training
CNET	Computer Network
COC	Certificate of Competency
ECBP	Ethio-German Engineering Capacity Building Program
EOS	Ethiopian Occupational Standard
ESDP V	Education Sector Development Program V
FTA	Federal TVET Agency
IDS	Intrusion Detection System
IT	Information Technology
KII	Key Informant Interview
MoE	Ministry of Education
MoSHE	Ministry of Science and Higher Education
NTQF	National TVET Qualifications Framework
OS	Occupation Standard
PMS	Property Management System
SSA	Sub-Saharan Africa
TTLM	Teacher Training and Learning Materials
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	Vocational Education and Training

ABSTRACT

This study aimed at investigating address the skill mismatch in technical and vocational education in TVET colleges in Nifas Silk Lafto Sub-city, Addis Ababa. The study employed a qualitative method. Specifically, interview was conducted with 32 respondents consisting of ten respondents (deans, vice-deans, trainers and department heads) and eight trainees selected form two government TVET colleges, four graduates; two officials form Addis Ababa TVET agency, and eight employers. Data collected was analyzed qualitatively with thematic analysis techniques. The integration of results from the qualitative method provided in-depth answers to the research questions. In addition, secondary data collection methods were used for the study which includes current training gaps (from literatures), review literatures on TVET education in Ethiopia and globally, review of TVET occupational standards and curriculum were conducted. The result shows that the skills that employer's desires are not being learned and practiced by graduates while they are in TVET College. Hence, skills mismatch observed in the graduates need to be addressed when providing training in TVET colleges.

Key words: *Skill Mismatch, Technical and Vocational Educational Training*.

CHAPTER ONE: INTRODUCTION

This chapter deals with the background of the study, basic research questions, objective of the study, significance of the study, delimitation of the study, limitation of the study, definition of terms, and organization of the study.

1.1. Background of the study

Ethiopia is the second most populous country in Africa with ~ 109 Million populations, an annual birth rate of 2.5% and an age structure in which 44% of the population is between 0 and 14 years (World Bank, 2018). Even though employment opportunities have increased in recent years in the commerce and manufacturing sector, most of the workforce is concentrated in the agricultural sector (68% in 2017). Unemployment rates in Ethiopia are highest for the age group 20-24 years old (25% in 2018) and highest for urban young women (31% in 2018). The labour market in Ethiopia is experiencing a strong demographic pressure as every year there are more than 2 million youth entering the labour force. On the other hand, companies in Ethiopia encounter difficulties in finding employees with the right skillset and practical experience. Therefore, not only new jobs need to be created but a better match between education and the job market is needed (World Bank, 2019).

The driving goal of the national TVET strategy of Ethiopia (2008) is to strengthen the culture of self-employment and support job creation in the economy (MoE, 2008). The strategy also anticipates preparing young people with the basic skills and competencies that would enable them to enter into employment in their respective fields of training. This is possible to a certain extent when training institutions implement their skill development and linking technical and vocational education and training with the labour market requirements will have great importance when it could build the employability skill of graduates. If not, there will be a mismatch between the training and the need of employers.

To realize the strategy, Hotel, Garment and Furniture training programs were developed to produce manpower with necessary skills, knowledge, attitude, and competencies in the areas

needed for employment, advancement on a job, and self-reliance. In this study Hotel, Garment and Furniture are selected as they are the major sectors with high employment opportunity.

Research indicates that even among the employed, a skills mismatch is prevalent, with many employees either lacking the appropriate technical skills, or being overqualified for the kind of jobs that they hold (Mekonnen and Tekleselassie, 2018). Therefore, this study assessed the skill acquisition and major skill mismatches of TVET graduates of Hotel, Garment and Furniture programs found in Nifas Silk Lafto Sub-city of Addis Abeba City Government, Ethiopia.

1.2. Statement of the problem

The Ethiopian government has entrusted the responsibility of preparing skilled labor force and providing entrepreneurial skills at varying levels to the Technical and Vocational Education and Training (TVET) system. The TVET program in Ethiopia is primarily supply driven. Even though TVET strategy stresses the importance of ensuring the TVET is flexible enough to accommodate the demand for, the allocation of trainees to TVET institutions, as well as the curriculum and the specialization offered are determined by government. Occupational standard is developed by the government ten years back and since then it is used by all TVET college.

Employers in Ethiopia face challenges in finding workers with the required technical (hard skills) and/or soft skills. Skill mismatches result from a gap between quality of training and employment opportunities which have adverse consequences for employees, employers, organisations and the economy at large. These issues are multidimensional and associated with a range of issues including unemployment- or underemployment, low wage level, satisfaction with the job, the ability to find suitable labour and overall productivity and competitiveness of a given sector of the economy. The research investigates major skill mismatches observed in TVET graduates specifically that of Hotel, Garment and furniture program, in order to review and recommend clear idea of what skills and quality are actually needed in the work place (focusing on soft and hard skills), inclusive and enriched level I, II and short term module to the competence-based TVET curriculum; to ensure skills training programs are relevant and satisfy the quality of requirements of the labor market in Hotel, Garment and Furniture. This includes identifying gaps in the current TVET curricula to produce competent graduates, in order to align with current employer's needs. Hotel, Garment and Furniture work are major sector with the highest potential of generating employment.

1.3. Basic research questions

The following research questions are designed to produce information that had given solutions to the research problem:

1. How do TVET colleges design competence-based teaching-learning materials?
2. What is the current competence status of TVET trainees?
3. What are the attitudes of employers, community, and others towards TVET trainees?
4. What kind of skills (soft or hard) gaps in TVET curriculum and education system?

1.4. Objectives of the study

The general objective of the study was to investigate the skill mismatches in TVET education system in selected TVET colleges in Nifas Silk Lafto Sub-city in Addis Ababa Administration.

1.4.1. Specific Objectives

The specific objectives of the study were:

- To identify how colleges design competency-based teaching-learning materials.
- To assess the current competence status of TVET trainees.
- To assess the attitudes of the employers, community, and others towards TVET trainees
- To explore skills (soft and hard) gaps in TVET curriculum and education system.

1.5. Significance of the study

The study of skill mismatch in TVET education for the chosen sectors is important for several reasons. It recommend an improvement in the quality of vocational training provided and providing a learning loop that will be integrated into other vocational training establishments in general, provide an analysis of skill requirements in the labor market as well as skill gaps employers face when hiring new staff. The analysis shall be limited to the following sectors: hotel, garment and furniture sector, to assess major TVET knowledge and skill gaps in order to review, design and develop inclusive and enriched level I, II and short term module to the competence-based TVET curricula content to produce competent graduates, in order to align with current employer's needs. The investigation achieving an improvement in the quality of vocational training and provide a learning loop which will be integrated into other vocational training establishments. Moreover, it helps as a reference to other researchers who are interested

to conduct further study on the area. Finally, it may be used as a source of information for other researchers that are interested in the area.

1.6. Delimitation of the Study

Addis Ababa city administration has eleven sub cities in the city Administration. There are eleven government TVET colleges. Nevertheless, resource and capacity-related limitations were not permissible for the researcher to study the problem across in Addis Ababa city administration. To make the study feasible and manageable, it were undertaken in Nifas Silk Lafto Sub city TVET Colleges. At present, the sub city has 13 weredas and 2 government TVET colleges. These are Nifas Silk Poly Technique and Gofa Industrial colleges

The subject of the study will also be delimited to the labor skill mismatches in the market as well as skill gaps employers face. The skill mismatch could solve competency problems of trainees, in what training settings training should be provided to generate desired skills for the selected sector, needed requirements from trainees, trainers, and training centers should be fulfilled to alleviate the skill gaps of new employees and generic skill are acquired during training and cooperative/internship sessions. To get further and reliable information, opinion, and attitudes of the respondents the researcher selects qualitative approach.

1.7. Limitations of the study

The qualitative research data collection methodology, in particular the choice of the small sample population through purposive sampling method, is considered as the main source of limitation for generalizing the results of the research to all study participants. The inherent weakness associated with this method cannot be assumed as limitation-free. Henceforth, cautions were made whenever extrapolation of the findings from the sample to all of the TVET trainees, graduates, trainers, and department heads, vice-dean, deans, employers, TVET Agencies, and were sought. All the responses of the interviews though subjective, are taken to be representations of the actual scenario. The limitation of a semi-structured interview may be considered in terms of whether the data obtained reflect the facts grounded in the day-to-day practices.

1.8. Definition of Key Terms

Ethiopian Occupational standard (EOS)

Occupational standards are the competencies needed to be considered qualified for a certain field (MOE, 2008).

National TVET qualifications framework (NTQF)

Accordingly, the NTQF has defined five levels (i.e. National TVET certificates I-V) along with the corresponding level descriptors (MOE, 2008).

Competencies: Competencies include a mix of skills, experiences, and Personal attributes that enable someone to successfully fulfill a particular set of roles (Learning and Skill Council, 2005).

Technical and vocational education and training (TVET): means a provision of technical and vocational education and training in any occupation (Federal Negarit Gazette, 2016).

Occupational Competency: means the possession and application of knowledge, skills, and attitudes to the standard of performance required in the workplace (Federal NegaritGazette,2016)

Employability Skills: Transferable core skills groups that represent essential, functional, and enabling knowledge, skills, and attitudes required (Overtoom, 2000).

Soft Skills: refers to interpersonal qualities and personal attributes such as communication, responsibility, social skills, positive attitude, flexibility, teamwork, and work ethics (Robles, 2012).

Hard Skills: technical expertise and knowledge needed for a job (Robles, 2012).

Human Capital: it is defined as the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social, and economic well-being (OECD, 2001).

Level I and II Training: focus on lower-level manpower training provided for those who have completed general secondary education (i.e. grade 10) and enrolled to obtain certificate.

Technical and Vocational Education and Training (TVET): refers to education and training to acquire the practical skills, know-how, and understanding necessary for employment in a practical occupation, trade, or group of occupations or trades.

1.9. Organization of the study

The study is organized into five chapters; the first chapter deals with the introduction parts, the Second chapter dealt with a review of related literature, the Third chapter concerned the research methodology, the Fourth chapter presentation and interpretation of data, and the Fifth chapter the conclusions were drawn from the findings and possible recommendations are made.

CHAPTER TWO: LITERATURE REVIEW

Introduction

This literature review discusses relevant issues and research findings that are essential to forming the theoretical background to support the present study. To link this study with the broader picture on the TVET, the present review begins with a discussion of skill mismatches in training of technical and vocational colleges in Addis Ababa.

2.1. TVET in the context of Ethiopia

There is no universally accepted definition of technical and vocational education and training (TVET). As a field, it is continually changing, usually in response to the demands made upon it (Maclean & Wilson, 2009).

The Historical Framework of TEVT in Ethiopia: TVET in Ethiopia followed the school-based model of training beginning from the establishment of the system. The beginning of TVET in the formal educational scheme dates back to the founding of the 1st TVET School in 1942 in Addis Ababa which had the name Ecole National des Artes Technique (re- named later on as Addis Ababa Technical School). The school offered trainings in many occupational fields such as electricity, economics, woodwork, secretarial science, accounting, auto mechanics, building construction, carpentry. Qualified candidates were enrolled into the three-year training programme known as 8+3 program, and upon completion they were awarded diplomas (Eden, 2012).

Over the years, Addis Ababa technical school underwent a number of changes in terms of the trainings offered and their entry level and duration. The school offered the 8+4, 10+2, and 10+3 programs and applicants from many parts of the country with the best academic achievements competed for admission to the then prestigious school. In 1943, the Addis Ababa School of Business and Administration (later renamed Addis Ababa Commercial College and now currently named Addis Ababa University Commercial College was inaugurated with the aim of supplying trained personnel in the vocational fields of accounting and secretarial sciences for business and commerce, as well as for civil service. Later, banking and finance training fields were added at the 8+4, 10+3, 11+3 and 12+2 levels. Currently, it offers Bachelor of Arts and Graduate degree level programs under Addis Ababa University (Eden, 2012).

In 1962, an educational reform in the country was made which saw secondary schools curriculum transform to a more inclusive education and training. This made TVET more available to students. Even though this reform was not well supported by the resources essential for its success, it was made with the intention that TVET will offer the chance for the secondary school students to join the world of work right after completion of secondary school. In reality, it was an alteration that offered the needed attention and credit for the significance of TVET in the education scheme (Abebe 2010). In 1963 the Bahir Dar Polytechnic Institute was established which further sustained the development of TVET in Ethiopia. This school was later upgraded to a higher education institution level and currently it offers Bachelor and Graduate degree level pro- grams under the name Bahir Dar University. Abebe (2010) argues that no major institutional expansions or development agenda intended at developing TVET took place in the educational scheme between the mid-1960s and the mid- 1980s (Abebe 2010).

During the Derg regime (1974-1991), the MoE was cautioning the government of the educational crisis as early as 1980s, not only in terms of achieving Universal Primary Education, but also about the increasing unemployment of the secondary school graduates (Abebe 2010). The MoE had planned to reduce the pool of unemployment through the introduction of an 8-year universal polytechnic education that could help the student's transition to the world of work but the plan was not fully realized (Abebe 2010). After the downfall of the socialist Derg regime in 1991, the command economy was changed by the free market economy and the country was politically constituted as a Federal Democratic Republic country (Negash 2006).

In 1991, the then transitional government of Ethiopia introduced a new education policy that dramatically changed the education system was introduced in July 1994. According to Policy, formal TVET is set to be offered at second cycle Secondary Level (Upper Secondary Level). In addition, the policy outlined that non-formal TVET would be given for unemployed people; including youth who failed to complete the education up to 10^{th} grade. The government has invested significant financial and human resource to increase access and improve the quality and relevance of formal and non-formal TVET programs. The government has made big commitment for the expansion of TVET for increased access. The plan is to make TVET accessible in every Woreda in the country.

The Ethiopian National TVET Strategy replaces an older version, the Ethiopian education and training policy, which was first adopted in 2002. It set as its objective to train competence, motivated, adaptable and innovative lower and middle level professionals which can contribute to poverty reduction and social and economic development through facilitating demand driven, quality TVET and transfer of demanded technology (TVET, 2008). The strategy was developed with the involvement of a broad range of stakeholders from both the private and public sectors. TVET development relies on an outcome-based system, which depends upon the cooperation, dedication and trust of its stakeholders. TVET provides training on market-oriented programs based on the demands of industry for various target groups, such as: graduates of grade 10, school leavers, people who are in employment, school drop outs and marginalized groups in the labor market.

Governance of TVET: The TVET is led by state minster of Ministry of Education who accountable to Minister of Ministry of Education. The Ministry has also established Federal TVET Agency (FTA) which is responsible for the implementation of TVET strategy and oversees the activities of the sector. In all the regions, TVET bureaus (members of regional state government council) are mandated to undertake all the duties and responsibilities of TVET in their respective regions.

Performance of TVET sectors: The total enrolment in TVET has fallen from a total of 346,160 (in 2014/15) to 302,083 (in 2016/17). The total enrolment, of 302,083, is still much smaller than the expected number of students who should be enrolled in the program due to different reasons. The share of Addis Ababa is 13% (40,477). When we see the gender of trainees female trainees constitute 51.32 percent of the total enrolment; this indicates that female participation in TVET sector is balanced at the national level. For the case of Addis Ababa, it is 50.3%. The Average Annual Growth Rate for female participation also shows a positive growth, exceeding the male AAGR over the last five years from 2016/17. TVET program at the national level and at all levels there are 131,097 students that have graduated from government and non-government institutions in 2015/16. Out of which 54% are female trainees. Of which 20,389(53%) of them are from Addis Ababa (9,541 Male and 10,848-Females) (MoE, 2016/17).

Structure of the Ethiopian Education System: The current educational structure consists of eight years of primary education followed by four years of secondary education. The primary

education has two cycles, first cycle (grades1- 4) and second cycle (grade 5- 8). The secondary education has also two cycles. The first cycle is the general secondary education (grade 9- 10) which leads to the end of the general education for all students. A national exam is given upon completion of grade 10, with those who score well promoted to the second cycle of secondary school (grades 11 and 12), which is considered college or university preparatory. Those who do not score well enough to continue in secondary school have the opportunity to pursue formal TVET, which takes one to three years.

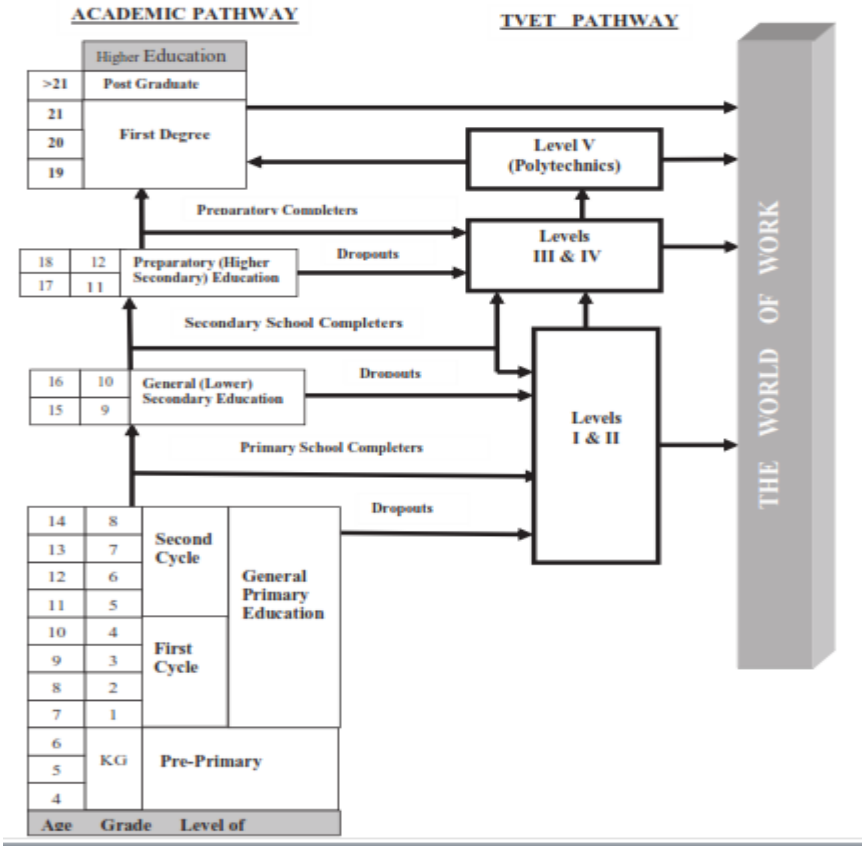

Figure 1: Structure of the Ethiopian Education System

Source: Ministry of Education (MoE, 2009)

TVET Delivery: Formal, Non-formal and Informal TVET Sector in Ethiopia

TVET provision in Ethiopia comprises of all modes of formal, non-formal and informal trainings offered either by government and/or non-government providers such as non-government offices, and private institutes. TVET provision is open to a variety of groups such as illiterates, school leavers, school dropouts, farmers, entrepreneurs, and other groups (Biazen and Amha 2009).

The formal TVET programs are for those students who have failed to achieve the Ethiopian General Secondary Ethiopian General Secondary Education Certificate Examination scores for admission to preparatory program. Students in the TVET path could attend programs that range from one year to three years that would enable them to join the world of work. Working people also join the formal program through distance learning and evening classes. Informal TVET is described as those man oeuvres which are operating unregistered with a low level of organization and are said to function mostly through home-based activities or in small channels without fixed locations. The government has small or no straight association with informal TVET in other words it is not supported or regulated by the government (Eden, 2012).

On the other hand, the non-formal TVET is provided to wide range of target groups such as school dropouts, Grade 10 and above (even college and university graduates) ,those with below grade 10 education or lower including illiterate people, unemployed, youth and adults, who could produce supporting letters from their respective woreda's. The training is offered through different channels (community based, institutional, apprenticeship) such as Community Skill Training Centers, prisons, and farmers training centers etc. The trainings are offered over different periods of time from short-term courses of a few days to long-term programs of up to 6 months. The selection criterion of trainees for non-formal TEVT depends on the training center's own basis. No one criterion is sufficient for recruiting trainees. Most training institutions employ a combination of criteria to recruit their trainees. What is common to all institutions, except the private ones, is having low income and having the interest to be self-employed after completion of the training programs. Since the private institutions are profit makers, they enroll all those who could afford it (Eden, 2012).

The TVET EOS and Curriculum Development: Every formal government training establishment is responsible for developing their curriculum and own training materials based on the centralized occupational standards (OS) facilitated, monitored and evaluated by regional TVET agencies. Developing training materials has become a challenge for all TVET institutions. To solve the problem, model training materials is developed and disseminated by the Federal TVET Bureau to the regional TVET agencies in order for them to develop their training material based on their local market needs and surroundings. In addition different curriculum reform were conducted which aimed to ensure quality and relevance of TVET by facilitating the setting of

National Occupational Standards which is fairly equivalent to international standards and organizing an occupational assessment and certification system which offers National Occupational Qualification Certificates to those who have proven, in an assessment, that they are competent in accordance with the defined occupational standards. The development of the occupational standards has been re-categorized into five levels now i.e. Level 1, Level 2, Level 3, Level 4 and Level 5 packages. Based on the new TVET policy level 1 is used as a carrier transition for the next levels (Eden, 2012).

The TVET EOS and curriculum also give high emphasis for cooperative training which is a mode of training delivered by the cooperation of enterprises and training institutions, whereby 70 percent of the training content is provided in the enterprises and 30 percent in the vocational institution. Cooperative training is conducted based on the occupational standard and is organized in order to enable trainees to acquire practical competency for the theories learned at school.

2.2. Current Status of TVET in Ethiopia

In the past two decades the TVET sub-sector has evolved through various levels and recorded certain achievements. At five-year intervals, the Ethiopian Government instituted a series of ESDPs. Driven by these ESDPs, the Government also resourced a relatively expansive TVET development program to establish TVET institutes. The Ethiopian Education Development Roadmap (2018–30) (Ministry of Education, 2018, p. 67) observed that large numbers of TVET institutions were built over 15 years from 2000 to 2015, and that over that period the number of public TVET institutions increased from 16 to 334, while enrolment rose from about 3,400 to roughly 273,600.

As stated in ESDP IV the main objective of TVET sub sector was to train middle level human power and transfer demanded technologies and by doing so to contribute to growth and transformation plan as well as the vision of the country to become a middle income country in the year 2025 E.C(2032/33). In this aspect how the sub-sector has developed so far should be reviewed appropriately. Thus under this section, the path taken and current status of Ethiopian TVET sub-system is to be shown taking some performance indicators. Development across the sub-sector considers features such as enrolment, quality, equity and level.

Ethiopia has achieved the highest increase of 5,565 % in TVET enrolment from 1999 to 2007 from SSA countries and ranked the second among the countries in Africa in terms of the number of training institutions. Furthermore, the recent growth in TVET enrolment and provision has been achieved by a substantial development of public spending and increased TVET provision by private institutions (MoE, 2018). The total enrolment in TVET in the year 1999 E.C (2006/07) was only 191,151. As of 2003 E.C (2010/11), enrolment has increased to 371,347, though this figure was quite small when compared to the number of students who were expected to be enrolled in TVET program then (MoE, 2016/17). In 2003 E.C (2010/11), female enrolment constituted 46.2% of total enrolment, indicating a relatively good gender balance at the national level. The following table depicts enrolment with gender consideration.

The total enrolment in TVET decreased from a total of 346,160 (in 2014/15) to 302,083 (in 2016/17). The total enrolment, of 302,083, is still much lower than the expected number of students who should be enrolled in the program due to different reasons. The share of Addis Ababa is 13% (40,477).When the gender of trainees is considered, female trainees constitute 51.32 percent of the total enrolment; this indicates that female participation in TVET sector is balanced at the national level. For the case of Addis Ababa, it is 50.3%. The Average Annual Growth Rate for female participation also shows a positive growth, exceeding the male AAGR over the last five years from 2016/17. TVET program at the national level and at all levels there are 131,097 students that have graduated from government and non-government institutions in 2015/16. Out of which 54% are female trainees. Of which 20,389(53%) of them are from Addis Ababa (9,541 Male and 10,848-Females) (MoE, 2016/17).

Table 1: TVET Enrolment Trends by Sex

	Sex	**2005 E.C (2012/13)**	**2006 E.C (2013/14)**	**2007 E.C (2014/15)**	**2008 E.C (2014/15)**	**2009 E.C (2015/16)**	**AAGR (%)**
Trainees	**Male**	116,457	115,942	164,658	146,163	147,066	**6.01**
	Female	122,427	122,107	181,502	157,976	155,017	**6.08**
	Total	238,884	238,049	346,160	304,139	302,083	**6.04**
	% Female	**51.25**	**51.29**	**52.43**	**51.94**	**51.32**	**0.03**

Source: Ministry of Education, 2016/17, p. 125

The MoE documents remarked that increase has been steady from year 1999 E.C (2006/07) to 2009 E.C (2015/16), when there has been a marked increase in enrolment.

Regarding quality and distribution of TVET institutions remarkable issues exist in few available literatures. The combination of high population growth and expanded access to TVET and tertiary education – university enrolment rose from 10,000 in 1990 to 360,000 in 2015 (Golubski, 2016) – means that higher numbers of young people with increasing qualification levels are entering the Ethiopian labour market. Unfortunately, although it is in a growth phase, the economy cannot generate jobs at the same rate. There are also indications, as mentioned elsewhere, that there is a degree of mismatch between TVET institution graduate skills and skills required by employers.

Table 2: below show that, the total number of enrolment in 2009 E.C. (2016/17), in all regions, was 302,083. The table illustrates that, from the 2009 E.C. data, the largest shares of enrollment were in Amhara and Oromia regions. On the other hand, Ethiopia-Somali, Gambella and Afar constitute the lowest enrollment shares. Regarding the gender enrollment shares at the national level, based on 2008 E.C. data, Amhara, Harari and Oromia performed best with percentage female enrollment of 56.4%, 52.8% and 50.7%, respectively. Moreover, compared to the total female enrollment shares at national level, Amhara scored the larger female enrolment exceeding the total national female enrollment value, 51.3%, whereas Harari and Oromia have a good proportion in female enrollment with the current data

Table 2: TVET Enrolment by Region, Level and Sex 2009 E.C. (2016/17)

	Level I		**Level II**		**Level III**		**Level IV**		**Level V**		**Level I-V**			% of Female
REGION	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**T**	
Tigray	2265	2397	4689	4239	1828	1607	3719	3602	689	676	13190	12521	25711	48.699
Afar	187	160	444	230	209	126	150	132	-	-	990	648	1638	39.56
Amhara	876	1101	11802	15474	7997	10509	13258	15517	1392	1591	35325	44192	79517	55.576
Oromia	6856	5951	16624	16740	6810	7164	8138	7490	297	218	38725	37563	76288	49.238
Somali	441	377	752	385	270	267	1098	1061	-	-	2561	2090	4651	44.937
Benishangul-Gumuz	1180	1594	847	1269	597	810	330	641	6	18	2960	4332	7292	59.408
SNNP	4599	4589	13037	12865	4297	4328	3930	4627	633	499	26496	26908	53404	50.386
Gambella	598	604	477	241	61	78	2	9	-	-	1138	932	2070	45.024
Harari	582	564	1027	967	747	838	434	407	86	6	2876	2782	5658	49.169
Addis Ababa	3326	4845	6867	4587	5398	5721	4460	5154	58	61	20109	20368	40477	50.32
Dire Dawa	14	28	471	523	643	944	1196	1133	372	53	2696	2681	5377	49.861
National	**20924**	**22210**	**57037**	**57520**	**28857**	**32392**	**36715**	**39773**	**3533**	**3122**	**147066**	**155017**	**302083**	**51.316**

Source: Ministry of Education, 2016/17, p. 126

Regarding the enrollment shares in the government and non-government TVET centers, the total share of the government owned centers exceeds that of the total non-government almost by six fold as seen from Table 3. Proportionally, non-government institutions enrolled more female students compared to government institutions, with 62% of those enrolled in non-government institutions being female while the government institutions have 50% female enrolment share. With respect to regional totals, the Amhara region performs the best for female TVET enrollment shares both from the government and non-government institutions, with 55% and 69% shares respectively. On the other hand, Afar constitutes the lowest female enrollment share among all regions with 39% female share in government and 40% in the non-government institutions. The female and male total shares at national and regional level are shown in Table 3.

Table 3: Government and Non-Government Enrolment by Region and Sex, 2009 E.C. (2016/17)

REGION	Government			Non-Government			Government+Non-Government		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Tigray	13190	12521	25711	-	-	-	13190	12521	25711
Afar	680	442	1122	310	206	516	990	648	1638
Amhara	33416	40889	74305	1616	3596	5212	35032	44485	79517
Oromia	36457	35506	71963	1916	2409	4325	38373	37915	76288
Somali	2203	1707	3910	358	383	741	2561	2090	4651
Benishangul-Gumuz	1504	1932	3436	1456	2400	3856	2960	4332	7292
SNNP	24601	23052	47653	1895	3856	5751	26496	26908	53404
Gambella	755	538	1293	383	394	777	1138	932	2070
Harari	1514	1116	2630	1351	1677	3028	2865	2793	5658
Addis Ababa	14478	10971	25449	5631	9397	15028	20109	20368	40477
Dire Dawa	2167	1608	3775	529	1073	1602	2696	2681	5377
National	**130965**	**130282**	**261247**	**15445**	**25391**	**40836**	**146410**	**155673**	**302083**

Source: Ministry of Education, 2016/17, p. 127

As shown in Table 3 above, in all regions except Harari, with an outstanding non-government share of 53.5%, the share of non-government enrolment in all regions is below 40% whereas the non-government share in the 2009 E.C. (the four regions) data is below 10%(MoE, 2016/17)

In terms of level and area of study a recent data of status is available. The distribution of students according to the sector of their study choice is an important feature of enrolment performance.

Table 4: Number of students in public and private TVET institutes in Ethiopia in 2015

Area of study	Levels 1+2	Levels 3+4	Level 5
Agriculture	10,055	5,910	243
Industry	47,706	12,535	3,072
Mining	96	-	-
Utilities	98,924	61,738	7,220
Trade	134	663	-
Health	2,500	7,161	2,048
Tourism	7,130	1,432	219
Social affairs	2,493	110	-
Total/level	169,038	89,549	12,802

Source: Ministry of Education, 2018, p. 83

As the table above shows, the highest enrolment across public and private sectors was in utilities, which accounted for just over 60 per cent of enrolment. The provision of utilities (water, electricity, and gas) is an essential service that plays a vital role in economic and social development. Moreover, the sectors chosen by the most students for study might be expected to coincide roughly with the current and future expectations of where sectoral growth in the national economy is set to take place. In contrary to this, in Ethiopia, allocation of students to fields of study is determined mostly by government through a quota system, which is seen as best placed to make these allocations. In terms of the levels of study opportunities in TVET, it is clear that the Education Development Roadmap aims to open up higher skills paths in the reform agenda by establishing a "national curriculum and training materials development center for TVET semi-skilled and skilled personnel and middle level professional trainings". (Ibid, p. 83)

The utilities industry, which accounted for just over 60% of enrolment throughout the public and private sectors, had by far the greatest enrolment. Utilities (water, electricity, and gas) are a necessary service that contributes significantly to economic and social growth. For effective poverty eradication, high-quality utilities are required. In an ideal world, the majority of students' study sectors would be expected to roughly correspond to current and future projections of where sectorial growth in the national economy will occur. However, in Ethiopia, the government influences the distribution of students to fields of study through a quota system, which is viewed as the ideal way to make these decisions. In terms of the levels of study opportunities in TVET, it is clear that the Education Development Roadmap aims to open up higher skills paths in the

reform agenda by establishing a "national curriculum and training materials development center for TVET semi-skilled and skilled personnel and middle level professional trainings" (Ministry of Education, 2018, p. 83).

2.3. The concept of Skill and Skill mismatch

Skill is defined as "the ability to competently perform a particular task assigned" (United Kingdom Commission Employer Skills Survey, 2010) or to perform "a specific task at a certain level of expertise" (Shah and Burke, 2003; Trendle, 2008). Similarly, a "skill" can be described as "the capability to carry out job assigned to a level of competence and this can be built upon through learning" (OECD, 2011). The concept of skill has been defined differently by writers in different forms. Skills could also be looked into from another perspective as being expert in the area of specialization (Wood, 1988), having competence (Boyatzis et al, 2002; Olaitan et al, 2000) dexterity, and knowledge of the workforce (Awe. 2010; Mangham and Silver, 1986). In the same vein, due to some schools of knowledge skill is a special ability to perform duties, majorly acquired through formal or informal training (Tether et al, 2005). Definition of skill according to some schools of thought should entail the ability of the skilled artisan to work in various sections of the industry or the workplace independently (Spenner, 1983; Olaitan et al., 2000) it could be termed as the capacity to carry our jobs perfectly without supervision.

Overwhelmingly, skill and various types of skills within the literature are linked to an activity or a job (Clarke and Winch, 2006). As a skill is linked within a particular task, a person who does not have skill is unlikely to be able to carry out a given job or will be less productive than somebody who possesses the skill. Skills are often linked and have some alliance with qualifications (Mawer & Jackson, 2005; sattinger, 2012; Cappellin, 2014) and acquisition through formal education and training which is adequate in quality and quantity.

Skill mismatch is a broader phenomenon that has a different interpretation in the research literature. An important topic in skill mismatch research is whether it refers to vertical or horizontal skill mismatch. Vertical mismatch refers to a situation where the level of skills a worker possesses is higher or lower than is required in the job. In this context, Allen and Van der Velden (2001, p436) refer to formal education-job mismatch and mismatch between acquired and required skills (skill mismatch). When there is a mismatch between the educational level and the job level, the term over-education or vertical mismatch (Hartog, 2000) is used; a situation in

which there is a mismatch between an individual's field of study and the vocational field in which one is employed is usually called horizontal mismatch (Witte & Kalleberg, 1995: Van de Werfhorst, 2002).

Skill mismatch is a discrepancy between the skills that are sought by employers and the skills that are possessed by individuals. Simply put, it is a mismatch between skills and jobs. This means that education and training are not providing the skills determined in the labor market, or that the economy does not create a job that corresponds to the skills of individuals.

2.4. Classification of a Skill

Skills could be classified into a few different ways, though skills have many characteristics. In this study skills could be classified as been generic, technical skill or Non-technical skill and hard skill (Ofori, 2004). Other skill categories include academic and cognitive and employability. Particular skills can be classified under several different skill types since these are overlapping categorizations with varying relevance for specific job sectors or roles. The classification will be discussed below.

2.4.1. Academic or Cognitive Skills

These are basic academic skills needed to support learning in different subjects such as physics, English, mathematics, and biology among other subjects. Most importantly, all secondary school students must have academic skills other than to further their education in higher institutions of learning. These subjects are learned in school and they should be transferable to applications where needed. They are assessed using a standardized test (Jayaram & Musau, 2017). Be that as it may, for graduates of technical training institutions to gain employment in the world of work, courses offered including skills should be reviewed and updated. Employers in the Hotel, Garment and Furniture industries referred to some courses in which students are deficient to include communication skills, English, mathematics, and a host of other subjects which needed to be transferred for use in the real context, in writing letters and memos, and other areas that need calculation whiles on their work.

2.4.2. Technical Skills

Technical Skills: These are specific skills for use across technical professions, to include academic subjects like mathematics, physics, chemistry, biology and other subjects applied in

different programmers' like, mathematics applied in measuring works. Technical skills are defined as those skills acquired both at formal and non-formal institutions of learning relating to the profession of one's choice as an apprentice, in the replica of the workplace for employees. They are always coded in the job descriptions and they are measured using standardized assessment (Sorrel, 2017). Technical skills are skills meant for an occupation in which the skilled worker has competency in his area of discipline or related profession which requires the use of tools, in the technical or engineering field. Technical skills issues relating to the use of equipment and tools meant for work and related issues are linked with technical skills. This could be learned in educational training institutions and non-formal settings (Handler & Healy, 2009).

2.4.3. Generic Skills

Generic Skills are non-technical competencies involving little or no interactions with machines, equipment, and tools within and across different occupations that help individuals to obtain positive social relationships and contribute to the work environment (Whelan, M., 2017). The Generic Skills courses that are incorporated in the Ethiopian TVET curriculum building occupational standards are as follows: communication skills, ICT skills, Kaizen skills, Entrepreneurship, and working together. Generic skills are the key term used as employability skills in most of the countries, but what is meant by this term varies in different countries (Weligamage, S.S., 2009).

This is a combination of skills that deal with problem-solving, communications, or teamwork. The combination of these skills is applicable for use across all jobs and is meant for use in all situations and across disciplines. Other names for generic skills include general skills, key skills, employability skills, key competencies, core skills, necessary skills, transferable skills, and essential skills. They are equally transferable across work settings. Generic skills have meaning in the different work contexts (Stasz, 2001). Generic skills are multifarious. They consist of analytical and problem-solving skills, (i.e. the ability to both formulate a problem and execute what is required to solve the problem), communication skills (i.e. the written presentation that require the ability to communicate in writing effectively and different formats and for various types of recipients as well as, the oral presentation, which is to communicate, verbally in an effective manner for presentation for and at different groups and audience), and information

skills (i.e. having the ability to know that there is a need for a certain type of information to complete a task, like information retrieval and information evaluation).

2.4.4. Soft Skills

Soft-skills having to possess soft skills are part of the requirement that makes you qualified to successfully work as part of a growing industry. Soft skills are defined as an array of a person's attributes and way of life to include goals, skills possessed, friendliness, reasoning, and motivation that make an individual in life (Sorrel, 2017). Soft skills entail work ethics, attitude, and communication. It could be referred to as such construct as motivation and dispositions (Jayaram &Musau, 2017).

2.5. Cooperative training as a competency-based learning approach

Cooperative training is a mode of training provided in partnership between enterprises and TVET institutions. It is directed toward the attainment of a skilled and versatile workforce adaptable to changing technology to meet the industry's current and further manpower needs. Under this system, industries and TVET institutions share the responsibility of providing the trainee with the best possible job qualifications, the former essentially through practical training and the latter by securing an adequate level of specific, general, and occupation-related theoretical instructions. In the cooperative training guideline, cooperative training depends on the willingness of enterprises to supply human resources and materials for enterprise-based training.

However, the quality and relevance of training is handicapped by several limitations like shrinking or stagnant wage employment opportunities, especially in the industrial sector; poor quality in the delivery of TVET programs; weak monitoring and evaluation mechanisms, lack of stakeholder's participation, and inefficient leadership and management (MoE, 2006)

2.6. Challenges of practicing competence-based training programs in Ethiopia

Through much has been done to improve the TVET system since 2008 there are, however, challenge that negatively influence the implementing TVET curriculum. According to Getachew, (2016), some of the challenges faced were:

- Starting many training program in one time which lead to budget constraint
- Misconception of parents, students, teachers in TVET
- Inadequate preparation of teachers for competence-based education and training.
- Not volunteering to accept students for cooperative training.

2.7. Employability of TVET Graduates

2.7.1. Employability skills of TVET graduates

The global economy has evolved into a knowledge-based economy, where skills and human resources have become the driving force for innovation, continued growth, and corporate competitive advantage. The meaning and practice of work are changing and the need for a highly skilled and productive workforce is shaping economies worldwide. To increase their chances of employability, TVET trainees need skills that are flexible and relevant to the demands of today's industry. To promote the employability of graduates TVETs' take vital initiatives to review the attributes needed by graduates as well as to support employability skills development (Bridgstock, 2009) to make them "appealing to multiple employers across multiple work contexts and disciplines"(Bridgstock, 2009).

The employability of TVET graduates is regarded not just as a result of professional, discipline-specific knowledge and skills (Leckey & Mc Guigon, 1997) but as an ability to show generic skills, attitudes, and qualities that are readily transferred to workplaces or occupational situations after finishing their TVET programs (de Guzman & de Castro, 2008).

2.7.2. Employers demands from TVET Graduates

Technical skills, or hard skills, were historically the only skills necessary for career employment. However technical skills are not enough to maintain employment in today's workplace (Robles, 2015). Two of the greatest concerns expressed by employers included acquiring and training good workers (Robinson, 2017). Because soft skills are important for productive performance in today's workplace, there is an extreme emphasis placed on the development of soft skills.

Pool, L. D. (2017) viewed employability as a set of achievements, skills, and personal attributes that help graduates to obtain employment and retain their jobs. In this respect, Lowden, Hall,

Elliot, and Lowin (2011) believe that employers expect graduates to possess personal attributes and skills such as teamwork, communication, leadership, critical thinking, problem-solving, and managerial abilities.

McCabe (2018) contends that jobs are not guaranteed to graduates unless they successfully use their attributes and skills in their job. It is important to mention that hard skills are necessary to obtain a job but not necessarily sufficient to retain them. Soft skills would help TVET graduates in progressing and retaining their jobs.

Graham (2001) investigated knowledge, skills, and abilities employers expect TVET graduates to possess and found that graduates need to demonstrate the ability to work with groups, show leadership, dedication, and initiation more than what they are doing now. He further found that employers attach high importance to verbal expression, presentation skills, listening, and understanding instructions.

2.7.3. TVET Course Quality

Knight et al. (2003) assert "good learning, teaching and assessment projects will be developing practices that are also likely to help students make good, well-founded claims to employability". Of course, what constitutes ‘good teaching and learning is hotly debated although the incorporation of reflective processes, experiential and action learning, authentic assessment are all considered important(Pegg et al.,2012). Pegg et al. (2012) acknowledge that although facilitating student access to the appropriate vehicles for enhancing employability is vital, effective teaching practice is also critically important.

2.7.3.1. Skills Match (i.e. relevance of training & application of knowledge)

The degree of relevance of the knowledge and skills acquired during graduate career to the nature of duties and responsibilities about the job opportunities available are yet another important factor that affects the employability of graduates. This is to say, this term represents the skills that are obtained through formal training but does not consider skills learning. Individuals who have completed higher levels of education will have skills mismatch due to its relevance to the job (Milion C.S., 2017).

2.7.3.2. Professional Expertise

To prosper in the knowledge society, graduates need to be equipped with the skills necessary to fulfill tasks effectively. Professional expertise (i.e. subject-specific knowledge) is the most important skills set that affect TVET graduate employability. This dimension is evident in individuals who have acquired a high degree of knowledge, spanning across professional domains (Van der Heidje&Van der Heijden, 2006). It is thus often seen as the prerequisite for successful career outcomes, at both an individual and organizational level. It is thus a central determinant of employability (Enders, 2002).

In this chapter, selected literature was reviewed on the topics related to skill mismatch among TVET graduates. The review of the literature also revealed four classifications of skills in explaining the increased importance and strengths of quality education achievement. These included generic skills, soft skills, cognitive/academic skills, and technical skills. The review of the literature also revealed major challenges identified through interviews with college administrators and program coordinators are purposes or functions of quality assurance. The recent literature also highlights the notions of both the industry-originated and education-oriented quality management models can be useful, but the specific core functions of higher education, i.e. education and research should not be ignored. The next Chapter presents an outline and discussion of the research methodology.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

This chapter tried to describe the research approach, research design, population of the study, sampling size and sampling technique and procedure, source of data, data collection instrument, data collection procedures, data analysis, and ethical considerations.

3.2. Research Approach and Design

The study aimed to investigating the skill mismatches of TVET in colleges in Nifas Silk Lafo Sub-city. Research design is a plan which clearly shows the way and strategy or plan of action to accomplish an investigation as best decided by the researcher. A research design is a plan which specifies and states clearly the population to be studied, the methods for the study and the procedure for processing and analyzing the data (Kothari 2009).

Creswell (2003) defines a research design as the plan of action which specifies exactly who or what is to be studied, when, how and for what purpose a study is conducted.

This study used a qualitative research approach design and purposive sampling technique were selected because it allows for a more comprehensive and synergetic use of data than separate quantitative data gathering and analysis offer and the interviewee is asked some very general questions and he/she may reply to these questions in any way he/she likes. In this type of interview, the interviewee is encouraged to express his/her ideas and feelings freely (Creswell, 2009).

3.3. Sample Population

3.3.1. Population of the study

Target population refers to all the members who meet the particular criterion specified for a research investigation (Walliman, 2011). The target populations of this study were all TVET trainees/graduates/trainers/department heads/vice dean and Deans at Nifas Silk Lafto Sub city in government TVET colleges, employers and TVET Agency of Addis Ababa. The selection of the respondents was done by using the purposive sampling method. This study was conducted on 32 study participants.

3.3.2. Source of Data

The researcher used both primary and secondary data to get a full picture of the present situations under study. As the study mainly focuses on the human aspect, primary data were the main source of data for this study. The primary data were collected through interview from employers, TVET agencies, College deans, vice deans, department heads, trainers, graduates, and trainees. Secondary data were obtained from different documents of topic-related literature such as desktop researches, books, articles, journals, and a variety of websites as well as other optional sources of the proposed study.

3.3.3. Sample size and sampling Techniques and procedure

Holloway (2002) asserts that sample size does not influence the importance or quality of the study and note that there are no guidelines in determining the sample size in qualitative research. Qualitative researchers do not normally know the number of people in the research beforehand; the sample may change in size and type during research. Sampling goes on until saturation has been achieved; when no new information is generated (Holloway, 2002). In Nifas Silk Lafto Sub-city there are two government TVET colleges these are Nifas Silk Poly Technique College and Gofa Industrial College, so in this study the total number of participants were 32 consisting of ten respondents (deans, vice-deans, trainers and department heads) and eight trainees selected form two government TVET colleges, four graduates; two officials form Addis Ababa TVET agency, and eight employers. All the participants targeted were willing to take part in this study. Sampling is closely related to generalizability of the findings. In this study, the sampling was purposive.

The colleges had nine departments. Only Hotel, Garment and Furniture department were involved in the study. Trainees, graduates, trainers, department heads, vice-deans and deans had participated in this study. And also employers and Addis Ababa TVET agency will proceed by purposive non-random sampling. The numbers of the population and the samples taken from trainees, graduates, trainers, department heads, vice-dean, deans, Addis Ababa TVET agency, and employers are shown in table 5 on page 28.

Parahoo (1997) describes purposive sampling as “a method of sampling where the researcher deliberately chooses whom to include in the study based on their ability to provide necessary

data". The rationale for choosing this approach was that the researcher seeking knowledge about the skill mismatch in TVET colleges.

3.3.4. Procedures of Data Collection

A structure open-ended interview was the main data gathering instrument to obtain adequate, valid, in depth and reliable information. Three interview questionnaires were prepared. One for trainees/graduates, one for employer and one for agency and TVET colleges, the interview was conducted among TVET agency, employers, trainees, trainers, department heads, vice dean, dean of TVET colleges at Nifas Silk Lafto Sub city. The interview was also conducted by the researcher on face to face basis to get further and reliable information, opinion, and attitudes of the respondents to enrich until saturated data were obtained.

3.3.5. Data processing procedures

After collecting the necessary data, the researcher used data processing procedures like editing and classification of the data amenable for analysis. The analysis of qualitative data were based on the text transcribed from the interviews made with trainees, graduates, trainers, department heads, vice-deans, deans, employers, and Addis Ababa TVET Agency. The responses of the interviewees for the interview questions were recorded in a digital audio recorder and notes were also taken. All the responses were transcribed into a text. Much emphasis was given to the accurate transfer of the content of the speech into text format. The transcribed text was read and re-read to understand the responses to the interview questions. Following significant statements and phrases about the study extracted from each transcript meaning formulated from the significant statements. Then meanings are organized into themes these are Soft and hard skill gaps, Gaps on curriculum and EOS, Teachers' participation in OS development and implementation, Leadership and management style of the TVET sector, Lack of quality assurance system, Image of communities towards TVET program, Dropouts, Gaps in cooperative training and Poor Infrastructure.

3.3.6. Qualitative data management and analysis

According to Edmonds and Kennedy (2016:321), qualitative data analysis includes production of data utilization of memos, and codes emphasis on presenting data. Furthermore, Gray, Grove, and Sunderland (2013) argue that qualitative interpretation of data from an interview might result

in the research asking further questions in successive interviews to confirm or disconfirm the meaning of any primary data.

The researcher transcribed the audio files, re-read the expanded field notes and transcripts of every interview and key informants (KIIs) to remain focused on the knowledge and context of the study. This helped the researcher to revise and refine the subsequent KIIs sessions. The qualitative data generated and analyzed were expanded field notes, audio recorded files and their transcripts. Finally, nine themes were extracted from the data and presented by narratives created from direct quotes. These are Soft and hard skill gaps, Gaps on curriculum and EOS, Teachers' participation in OS development and implementation, Leadership and management style of the TVET sector, Lack of quality assurance system, Image of communities towards TVET program, Dropouts, Gaps in cooperative training and Poor Infrastructure

3.4. Ethical Considerations

The purpose of the study is fully explained to all participants and all of them participated in the study voluntarily. Also, because of the sensitive nature of the information being gathered about the participants and their supervisors, specific personal information like the names and names of their supervisors and their organizations are kept anonymous. And all sensitive data collected for this study are kept confidential.

CHAPTER FOUR: PRESENTATION AND INTERPRETATION OF DATA

As the study, the raw data gathered from the varied participants such as trainees, graduates, trainers, department heads, TVET vice-dean, dean, employers, Addis Ababa City Administration TVET agency are categorized and analyzed to examine skill mismatch among TVET. Skill mismatch presentation and interpretation of data are made by interpreting the data obtained from individual interviewees. The researcher first interpreted the data obtained from various interviewees about the skill mismatch on TVET. For the sake of convenience and simplicity, the gathered data is presented by nine thematic issues. The themes are, Soft and hard skill gaps, Gaps on curriculum and EOS, Teachers' participation in OS development and implementation, Leadership and management style of the TVET sector, Lack of quality assurance system, Image of communities towards TVET program, Dropouts, Gaps in cooperative training and Poor Infrastructure.

4.1. Demographic characteristics of the respondents.

This part presents demographic data collected from four graduates and 8 trainees, two officials from Addis Ababa TVET agency, eight from employers, and ten from TVET college's department head/vice deans and deans. The demographic data contains gender and types of job/responsibility

Table 5: Details of the KII

Study participants	Male	Female	Total
Ababa City Administration TVET agency	2	0	2
Employers	5	3	8
TVET deans, vice dean, department heads, and trainers	5	5	10
Trainees	3	5	8
Graduates	2	2	4
Total	17	15	32

4.2. Soft and hard skill gaps

The main challenges for TVET graduates to transition to the labor market are attributed to a mismatch in skill development and scarcity of jobs (United Nations, 2018**).** The United Nations global youth report recommends that investing in skills development might facilitate a better

transition to work. This includes attention to life skills centered on effective communication and negotiation, decision-making and problem solving, leadership, personal finance management, and critical thinking.

The investigation focused on the soft and hard skills that the current TVET trainees and graduates (Short term, Level I and II) lacks. As per the interview, the current occupational standard and curriculum have major gaps in hard and soft skills. However, the gaps in the soft skill of the trainees are significant compared to the hard skill. According to the TVET strategy, skills should include attention to practice skills (70% of TVET should be practice, and 30% should be theory), entrepreneurial skills, and business management skills. However, it seems that the extent to which skills are taught in TVET is limited due to the limited capacity of the trainers and limited resources and facilities to practice skills. Particularly the development of 'soft skills' seem to be lacking.

This investigation also found that soft skills needed include customer handling, communication, work ethics, and professional ethics, working with others, team leading and team work, cooperation, business know-how, problem-solving skills, business attitudinal skills, and time management is the main skill that has to be strengthened across the three streams.

The current OS and curriculum have some of the soft skills like working with others/colleagues /customers, workplace communication, entrepreneurship, working in a socially diverse environment, etc. However, neither the employers nor the trainers their skill during cooperative training and employment. This is mainly due to: most of the trainees are highly interested in hard and practical skill than soft and theoretical skill, the soft skill courses are handled by major subject trainers which are out of their core training areas, lack of ethics and good citizenship behavior of the trainee, lack of trainers for some of the courses such as the French language for hotel service training, the attitude of the trainees towards TVET training. Most of them feel that they joined TVET as they fail in the national exam to join university, some of the soft skill courses are redundant and can be merged for example Work with Others, Workplace Communication, and Demonstrate Work Values, most of the soft skill training is not being delivered in a way that changes the behavior of the trainees as required. Lack of knowledge and interest in the soft skill training also contributed to the poor quality of the soft skills of trainees,

education evaluation (grading system) of the trainees, lack of dedicated IT infrastructures and software's special of hotel service and catering training. For instance, one government TVET college does not have hotel booking and service software. They are using the private colleges' ICT infrastructure where trainees are expected to cover the cost of transportation for the training facilitated out of the college and applying soft skills needs more time and close follow-up and support during practice.

The following needs of the industry sector were also identified; Emphasizing continuous learning and development to encourage graduates to continue growing and in turn, keep their information relevant and up to date, include a balance of theory and practice in all curricula, as dictated by course needs, exposure to occupational areas' relevant tools and equipment to make trainees more equipped for employment and job-ready, to improve content around behavioral codes of conduct and ethics (work and business) training, to improve the quality of the tools and equipment used for training purposes, to focus on improving English and IT skills across all courses with hands-on experience in computer usage, foster a space where there is less focus on theoretical exams and more focus on practical assessments, focus on hiring the most qualified trainers and motivating them and provide career guidance and counseling service for trainees

The employer of Haile Hotels and resort said:

> *"We don't expect much hard skill from new graduates as they will be new to the environment. So we will work to cultivate their knowledge and practical skills. The majority of them have limitations regarding soft skills. Trainees lack mental readiness, communication skills, and the skill of unwillingness to tackle challenges during their work".*

The TVET agency curriculum and development team leader said:

> *"Hard skill is easier for them to master as they are young and that they can easily acquire the skills. Soft skills, on the other hand, are difficult to master. There is a big problem regarding attitude and discipline. Discipline problems may include not being punctual and respecting the rules and regulations of their workplace. We have conducted studies in this area and companies have told us that there is a huge problem in the area of discipline, communication and working together. When we talk about communication it can be difficult to comply and vice versa. If*

we take for example at universities we learn one-way communication. It creates a problem when working in collaboration with others."

The employer of Momona Hotel reported that:

"Trainees lack skills such as computer skills, Microsoft Word, Microsoft excel, different housekeeping, and kitchen equipment utilization, and PMS function (hotel software systems like Opera, CNET, and IDs".

The trainer of hotel said:

''In the hotel industry, we focus on soft skills rather than hard skills because we provide services and it requires coming in contact with customers. There are areas such as finance language that still need more work. There are 3 units of competency when we talk about finance. However, the units of competency were not specifically designed for the hotel industry. These units are similar for all TVET training. Similarly, we only have French language training other than English. No matter how important the English language is for customer service. We don't have enough access to language training. I have some experience in the industry and I consider these gaps based on my observation. These gaps created frustration among TVET graduates when they come face to face with foreign customers. More work has to be done in this area. The reason for less English language training I think is that we took the curriculum from English language speaking nations and that they didn't need to incorporate English language training in their curriculum. I believe that as the English language is not our native tongue, it has to be given at every level.''

The TVET agency curriculum and development team leader said:

"Communication, working with others, Kizen and entrepreneurship are the major soft skills and they are related to business skills. These skills will be given about each sector. For example, if we talk about safety, safety with construction, safety with hotel and such will be given. Communication is also similarly given about the sector. The gaps will occur when such a process takes place. Thus trainers

have to be trained in a way that they can create linkage between each skill and the sectors."

Noll and Wilkins (2002) utilized a survey instrument asking respondents to rate the importance of each knowledge/skill area from each of the staffing groups. The results show that knowledge relating to the entire organization and overall business knowledge is important, however, the so-called soft skills such as teamwork and collaboration, planning and leading projects, presentation delivery, and writing skills will be critical for success in the profession. The results of this investigation shows that there is a need to enhance the quality of soft skills for future employees who enter the local workforce and soft skills are perceived by trainees and employers as relevant employability skills. The finding is in line with this argument.

4.3. Gaps on curriculum and EOS

The TVET strategy foresees the TVET sector to move towards an occupational standard-based TVET system to replace the current curriculum-centered approach. This means that TVET providers have to develop curricula that are based on the national occupational standards and are appropriate to the learning and specific local labor market requirements. The strategy has thus moved away from prescribing national curricula. TVET providers are responsible for the design of their curricula responsive to their target group's needs. The TVET strategy foresees that the curricula development will benefit from input from local/regional TVET authorities and be designed in coordination with local TVET Management boards comprised of public and private actor representatives. In addition, sector skill councils, comprised of TVET institutions, private actors in the sector, and other relevant actors, are also expected to provide input to the curricula to meet sector-specific skills demands.

The employer mentioned challenge with regards to skills education is that it lacks practicing skills with new technologies. The lack of practical skills taught is due to limited infrastructure/resources, and also due to trainers' limited practical skills. Most current initiatives lack on improving practical skills education and aligning practice to labor market demands through partnerships with the private sector. However, in addition to lacking practical experience, the current skills education typically does not emphasize work readiness and business skills.

Individual trainers and/or institutions are mandated to develop curricula and learning materials (TTLM) for occupation skills they train in TVET Strategy Plan. Significant differences in the competence of trainers would create significant differences in the quality of the curriculum and learning materials they prepare for the respective TVET institutions. Thus, in absence of a standardized curriculum and learning materials, it is difficult to deliver comparable TVET programs across the country and to train an envisaged competent, motivated, and committed skilled workforce.

The other gaps that were mentioned by KIIs were the current curricula are not in line with labor market needs. To develop labor-market responsive curricula, the private sector needs to be activated to be involved in curriculum design as well (in addition to playing a role in cooperative training/internship/apprenticeship). However, as per the interview of TVET agency the private sector actors were often reluctant to be involved in EOS development and cooperative training. Indeed, the industry was invited to participate in the EOS development; however, they were not actively engaged as they were busy with their day-to-day activities. Due to this the current curriculum still lacks the current need and demands of the market. The following are the general mismatches of the existing curriculum; EOS and education system mentioned by trainers and department heads:

- ✓ Different curriculum and teaching materials among TVET colleges
- ✓ Lack of local contextualization of the curriculum
- ✓ OS and curriculum don't consider the resources
- ✓ High imposition/domination of other countries curriculum and lack of local context
- ✓ Lack of industry extension support service where TVET provides technical support for the industries.
- ✓ The curriculum and OS focused on import substitution not local and cultural products
- ✓ Redundancy of course among levels. For instance, Work with others (level I) and work in a team environment (level II)
- ✓ One of the government college and catering departments lacks dedicated software for the training of hotel booking and reservation courses. They are using private training colleges facility
- ✓ Outdated OS which was developed in 2012(ten years back) and lack of regular update on the OS

- ✓ Lack of standardized training inputs and machines which create deviance among graduates of different institution
- ✓ Lack of standardized TTLM and limited capacity of trainers to develop TTLM
- ✓ The government expects the curriculums and training institutions to develop materials that reflect local needs and environments. However, some of them are copied from other countries.
- ✓ Ever-changing curriculum development affected the training materials preparation.

The department head of hotel said:

> *"TVET institutions have indeed adjusted their curricula based on the national occupational standards, but that, in the meantime, the occupational standards were adjusted by the Ministry of Education, leading to frustration and affecting resource utilization at the TVET institutions. This is mainly because EOS also doesn't consider the available resources and infrastructure of the TVET colleges and lacks resources to fulfill the infrastructure need based on the EOS. The other issue is there is a mismatch between current EOS and the market need."*

According to the report of Vice-dean:

> "*There is no national update curriculum related to the industry in the country. The training is not fulfilling the current market need of the industry. The quality of training system in TVET College has a problem such as a grading system, management system, has no resource, etc."*

The department head of hotel said:

> *"The curriculum is there even though the quality of its development is still arguable. Most of the time we witness that curriculums are directly derived from other developed nations and are implemented in the system with no regard to the actual context that we are currently in. There are many gaps even in implementing the existing curriculum with all its flaws. I don't think that we currently can implement it. Moreover, I attribute the major gaps to a lack of evaluation and monitoring. The general college structure by itself is not well arranged to monitor and control quality. There is no framework where one could evaluate and grade students wholly. A trainer could simply assign a given task and grade students based on that one task and there is no way to monitor such*

misconduct. The curriculum is there but it doesn't take the general context into account. We can also ask if the curriculum was designed by professionals who know the industry very well".

The trainer of hotel said:

"Materials have to be modernized; trainers have to break loose of their old habits of teaching to change people's attitudes. Trainers, on the other hand, have to upgrade themselves and the industry needs to employ MA, Ph.D., and other dignified professionals. As a result, quality will increase hence attitude change."

As of the implementation of the new TVET strategy, however, it has been envisaged that the preparation of curricular materials at a local (institutional) level than at the center not only renders faster and better responses for local problems but also enables to change local knowledge and resources into developmental objectives. Thus, to provide higher quality TVET to their specific target groups, curricula are prepared locally to focus on the specific requirements of the target groups which by itself are the reflection of the specific local labor market requirements. The benchmarks for the preparation of the curricular materials are the occupational standards prepared at the central level by the Federal TVET Agency and with the involvement of relevant stakeholders that have adequate understanding and knowledge in the world of work (MoE, 2008). These days, accordingly, each training institution is accountable for the prescription or development of curricular materials based on the centralized occupational standards.

4.4. Teachers' Participation in OS Development and Implementation

As a main key stakeholders' participation of teachers in the development of their respective OS is important. However, TVET trainer participation in OS development and implementation process/discourse was not significant. According to respondents, well-experienced TVET teachers were considered more as implementers than developers at the time that EOS and other documents such as TVET strategy were introduced. Those who were assigned on political merit than experienced TVET teachers participated in OS development. Involving teachers from the inception to the implementation stage of innovations such as OS and curriculum is imperative as their involvement influences their attitude and motivation to work in a challenging situation. The other gap of the OS is the lack of regular updates (it was developed ten years) based on the market need. Since occupations and their specific characteristics change over time and Occupational Standards

should be reviewed and adapted accordingly within the process of OS revision. Curricula need also to be revised to continuously reflect "up to date" occupational requirements.

According to the report of furniture department head:

> *"I have been in the sector for the last eight years in different capacities. However, I don't believe the OS development was participatory enough with a good representation of TVET trainers. Whenever there are workshops, meetings, and events, it is the deans who attend the session"*

The TVET agency curriculum and development team leader said:

> *"The direct participants in TVET curriculum development are industry experts who have know-how about each occupation, employers who can serve as main sources of labor demand analysis, regional TVET authorities and TVET providers, and trainers. However not all the TVET trainers were participated directly or indirectly on the review process. We have a plan where TVET trainer can discuss at college level and identified gaps and send the comment through the representatives at the time of EOS and curriculum development"*

4.5. Leadership and management style of the TVET sector

According to TVET trainers, TVET systems management is currently highly centralized. The various TVET colleges do not have much autonomy, are subject to system rigidity, and cannot exercise programming decisions requiring localized educational leadership. The following are some of the gaps that are identified:

- Poor procurement system in where they require quantity with required quality is not delivered on time. Due to this some of the courses are facilitated with our practice and some of them are compromised. Even the procurement system affected the COC exam where COC exams are frequently rescheduled till the required input is procured.
- Autocratic leadership style of the deans and lack of TVET specific knowledge of the TVET dean.
- Poor relationship of TVET teachers and deans and TVET
- Lack of proper incentive mechanism and performance evaluation system for TVET staff.

The department head of garment said:

> *"Most of the TVET deans are appointed by their political engagement not by their education background. It is common to see deans who came from other sectors without an understanding of the sector. This highly affected the teaching and learning process of the sector"*

4.6. Lack of quality assurance system

Quality Assurance for education is the process of monitoring and assessment in line with defined requirements. The quality assurance system helps an institution gain confidence in its quality and gain an increase in public trust. Quality in Technical Vocational Education and Training (TVET) refers to three aspects: TVET qualifications, courses/curriculum, and providers. Neither internal nor external quality assurance on the curriculum, training facilities, trainers, etc is available on the government TVET colleges. The majority of respondents said that there is a quality compromise of the TVET program.

The employer of Haile Hotels and resort said:

> *"The sector of TVET program is improved and new fields are being introduced. However, the quality has not improved as much as it needs to. For example in technical area. We once had a desire to employ level-II mechanics but candidates lack adequate technical ability. They have all the necessary theoretical understanding but they have limitations when it comes to practical skills."*

The employer of Momona Hotel reported that:

> *"The TVET program is good but most of the students know the theory parts. They have poor performance in practice."*

The above point indicates that lack of a quality approach can influence the skills of TVET students, and a learning process that reflects a teacher-centered and content-focused approach could be an obstacle to skills.

As indicated in the literature review, the quality of teaching staff is critical to effective curriculum delivery across all types of institutions. In the absence of sustained attention being paid to the improvement of TVET teacher quality, the potential effectiveness of TVET reforms

will be severely compromised. Other problems which have negatively affected the quality of TVET training are lack of TVET institutional autonomy, inadequately qualified teaching staff, low funding levels, absence of technical teacher training college, lean management and governance structure, and the non-existence/unavailability of recruitment policies (MOEST, 2009).

4.7. Image of communities towards TVET program

A common barrier for helping a TVET system to realize its full potential is the social image of TVET as a national education system sub-sector. TVET suffers from a poor social image. It is viewed as a substandard approach to education and training and more suited to those students who have performed poorly in academic school education. In this context, vocational education and training is considered as a deficit form of preparation for the world of work and indeed, is often regarded as education for dropouts. According to TVET trainers, families want to see their children complete grade 12 or preparatory school education and then enter a community college or university, not TVET. Some college trainers also viewed TVET as a low-status alternative to college-preparatory education. This influences the trainee's motivation and commitment to attend the TVET program seriously.

The employer of Bemnet Bar and Restaurant said:

> *"The community's image to TVET is so much is weird. If trainees going to learn TVET programs, many people think that they are failures or got nothing in life"*

The graduate of hotel trainee said:

> *"Some members of the society/community believed that no need for training or education to be a waitress or hostess.* ***The community considers us (waitress or hostesses), as the person who only waits tables and makes beds.*** *The fact is not this one. Even I may give you my testimony. This negative perception I have encountered from my family members and I feel sad about the way they perceived the TVET program."*

The department head of garment said:

> "*Most of the students came to our college with low commitment, satisfaction, and interest. Most of them considered TVET as a rehabilitation center for those who did not succeed with preparatory and higher education. They expressed in Amharic as* ***"ማጉማ- የማትሪክ ጉዳተኞች ማገገሚያ".*** *There should be an awareness creation session at the secondary school level so that students understand the importance of TVET"*

The department head of hotel said:

> *"The community assumes that TVET is less valuable than other higher education programs. They assume that* ***TVET is a collection of students that are ineligible for higher education****. In my opinion, this perception is very wrong. Because I know, TVET professionals who changed their lives and the lives of others far better than other higher education graduates. I can be an example of this. Higher education focuses on building theoretical understanding whereas, TVET is more practical. I think the new education roadmap will solve this misconception as all students will get to go to either TVET or other higher education after completing grade 12."*

The trainer of garment said:

> *"There is this misconception that TVET is a collection of students who are ineligible for other higher education institutions. The community assumes that students are training at TVET centers because they failed. Moreover, there is this back warded misconception regarding handymen. Similarly, even trainees have a difficult time accepting the level and importance of TVET. We have this trend that we desire office work rather than labor works."*

According to the report of furniture department head:

> *"Students at elementary and high school used to think that TVET is useless, like something you learn rather than sitting at home idle, something that gets you nowhere…because I heard some people saying* ***"ባጣ ባጣ ሙያ ሉላጣ"***

This finding is supported by a study conducted in Nigerian public; people still prefer to go about looking for white collar as a result of low status associated with vocational education (Gambo, 1980). Some parents want their children to be medical doctors, accountants, lawyers, administrators, and politicians because the negative attitude toward TVET accounts for the decline and lack of interest by the students in the teaching of education in schools.

4.8. Dropouts

Dropout is considered a serious problem for two reasons. First, dropout reduces the number of individuals who complete upper-secondary TVET. To the extent that the goal of economic growth and poverty reduction requires individuals to complete (and not just attend) upper-secondary TVET, dropout undermines the goals of policymakers. Indeed, retention is considered a key metric in evaluating upper-secondary TVET (UNESCO, 2012b). Second, the fact that families are withdrawing their children from upper-secondary TVET suggests deficiencies in TVET value-added. As per the interview of the trainees, graduates and trainers mentioned that the main reasons for dropping out of TVET trainees are:

- Poverty, family breakdown,
- Eager to get earning or job at a lower level
- Parents' low level of education
- Engagement in an unprofessional job or income-generating activities
- Perception of trainees and family towards TVET (TVET is considered as a stream for low performing students)
- Pregnancy
- TVET College location
- Absence of guidance and counseling services at the time stream selection and training
- Inadequate supply of instructional materials and facilities
- Less trainers' encouragements
- Trainee absenteeism

The trainee of furniture said:

> *"There were many dropouts, especially at level-I. Even though I don't exactly know the reasons beyond, I assume that they drop out because they initially have low interest in training "*

The graduate trainee of garment said:

> *"Many have dropped out due to various reasons. Some of the dropouts started jobs while some got bored and frustrated. However, few of the dropouts wanted to resume their training".*

The department head of hotel said:

> *"There were few dropouts and I think the reason was the COVID outbreak. From level 2 and up they will either graduate or continue their training to higher levels. But level-I student can easily change departments, start work or drop out when scenarios like COVID happen. Some students might have financial problems so that they will be forced to drop out. To tackle this problem, our department provides support in helping them get jobs to sustain their life and continue their training. We have done quite well to minimize the number of dropouts. As a result, more than 95% of our students continue their training".*

The TVET agency curriculum and development team leader said:

> *"There might be many factors for dropping out. Some trainees finish level-I and level-II and they might get jobs while they were on cooperative training. We have agreed with factories that trainees have to finish their training before they were recruited. Other students may shift to other sectors or other schools."*

The consequences of frequent absenteeism lead to technical and vocational education and training college students to leave schools early. In TVET institutions, students are pushed by the schools out by the level of absenteeism. Low levels of academic achievement and high absenteeism are the strongest behavioral predictors of dropout (Strey, 2001).

On the other hand, research also shows that students who are less academically engaged-cut class, are absent, and have discipline problems in school are also more likely to drop out. Related

to this, it is noted earlier that students' willingness to direct efforts toward learning and performance on academic tasks· is one of the reasons for students' academic difficulties that drive within the school system. Similarly, Fine (1986), asserted that many dropouts attend schools with conditions that could affect their performance in school and ultimately their decision to leave. Based on the above understanding, in educational institutions like TVET, where the delivery system is characterized by low-quality and inefficiency, the impact of absenteeism towards increased dropout rate is viewed as a critical problem. The result is in line with the above arguments.

4.9. Gaps in cooperative training

The TVET system in Ethiopia aims to emulate cooperative training or apprenticeship-based system. TVET trainees in Ethiopia have to apprentice 70% of the time spent in the program. TVET colleges are tasked by the government to identify potential employers who can provide apprenticeship experience for the TVET trainees. TVET institutions benefit a lot from cooperative training. Firstly, the trainees are more motivated to study, and they learn more easily since they are aware of what they are learning for and how they will apply theoretical concepts in their practical work. Similarly, cooperative training helps trainers to remain up to date on working technologies and processes and methods used in enterprises. Furthermore, cooperative training contributes to the improvement of the training quality and outcomes. Finally, instruments for expensive laboratories and equipment at training institutions can be reduced if most practical training takes place in the enterprises rather than at the training institutions. The following gaps were identified through the study

- The industry /private sector is not well-developed or reluctant to engage TVET trainees in practical work
- While identifying and engaging employers in certain industries has been successful, it appears that other companies resist this practice and see TVET apprentices as a burden.
- The industry /private sector is not well-developed or reluctant to engage TVET trainees in practical work
- Lack of incentives for the industry to accommodate cooperative training

- The credibility and fairness of the enterprises' assessment of trainees are questionable because most of the enterprises said that the trainees had mastered all competencies (scoring 100% in all competencies), which is unrealistic.
- Industry' concerns: disturbance of production while trainers spend their time on training and lack of quality in production as the new trainee learns how to do the job. Also, it leads to lower productivity while the trainee is acquiring new skills, and additional time is spent while supervising training.
- The interest of the industry is to assign the trainee on labor work, not on the practical sessions. Similarly, Production equipment may be damaged or improperly handled by inexperienced trainees, and additional equipment is needed for training in order not to disturb the regular production. In addition, the industry is concerned about any accident and hazards that happen on the trainee and long training periods may make enterprise participation costly
- Poor ethics and behaviors of trainees at the time of practice
- Lack of database for actual and potential industries for cooperative training
- Difficulty to handle or operate new machines and environment in the industry
- Lack of fair evaluation/grading of the trainee by the industry
- Less supervision of the cooperative training by the TVET trainers due to shortage of logistics
- Fear of the industry for material wastage, machine damage, hazards, and risks on the trainee
- Lack of confidence and trust in the trainees
- Lack of professional industrial trainers.
- Most of the TVET trainers do not prepare and submit the training plan for cooperative training to the industries.

The department head of garment said:

> *"Memorandum of understanding between the industry and TVET is important. Thus cooperative training will enable us and trainees to get the overall feel of the technology out there. Cooperative training will provide a chance for trainees to experience a new technology that is not available at college. Some organizations are kind enough to take on our students and give them proper support while others refuse to help us. Either way, cooperative training is the best way we get to*

experience the ever-changing technology. The training cannot be done at the college level only. Trainees must get the cooperative training experience."

The TVET agency curriculum and development team leader said:

"Companies will provide on-job training as soon as a new employee joins. Some time ago we had a meeting with a garment company. There was a Chinese manager who was training employees on new machinery. Cooperative training will also help in this regard"

The trainee of hotel said:

"Most hotels that we went to considered us to be there to give their employees some leave."

The trainee of garment said:

"We have seen and learned things that we normally don't learn at college. We have benefited a lot from the experience."

This finding is supported by the document of (UNEVOC, 1997). They are deficient in both theory and practice. The trainers themselves are graduates of institutions that are not yet efficient. There is a gap between what they were assessed for and what they are training. Currently, efforts are being made to enhance their skills by providing them, training on pedagogy and their respective occupations. In addition, training is conducted by experienced trainers and industrial exposure is being taken as one way of capacity building. In connection to the above-stated finding, UNEVOC (1997: 71-72) emphasizes that the successful implementation of TVET programs very much depends on the availability of well-trained and experienced TVET trainers. A major constrain in the rationalization of curricula in Africa has been the lack of such personnel. In several areas, due to low pay, it has not been possible to attract the right trainers to these areas as most qualified TVE professionals.

4.10. Poor Infrastructure

Learning environments are sometimes not suited for the equipment needed and activities that must take place. There are few instances where training and assessment, leading to recognition of skills, is undertaken by trainees in real or very closely simulated workplace environments. The poor quality and function of learning environments (classrooms and workshops), shortage of computer and laboratory room, hotel set up training facilities standardized workshop and equipment among TVET College of many TVET centers is a significant impediment to the introduction of new and up-to-date courses of study backed by the required tools, equipment, and machinery.

The study identified the following infrastructure gaps for the three sectors

- Lack of new technologies, modern equipment, including hand tools, power tools, etc.
- Below the standard workshops (old and less furnished)
- Due to shortage and delay of input, most of the courses are thought theoretically
- Lack of standardized workshop and equipment among TVET colleges creates differences at the time of COC examination
- Frequent power interruption
- As much as there are workshops of training institutions that are in good conditions and useful, there are old, dilapidated, and/or low standard ones that require much maintenance or rebuilding measures though many are still in use.
- Perception of the trainees: E.g. Furniture making is for Males, etc.
- There are institutions with shortages of workshops as well as workshops that lacked safety features, latrine, water, ventilation, training manuals, tools, and equipment.
- There are also machinery and equipment that never gave services due to wrong procurement measures and other challenges.
- Lack of hotel set up training facilities
- Lack of access to the internet
- Shortage of computer and workshop rooms
- Lack of backup generator fuel

The TVET agency curriculum and development team leader said:

> *"The first one can be the technology gap. When new technologies arrive, trainers need to train on that specific technology so that they will give up-to-date training. At a university level professionals will only acquire theoretical knowledge and they need to have the practical skill before training students. For example, there was this garment software that was not available to all colleges even when it was mandatory to use for training."*

The department head of garment said:

> *"There are gaps regarding infrastructures. For example, if we take the Garment department, we have many students at all levels both short-term and regular. We give adequate and quality training with all its flaws. But when it comes to facility and training equipment we have challenges accessing them when we need them. The OS has stated specific standards but our economy doesn't allow us to have all the facilities the standard requires. on level-I and level-II I think some contents should be deducted rather than added. For example, level-I trainees are forced to complete too much content. Instead, it should be introductory. The problem includes broad contents, material shortage. Moreover, sometimes there is repetition and copy-paste. Some contents didn't consider the level. For example, you might find a level-IV content at level-I."*

The trainer of hotel said:

> *"Nowadays equipment is being bought but in the past, we were only told that we will know about the equipment when we join the work environment. There is still a lot that needs to be done in this regard. Access to adequate and timely equipment will help teachers and students learn better and productive. Even though there is some equipment available, they are not enough considering the number of trainees."*

Many of the respondents including those in management observed that lack of resources is one of the hindrances to implementing TVET policies and procedures that would help to ensure and assure quality training. The resources available do not match with trainee enrolment and this

makes the institutions unable to adhere to and implement policies necessary for assuring and ensuring the quality of training. The findings discussed suggest that TVET institutions have inadequate resource requirements for training and this poses a challenge for effective implementation of quality assurance systems in TVET institutions.

CHAPTER FIVE: SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This chapter consisted of three parts. The first part dealt with a summary of the major findings of the study. The second part presented conclusions drawn from the findings and finally presents the recommendations forwarded based on the conclusions made encountered in Skills' mismatch in the training content in selected TVET colleges**.**

Summary of findings

This chapter focused on the findings of the qualitative with the literature in other to bring out the comparative and the differences out from the findings. The other factor that has contributed to the issue of skills mismatch found wanting in technical college graduates is the lack of materials and equipment's which all were identified from the literature review. Another point is the research was set out to identify how employers perceive technical college graduates' skills and abilities in the workplace. Moderate gaps were found among the desirable skills needed by the TVET. Skill mismatches were also found in the skills gap analysis conducted on the top/low-level skills, rating of graduate demonstration, skill acquisition, and importance of skills needed in the industries.

The study has been conducted with the aim of skill mismatch in technical and vocational education in government TVET colleges in Nifas Silk Lafto Sub-city of Addis Ababa. Two Government TVET Colleges in the Sub-city were sampled for this study. This study employed a qualitative method. Specifically, interviews of thirty-two among TVET graduates, trainees, trainers, department heads, vice deans, deans, Addis Ababa TVET agency, and employers were selected from the TVET institution provided a data source for developing a deeper understanding of the skills of TVET of trainees.

To attain the objective of the study, the following basic research questions were raised.

1. How do TVET colleges design competence-based teaching-learning materials?
2. What is the current competence status of TVET trainees?
3. What are the attitudes of employers, community, and others towards TVET trainees?
4. What kind of skills (soft or hard) gaps in TVET curriculum and education system?

The data obtained from the interview were analyzed. Depending on the results of the analysis made, the following major findings were obtained and summarized as follows:

The design competence-based teaching-learning materials

Drawing on (integrating) the theoretical background on TVET, this research tries to identify the interventions and assumptions that underline the design of the system and to evaluate it in light of the theoretical principles of TVET. Based on the analysis, this research has identified various government interventions and assumptions under regulatory, framework (Qualification Framework, Occupational Standard, Management and Financing, accreditation of TVET institutions/programs); curriculum design and organization of instruction-learning. The current OS and curricula are not in line with labor market needs and it is outdated. In addition, high imposition/domination of other countries' curriculum and lack of local context is also a problem, lack of trainers' Participation in OS Development and Implementation and Lack of Standardized curriculum and learning materials makes it difficult to deliver comparable TVET programs across the country and to train an envisaged competent, motivated and committed skilled workforce. Based on evaluation of the design of the TVET system in light of certain theoretical principles of TVET. TVET system is (on paper) outcome-based. Whether the interventions and assumptions underlying the promised results in yet to be evaluated through upcoming research.

Current competence status of TVET trainees

The results show that competence-based TVET is practiced in the TVET system in Ethiopia and that this is recognized by trainers and trainees. The Ethiopian TVET system is therefore between "partially competence-based" and "largely competency-based" levels of realization. A positive relationship between the 'competitiveness' of a TVET program and graduates' job performance in employment has also been observed. Most of the TVET trainers also lack industry experience, despite it being set as a mandatory requirement. Additional challenges such as an unattractive work environment and retention of TVET trainers. TVET programs did not address actual competence needs in the economy, with most programs of low quality and theory-driven due to resource constraints and lack of skilled TVET trainers in Ethiopia.

The attitudes of employers, community, and others towards TVET trainees

Technical and vocational education and training TVET has a key role to play in the international education agenda, as outlined sustainable. The importance of TVET is increasingly recognized in international discourse and policies, the image of the TVET can be quite challenging when compared with other educational pathways such as higher, academic education. Low image of communities towards TVET program where TVET is a sector where it is a place for poorly performed students in an academic school. Even in countries where there is a high-quality TVET system, many trainees continue to prefer to go follow the academic education track as their first choice. The low image of TVET is therefore a universal concern.

Skills gaps in TVET curriculum and education system

From the study finding, adequate skills are required in preparing TVET graduates to fit in today's workplaces. The majority of them agreed that the current OS and curriculum has major gaps in hard and soft skill. However, the gaps in the soft skill of the trainees are considerable compared to the hard skill. This skill mismatches study also found that soft skills needed include customer handling, communication skill, work ethics, and professional ethics, working with others, team leading and teamwork, cooperation, business know-how, problem-solving skills, business attitudinal skills, and time management are the main skill that has to be strengthened across the three streams. Interviews with key informants confirmed that practical skills need to be practiced more in TVET education and that soft skills, life skills, business skills, and entrepreneurship skills were often completely lacking. However, informants also highlighted that improving skills education alone will not lead to better job opportunities. There should be a real behavioral change among trainees which should be built up starting from the lower class. Participants emphasized the importance of private sector development, decent work efforts, and private sector engagement in cooperative training. Trainees believed that the most important way to transition from school to work is through connections between their TVET institutions with a future employer, particularly through practical experience in the form of cooperative training.

Conclusions

Based on the findings of the study, the following conclusions are drawn:

The finding of the study shows that in the TVET institutions there are problems with facilities, quality of the curriculum, competency of trainers, practical skills, and linkage of TVET and industry. In this study, the research identified key gaps in trainees, trainers, TVET agency, industry (employers), and community perspective at large. There are significant gaps between the skills provided by the TVET institution and those needed by employers. This is especially for computer skills, problem-solving ability, the capability of communicating in speech and writing, reasoning skills, customer services, and time management. This study focused on the perceptions of employers and recent graduates to determine if adequate preparation is being provided to the Addis Ababa TVET Agency. The findings of the study identified several deficient areas. Through these deficiencies, it is clear that the skills that employers desire are not being learned and practiced by graduates while they are in TVET College. The research finding indicated that lack of adequate cooperation between the TVET institutions and the industries to implement the TVET program effectively. As a result of this, graduates were not getting appropriate training during (cooperative) internship training, which in turn may have a significant negative impact on the development of trainee's practical skills and competencies. The following are forward recommendations for Addis Ababa TVET Agency, TVET Colleges, and Employers:

Recommendations

The following are forward recommendations for Addis Ababa TVET Agency, TVET Colleges, and Employers:

- **Curriculum and EOS revision:** there should be a curriculum revision to reflect the current dynamic change in technology, economy, and socio-cultural issues. The revision should support by proper national gap assessments, tracer studies, and other consultative meetings for the curriculum revision. Though this gap assessment is meant for the three sectors, based on the interview of key informants the gaps are also common to other streams.
- **Pre-vocational training**: A pre-vocational training program phase should be added to each TVET center. A pre-vocational period usually occurs at the front end of a TVET program. Pre-

vocational training is designed to assist trainees in making a logical career choice based on their abilities, interests, and opportunities in the labor market. Students in pre-vocational training will receive assessments of their basic skills and ability to learn, as well as their best modalities for learning. This alleviates students being dumped in training only because there is a slot or a need to fill a class. Students who have input into their choice of vocation usually stay engaged and work hard to graduate.

- **Guidance and counseling**: Training institutions should consider establishing career counseling and placement departments to assist graduates in finding employment and to monitor and track the transition of trainees from college to work.
- **Advocacy on TVET programs to the community:** Community members have a negative attitude towards TVET; it is mostly considered relevant to persons who have failed and have no option of advancing their education. There is a need to sensitize the community on the need for everyone to access TVET regardless of gender, class, ethnicity, disability, or any other social factors.
- **Awareness creation to Trainees**: It would be advisable to use different systems to initiate students to raise their interest and motivations towards TVET such as giving guidance and counseling information and advice, and teachers' orientations about diversified fields and job-creating opportunities in TVET beginning at lower grades. In addition, at all grade levels, providing educational tours and making students visit TVET institutes and their general activities will make students have insight into TVET.
- **Awareness creation for community**: community undermines and down look the status and prestige of TVET. It is the extension of society's low status and prestige outlook of TVET. So, to alleviate this problem, there is a need to orient the community about the use and role of TVET in building the country by using various communication systems like mass media, conferences, and exhibitions. There is a need to disseminate the essence of TVET in society. Otherwise, these observed problems will be steadily continued
- **Experience sharing:** Instructors and deans should participate in an exchange visit to other TVET colleges that are well developed and operating successfully. In addition visit to industries to learn from the changes in technology is also important for instructors to guide students.

- **TVET industry linkage:** TVET should establish links with local industries and find out ways of coordination between the TVET programs and employers' requirements. This kind of coordination will undoubtedly, enhance future employment opportunities for the students enrolled in TVET.
- **Equip institutions with the necessary educational facilities**: The availability of educational facilities and infrastructures is essential to improve the quality of education. Thus, the management of government TVET colleges should equip their institutions with the necessary educational facilities by allocating more budget funds. As they are the most important substances of quality in education, curricular/instructional materials should be fulfilled by preparing and purchasing, TVET Colleges to give quality training at a different level.
- **Public-private partnership:** Exploring Possibilities for Public-Private Partnerships to set up Industry-based TVET Institutes which could be jointly operated/managed by industry and government. TVET institutions were working in collaboration with industries for cooperative training at an expected level to materialize the already designed strategy of cooperative training. Therefore, the TVET agencies should have to devise and develop sound short-term and long-term training as to how to bring TVET institutions and industries for cooperative training to the playground.
- **Linkages with the labor market:** The study established that the labor market linkages are not fully developed in the study sites at the moment. Thus, the need for TVET institutes to be encouraged to strengthen linkages with the private sector to ensure that they offer courses that have demand in the labor market. Proper cooperative training programs need to be developed to ensure that TVET trainees acquire relevant skills from programs need to be developed to ensure that TVET trainees acquire relevant skills from the program. Likewise, the private sector should be involved in all stages of the training to promote the effectiveness of the TVET training program. One of the major challenges in the present time is the rapid increase of unemployed graduates in Ethiopia in general and in Addis Ababa in particular. Thus, expanding the job opportunities by diversifying and developing the manufacturing sector of the economy is very vital.

Recommendations for further research

- This study focused on a specific population of graduates, TVET trainees, trainers, Addis Ababa TVET agency, and employers from the selected TVET Colleges in Nifas Silk Lafto Sub-city, Addis Ababa. As consequence, the findings may not be generalized. Therefore, further studies using larger population groups, covering a greater geographic area, and including different departments or disciplines will be necessary to provide more in-depth insights into the TVET program to attribute their skills.
- More research should also be conducted on how the teaching and learning process is integrating employability skills may result in the enhancement of employability of graduates.
- Future research should target a large population involving other regions in Ethiopia. It would be better if more researchers could be involved to conduct a comprehensive study and identify the major factors that influence graduate employability skills.

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Appendix

Addis Ababa University

College of Education and Behavioral Studies

Department of Educational Planning and Management

An investigation of Skills' mismatch in Technical and Vocational Education in TVET Colleges of Nifas Silk Lafto Sub-city, Addis Ababa

This interview is designed to gather information on "Skills' mismatch in TVET colleges in Nifas Silk Lafto Sub-city of Addis Ababa". **The purpose of the study is to fulfill a thesis requirement for the award of the degree of Masters of Art in Educational Planning and Management (EdPM) at Addis Ababa University.**

The main objective of this research is to assess major TVET skill mismatches to review and recommend a clear idea of what skills and qualifications are needed in the workplace (focusing on soft and hard skills), inclusive and enriched level I, II, and short term module to the competence-based TVET curriculum; to ensure skills training programs are relevant and satisfy the quality of requirements of the labor market in Hotel, Garment, and Furniture sector.

I would greatly appreciate your help in responding to this interview. The interview will take about 50 minutes. Would you be willing to participate?

Thank you so much!

Appendix 1: Interview questions for TVET Colleges trainers, department heads, vice-dean, dean, & TVET agency

Interview profile

Name

Sex

Age

Name of Organization

Department

Work experience

Educational qualification

Position

Contact address

1. How do you see the current TVET level I, II and short term Education in Ethiopia? (prob:, quality of training, infrastructure, employable skill and graduates competence etc.)
2. What are the main gaps of the current TVET level I, II and short term Education in Ethiopia? (prob: Curriculum issue, quality of training, quality assurance, infrastructure, employable skill and graduate's competence etc.?
3. What kinds of skills (soft or hard) are required from level I, II and short term?
4. What kind of skills (soft or hard) are gaps on contents of TVET education in your sector?
5. What should be done to fill the above skills (soft or hard) are gaps on contents of TVET education?
6. What lacks in the current TVET training in your sector to fulfill skill requirements of employers?
7. Do you think the current Level I, II and short term TVET training programs are relevant and satisfy the quality of requirements of the labor market in your sector? If not what are the main problems?

8. Can you please suggest the methodological inclusions and content enrichments TVET trainings could solve competency problems of trainees in your sector?
9. What are the current TVET curricula (level I, II and short-term training) content gaps to produce competent graduates, in order to align with current employers needs for the following sectors? (prob: infrastructure, HR, capital, etc.)
10. What are the requirements for TVET College to provide training for the following sectors? (prob: infrastructure, HR, capital, etc.)
11. Which sets of generic skill are acquired during training and internship sessions?
12. Did you participate in the design of OS, competency-based teaching-learning materials?
13. How do you describe the image of communities toward the TVET program?
14. How do you see cooperative training? Is there a gap in cooperative training?
15. What are the main reasons for dropout? What makes students become dropout from the perspective of teaching, job opportunity, and acceptance in the community
16. In general, what do you suggest/ should be done to overcome new applicants' deficit in basic skills in the future?
17. Any point you will describe at the end (I mean points not discussed during our interview sessions and things you will be added more). If not Thank you!

Thank you so much!

Appendix 2: Interview questions for employers

Interview profile

Name

Sex

Age

Name of Organization

Work experience

Educational qualification

Position

Contact address

1. How do you see the current TVET level I, II and short term Education in Ethiopia? (prob:, quality of training, infrastructure, employable skill and graduates competence etc.)
2. What are the main gaps of the current TVET level I, II and short term Education in Ethiopia? (prob: Curriculum issue, quality of training, quality assurance, infrastructure, employable skill and graduate's competence etc.?)
3. What kinds of skills (soft or hard) are required from level I, II and short term?
4. What kind of skills (soft or hard) are gaps on contents of TVET education in your sector?
5. What should be done to fill the above skills (soft or hard) are gaps on contents of TVET education?
6. What lacks in the current TVET training to fulfill skill requirements of employers?
7. Do you think the current Level I, II and short term TVET training programs are relevant and satisfy the quality of requirements of the labor market in your sector? If not what are the main problems?
8. Can you please suggest the methodological inclusions and content enrichments TVET trainings could solve competency problems of trainees in your sector?

9. What are the needed requirements from trainees, trainers and training centers should be fulfilled to alleviate the skill gaps of new employees in your sector?
10. What strategies are you used by your firm to overcome shortage of skills in your organization?
11. Which sets of generic skill are acquired during training and internship sessions?
12. What are the main expectation of trainees on skill and knowledge set up among employers?
13. What skill gaps you observe from new employees in your firm in level I, II & short term?
14. Did you participate in the design OS and competency-based teaching-learning materials?
15. How do you describe the image of communities toward the TVET program?
16. In general, what do you suggest/ should be done to overcome new applicants' deficit in basic skills in the future?
17. Any point you will describe at the end (I mean points not discussed during our interview sessions and things you will be added more). If not Thank you!

Thank you so much!

Appendix 3: Interview questions for TVET Trainees and Graduates in Nifas Silk Lafto Sub-city, Addis Ababa

Interview profile

Name

Sex

Age

Name of your College

Department

Level of Training

Contact address

1. How do you see the current TVET level I, II and short term Education in Ethiopia? (Quality of training, infrastructure, employable skill and graduate's competence etc.)
2. What kind of skills (soft or hard) are gaps in TVET education with the industry?
3. How do you describe the Human Resource Development for the TVET sector?
4. How do you describe the image of communities toward the TVET program?
5. How do you see cooperative training? Is there a gap in cooperative training?
6. Is there a standardized curriculum, Learning guide for Level-I, II & short-term training?
7. Do you think is modern equipment, tools are available in your college?
8. What are the main reasons for dropout?
9. Do you think the current Level I, II, and short-term TVET training programs satisfy the quality of requirements of the labor market in your sector? If not what are the main problems?
10. Any point you will describe at the end (I mean points not discussed during our interview sessions and things you will be added more). If not Thank you so much!