TVET Curricula and the World of Work:A study on the Employability of Manufacturing Technology Graduates from Colleges of Adama, Asela, Ambo and Bishoftu. (Oromia Regional State, Ethiopia).

Endalkachew Woldemariam Desalegn

A Dissertation Submitted to:

The Department of Curriculum and Teachers Professional Development Studies in Fulfillment of the Requirements for Degree of Doctor of Philosophy. (Curriculum Design and Development)

Addis Ababa University

Addis Ababa, Ethiopia

January 6,2018.

Statement of Declaration

I declare that this PhD dissertation entitled “A study on the Employability of Manufacturing Technology Graduates from Colleges of Adama, Asela, Ambo and Bishoftu.’’ (Oromia Regional State, Ethiopia) is my work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Endalkachew Woldemariam Desalegn

Signature_____

Addis Ababa University, 2018.

This doctoral thesis has been submitted by my approval as a university Advisor.

Name: Dr.Teshome Nekatibeb

Signature: _____

Date of Submission: _____

ADDIS ABABA UNIVESITY

SCHOOL OF GRADUATE STUDIES

This is to certify that the thesis prepared by Endalkachew Woldemariam, titled: TVET Curricula &World of Work: A study on the Employability of Manufacturing Technology Graduates from TVET colleges of Adama, Asela,Ambo and Bishoftu (Oromia Regional State, Ethiopia) submitted in fulfillment of the requirements for the degree of Doctor of Philosophy in Curriculum Design and Development complies with regulation of the university and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Ex. Examiner: _____ Signature_____ Date: _____

In. Examiner: _ _____ Signature_____ Date: _____

Thesis Advisor: _____ Signature _____ Date: _____

Chair of the Department and Graduate Program Coordinator.

_____ Signature_____ Date: _____

ACKNOWLEDGMENTS

I would like to express my gratitude to a number of people who helped me in many ways to complete this dissertation work.

First and foremost, I would like to express my heartfelt gratitude to my advisor Dr.Teshome Nekatibeb whose support, scholarly advice, useful comments and feedback, patience, and encouragement helped me in immeasurable ways to complete this dissertation successfully.

Secondly, I would like to thank to Jimma University College of Education and Behavioral Sciences administration, for allowing me to join graduate studies program, and creating conducive conditions to successfully complete my study. Similarly, I would like to thanks to Addis Ababa University administration that supported me financially during my research work.

Thirdly, I would like to express my gratitude to TVET teachers, employers and employees who have participated in this research and provided invaluable insights and information for the success of this study.

My special gratitude goes to my parents and family with whom I have the luxury of sharing this humble achievement. Specially, I wish to express my love and thanks for my wife Mamitu Zewde and my sons Girum, Henok and my daughter Hiwot. I remain eternally indebted and grateful to them for their encouragement, support and sacrifices throughout my long and arduous doctoral journey.

In addition, I would like to express my immense gratitude to the curriculum department and its staff, who generously and genuinely shared time, knowledge and expertise and provided unstinting support.

Finally, this was no solo endeavor, but the product of invaluable knowledge and wisdom passed on to me knowingly or unknowingly by my instructors', relatives, friends and acquaintances through the years, and I thank you all for enriching my life.

Table of Contents Page

List of Tables Page

List of Figures Page

Abbreviations and Acronyms

COC	Center of Competence
ENLC	Ethiopian National Literacy Campaign
EPRDF	Ethiopian People's Revolutionary Democratic Front
ESDP	Education Sector Development Program
ESR	Education Sector Review
ETS	Education and Training Strategy
LMIS	Labor Market Information System
MoE	Ministry of Education
NQF	National Qualification Frame Work.
OS	Occupational Standard
SPSS	Statistical Package for Social Science
TVET	Technical and Vocational Education and Training.
UNESCO	United Nations Educational, Scientific and Cultural Organization.

ABSTRACT

Technical-Vocational Education and Training (TVET) system plays important role in providing highly skilled workforce to fulfill the needs of industries. Today TVET is expected to equip graduates not just with technical skills but also with employability skills, which are increasingly important in preparing them for employment and work advancement. To this end, an empirical research is necessary to identify effective TVET system that can successfully equip students with technical and employability skills that would enable them to fulfill the current work demands and professional expectations. The main objective of this research is to investigate the employability skills of manufacturing technology graduates and explores the factors that influence the transition of students to the world of work. This study used mixed research methods to collect and analyze data. The first part of this study used quantitative method. survey questionnaires was employed and both manufacturing technology graduates (N=300) and employers (N=60) responded to the questionnaires with regard to the employability of graduates. The second part of the study employed a qualitative method. Specifically, interviews of twelve teachers selected from the sample TVET institutions provided a data source for developing a deeper understanding about the employability of graduates. The integration of results from the quantitative and qualitative methods provided in-depth answers for the research questions. The findings revealed that various factors have been identified as the challenges for attaining quality TVET program in Oromia region. Some of these factors are; lack of required facilities, poor funding of TVET program, low capacity of some teachers, lack of adequate practical training, weak relationship between TVET institutions and industries. In addition, the study indicates personal characteristics, parent's attributes and geographic location/ residence of the graduates (as proxies by location of training centers)influence the likelihood of getting jobs within a given period of time following graduation for TVET graduates in Oromia. Furthermore, the majority of the employers respondents agreed that manufacturing technology graduates have problems with the aspect of employability skills. This includes problem solving skills, adaptability skills, ICT skills (mean=2.53),reasoning skills (2.88),and written communication skills (mean=2.83).This finding reveals that graduates may have deficiencies in those skills that requires improvement. Finally, necessary recommendations have been given for enhancing employability skills of TVET graduates.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Ethiopia has a long and rich tradition of indigenous education most notably associated with the Coptic church, which has been a powerful institution in the area of contemporary Ethiopia for over 1000 years (Pankhurst,1974). Until the early 1900s, formal education was confined to a system of religious instruction organized and presented under the aegis of the Ethiopian Orthodox Church. Church schools prepared individuals for the clergy and for other religious duties and positions. In the process, these schools also provided religious education to the children of the nobility and to the sons of limited numbers of tenant farmers and servants associated with elite families of the Ethiopian highlands.Misguided policies caused very few children to receive an education. As a result, Ethiopia did not meet the Educational standards of other African countries in the early 1900s (Damtew & Philip, 2003).

Although, Ethiopia had a long history in art and culture, there was no significant sign of development in science and technology that helped for the socio-economic development of the country (Belete, 1995).The major reason was that artisans and crafts men were relegated to a lower status by traditional Ethiopia for a long time. In society, especially in rural areas potters, black smiths, weavers, tanners were isolated and despised. Some writers on Ethiopia hint out that such negative attitude towards crafts men and artisans probably affected the development of indigenous crafts, thus weakening any technological advances that the country could have made (Wanna,1998).This in turn, has adversely affected the traditional way of imparting those skills to the succeeding generations.

Nevertheless, Ethiopia had recently started endeavoring to change the public misconceptions to change and maximize its benefits from TVET. Accordingly, the Transitional Government of Ethiopia(TGE), which replaced the Military regime, has introduced the Education and Training Policy(ETP) in 1994. This policy gave not only a due emphasis for TVET and the involvement of the private sector in TVET delivery, but also the need for over all partnership in general in implementing the sector(TGE,1994).To this end, TGE declared its commitments as follows: “parallel to general education, diversified technical and vocational training will be provided for those who leave school from any level of education”(TGE, 1994:32).The policy also emphasizes the need for expanding vocational and training facilities, development of relevant curriculum, and improving the standard of trainers.

To address all the problems related with TVET system, the Ethiopian government has been expanding both public and private institutions as well as raising the standard of the existing TVET institutions based on the country's skilled human power needs for the past two decades (MoE, 2008: TGE, 1994). One of the major changes introduced was therefore, the commitment made to utilize both public and non-public resources to expand TVET parallel to the academic education system and supply labor markets with middle level skilled human power.

Moreover, a new mechanism of tackling the problems entangled against the TVET system was also became necessary. To this effect, a new TVET strategy has been developed and adopted in 2008.Its overall objectives is " to create a competent, motivated, adaptable and innovative work force in Ethiopia contributing to poverty reduction and social and economic development through facilitating demand-driven, high quality TVET relevant to all sectors of the economy, at all levels and to all people " (MoE, 2008:12).

However, as different studies and policy documents revealed training programs by TVET providers in Ethiopia are still determined by consideration of supply side. For instance, Ethiopian National TVET Strategy indicates the issue as;

> *The TVET reform process was slow and limited by the fact that all efforts and resources were directed toward the massive quantitative expansion of the public TVET supply. As a consequence the programs, by-and-large, do not address actual competence needs in the economy, with most programs for low quality and theory-driven due to resources constraints and of lack of skilled teachers. A systematic integration of TVET with the world of work has not yet been achieved(MoE,2008:1).*

In a similar way, the Educan Foundation Project (2012) reports some problems as follows:

> *The TVET system in Ethiopia is entangled with a wide spread problem of graduates' unemployment. The attention given in the leadership of the TVET system is much more for enrolment maximization than for the employability of graduates. In other words, the school to work transition services such as orientation, counseling, training on job search skills, employment, referrals and job placement, among the training institutions are in most cases unavailable in many parts of the country. Lacking adequate labor market trend information limits job seeker's ability to discover and learn about the labor market demand and skill requirements (pp.66-67).*

As a result of this, many TVET graduates have not been able to enter in to employment in their respective fields of study. The poor transition from vocational school to work has made TVET graduates to move from place to place for seeking jobs. This trend of affairs may suggest that training

programs offered by TVET probably failed to develop the skills required for employability in Ethiopia in general and Oromia Region in particular.

Moreover, global demands for skills have increased substantially in recent years as a result of technological advances, rapidly changing markets and the intensified global economic competition due to accelerated globalization. To compete successfully in this global competition, producing skilled and competent work force is the responsibility of the education system of every nation.

Technical and vocational education and training is an essential, if not sufficient, condition for the development of the economy and society. It is used to resolve the problem of unemployment by training young people and adults for various skilled and service occupations (FMECG, 1992). As stated in UNESCO/ILO (2002), the education and training system is largely determined by the country's socio cultural, economic, demographic and technological development.

The general objectives of TVET are;

1. To contribute to the achievement of the societies social, cultural and economic development and to greater democratization. At the same time it develops the individual's potential for active participation in the establishment and implementation of the society's developmental goals.
2. To enable people comprehend the scientific and technological aspect of contemporary civilization and to be capable of acting up on it.
3. To empower people to contribute to sustainable development that is sound to their environment through their occupations (UNESCO, 2001: 1).

Curriculum plays a decisive role for implementing the objectives of TVET program effectively. Wentling (1993:14) explains curriculum as:

> *A set of intended training that is planned and directed to attain the desired objectives. In technical and vocational education and training, curriculum should be tailored to the world of work. It should be carefully planned and implemented to satisfy the dynamic and complex labor market demand.*

The effects of globalization present the education and training system; particularly the vocational education and training system, with challenges in providing relevant skills to workers to enable them to be flexible and adaptable in the work place. Ashton and Green (1996:69) assert that modern technologies demand higher skills levels from education and training. The above view is supported by Brown (2001:235) who argues that "prosperity and social justice depend on the creation of a highly skilled work force". This statement implies that the prosperity of any nation depends on the contribution of the education and training sector towards the economic competitiveness of a country.

Buhler (2001:1) posits that, due to the changing demands in the work place, there is also a corresponding demand for new sets of skills, and the emphasis is on 'soft skills', which are generic in nature and are key to effective performance across all job categories.

Similarly, Fallows and Steven(2000)support the above assertion by arguing that due to the economic situation today, new graduates are not only expected to possess knowledge of an academic subject, but that it is equally important for students to gain those skills that will enhance their employment prospects.

According to Atchoarena and Delluc (2002), technical and vocational education systems are everywhere facing challenges to prepare sufficient number of people with the right skills to meet labor market demand. Matching skills, knowledge, and attitude and the needs of employment is increasingly challenging in the current context of globalization and rapid technological change due to the constant transformation of occupations. A critical issue for technical and vocational planners and managers is how to train individuals for further jobs on the basis of information covering past and present labor markets.

The employability agenda has become an important issue among employers and educational policy makers' worldwide due to the changing demands of modern economies. There have been a number of studies indicating the fundamental role that employability plays in organizational life in general and individual career success in particular (Van der Heidje &Van der Heidjen, 2006).More specifically, it has also been established that employability is valuable in the current employment context(Coetzee &Roythorne,2007; Mc Ardle et al.,2007).High employability has also been strongly correlated with positive coping strategies in a high unemployment context(Mc Ardle et al.,2007).

Graduate employability is not only confined to institutional achievement (i.e. TVET).It is rather contingent on a number of other factors such as social back ground, gender, age, career aspirations, work experiences, job search behavior, recruitment mechanism and labor market conditions. These factors have their own effect to facilitate or hinder the pace of graduate transition from vocational college to work.

Therefore, in order to understand the mechanism behind a smooth transition from TVET to the world of work, it is important to identify the gap between the skills required by the employers and skills possessed by the graduates.

Despite an increasing number of studies dealing with the various aspects of employability, the transition of graduates to the world of work has been not properly and extensively researched in

Ethiopia in general, particularly in Oromia. Brown et al., (2003) argues that a major problem confronting researchers is the lack of theoretically informed studies on employability. There is limited research-based data on how best to strategically and practically increase graduate employability (Gore, 2005).As a result, there has been little focus on the generic skills competencies that contribute to one's employability(Mc Ardle et al.,2007).This implies that further research on the issues of graduate employability is very vital and unquestionable.

This study will seek to identify technical and employability skills that are considered important in the job search process and work performance that manufacturing technology graduates should therefore possess when entering the labor market.

1.2. STATEMENT OF THE PROBLEM

The main goal of Technical and Vocational Education and Training(TVET)is to prepare young people with the basic skills and competencies that would enable them to enter in to employment in their respective fields of training. This is possible to certain extent when training institutions are capable enough to develop and implement their curriculum effectively. Though linking technical and vocational education and training with the labor market requirements is generally an accepted principle.

The key to a nation's future economic prosperity depends on the quality of its education and training systems. In line with this objective, the Oromia Regional State has embarked on increasing expenditure on the education and training sector, in order to produce skilled human power for the region.

Despite these efforts, however, evidences indicate there is a growing mismatch between the number of graduates from various TVET institutions and those who manage to get employment or self-employment. There was a serious mismatch between what the educational institutions are producing and what the employers need (Abosetegne, 2000).The report of MoE(2010)which informs that only 20-23% have employment opportunities among the TVET graduates in 2010 is a consistent evidence for the problem is a nationwide.

Moreover, there is also research findings that show issues and challenges of graduate employment. In this respect, the Educans Foundation indicates that,

> *TVET system in Ethiopia is not based on labor market information and hence usually cultivates tens of thousands of graduates that mostly have no chance of employment for many years. This in turn results not only inefficiency among students also wastage of time, energy, and some sorts of other resources among students (Educan ,2012:68).*

As a result of this, the level of TVET graduates competencies is often criticized as in adequate, since the growing numbers of youth are found unemployed and some engaged in unrelated jobs to their field of studies.

When we look into Oromia Regional State TVET institutions, the situations are similar with the country as a whole. TVET institutions in Oromia were working under capacity due to lack of promotion and inadequate funding system. Little attention was given to work related practical training. The quality of training was poor as a result of ineffective curriculum. Weak institutional set up, under qualified trainers, insufficient funding, inadequate training equipment and facilities aggravated the problem of producing competent and motivated work force in the region (OEB, 2003).

The report of Council of Oromia Regional State (2012) and the study made by Jeyilu (2011) revealed the incompetence of trainees and failure to be employed in different public and private sectors and self-employment. As indicated by Jeiylu (2011), a study made in Arsi Administrative Zone in six TVET institutions revealed that, out of 722 TVET graduates, only 128 (17%) of them have got employment opportunity (self-employment, organization in cooperatives, and employment in private and government firms). A similar study conducted by Adama TVET College revealed that only 23.5% of the 2009/2010 graduates have got job opportunity. Also, in East Shewa Zone only 35.3 % of the 2009/2010 graduates were employed in different sectors (Jeiylu, 2011).

From these study reports, it is evident that numerous problems exist within TVET system that adversely affects graduate employability in Oromia Regional State. To this effect, graduates trained in TVET institutions cannot, therefore, be immediately absorbed in to the job market. There is, therefore, a big challenge for the TVET to ensure competencies that graduates require to achieve employability in the labor market.

Similar to all other TVET sectors, employability is a great challenge in the manufacturing industry due to rapid changes caused by technology. With reference to Oromia Regional State, it is well known that majority of Ethiopia's manufacturing industry is located in it. However, there is a very limited understanding and knowledge as to the absorption of TVET graduates and whether employers are satisfied by the skills acquired by graduates prior to their employment in the sector. Thus, there is a need to know the levels of competence that graduate students in manufacturing technology possess during their transition from school to work. Since the level of preparedness of manufacturing technology graduates could affect their employment, assessing whether or not TVET programs are providing the necessary employability skills is critical.

1.3. RESEARCH OBJECTIVES

1.3.1. GENERAL OBJECTIVE

The main objective of the study is to investigate employability skills of manufacturing technology graduates of selected TVET institutions in Oromia Regional State of Ethiopia and explores the factors/ conditions that influence the transition of students from education to the world of work.

1.3.2. SPECIFIC OBJECTIVES

The specific objectives of the study are:

1. To explore the relevance of skills gained in the course of TVET studies for the world of work as perceived by graduates.
2. To find out the employability skills acquired in manufacturing technology by graduates (i.e. 2009-2011G.C) of the sample TVET institutions in Oromia.
3. To identify key employability skills demanded by employers of manufacturing and compared it with acquired skills.
4. To analyze the process of job search that graduates went through in order to join the labor market.
5. To explore the main factors that influences the employability of manufacturing technology graduates of the four TVET institutions in Oromia.

1.4. RESEARCH QUESTIONS

1. How do manufacturing technology graduates of TVET institutions assess the quality and relevance of the training they received during their training program?
2. What are the skills employers look from manufacturing technology graduates? What recruitment procedures are used?
3. How do manufacturing technology graduates seek for employment?
4. What are the factors (problems) TVET institutions face to improve employability of manufacturing technology graduates?
5. How can TVETs enable manufacturing technology graduates to improve their employability?

1.5. SIGNIFICANCE OF THE STUDY

The findings of this research will contribute to the quality of TVET curriculum development, and to the determination of the relevance of the study programs in terms of providing students with skills and knowledge required in the world of work in the field of manufacturing technology. Specifically, the study will be a helpful reference for the development of TVET quality improvements. Furthermore, the result will provide important information to relevant stakeholders in the TVET sector in order to create the TVET stream as a main tool for equipping people with knowledge, skills and competence for their employability in the competitive world. Data in the study will hopefully be utilized for the improvement of curriculum and will also be used to determine areas of weaknesses. The findings can be used as a tool to provide instructors to better master their teaching practices. Hopefully, this study will be a valuable to serve as a supportive document for researchers from different fields of study to use and build their foundational knowledge about the employability of students and relevance of study programs to jobs in industries.

Finally, this study will benefit for TVET institutions that played the major role of nurturing competent graduates before entering into the workplace. By understanding the current needs of current organizational and employment trend that would enhance graduate‘s employability .TVET institutions could increase their institutional reputation and effectiveness by producing competent graduates that could adapt well into the dynamic business environment. Most importantly, the study could help such institutions to produce quality education which could easily train and prepare its respective students into today‘s competitive working world.

1.6. DEFINITION OF TERMS

Competencies: is a collection of skills and abilities that allow the individual to successfully fulfill his/her role in the organization. Competencies include a mix of skills, experiences and personal attributes that enables someone to successfully fulfill a particular set of roles.(Learning and Skill Council,2005a:174).

Employability : Hillage and Pollard (1998:2) extend this definition by arguing that employability is an individual’s ability to gain initial employment, maintain employment, move between roles in the same organization, obtain new employment if need be and secure a suitably fulfilling job. Employability is considered to be the prospect for students to enhance their employment opportunities (Fallows & Steven, 2000:75).

Employability Skills: Transferable core skills groups that represent essential, functional and enabling knowledge, skills and attitudes required by the 21st century workplace necessary for career success at all levels of employment and for all levels education(Overtoom, 2000:2).

Soft Skills: refers to interpersonal qualities and personal attributes such as communication, responsibility, social skills, positive attitude, flexibility, team work, 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, p. 18).

Globalization*:* refers to the integrated economy characterized by free exchange/trade between world markets (Friedman, 2006:6).

Manufacturing Technology: refers to the field of study that equip students with the skills typically associated with accomplishing specific tasks related to machining, general metal fabrication assembly, welding, painting, mechanical assembly and electrical assembly.

Level III Training: focus on middle level manpower training provided for those who have completed general secondary education (i.e. grade 10) and enrolled to obtain diploma upon the completion of the 10+3 of the TVET program.

Technical and Vocational Education and Training (TVET): is used as a comprehensive term referring to the aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of socio-economic sectors (UNESCO, 2002:3).

1.7. SCOPE AND DELIMITATION OF THE STUDY

This study focuses on the manufacturing technology graduates who enrolled and finished their course from 2009 to 2011G.C at the selected TVET institution in Oromia Regional State. Participants were specifically drawn from general metal fabrication assembly trainees (i.e. level III), who graduated from training institutions, and who are currently working in government and non-government industries in Oromia Region.

1.8. LIMITATION OF THE STUDY

The researcher experienced some limitations in carrying out this study. The following limitations had an impact on the study.

1. The findings of this study cannot be generalized to all TVET institutions in Oromia. Data were generated from sample TVET institutions, therefore, the generalization of the results may be considered only for this population.

2. The respondents' rating on each employability skills dimension were specific to the definition of the skill as provided by the researcher and, therefore, may not be applicable to other definitions of the skills employed in subsequent studies.

1.9. ORGANIZATION OF THE STUDY

This research report consist a total of seven chapters. Chapter one: provide an overview of the study and explaining the research problem. It contains a brief introduction of the research; statement of the problem,objectives,significance of the study, delimitation and limitation of the study. The second chapter explains the context of the study. It describes the historical development of the education system in general and TVET in particular. These serve as a contextual basis for the study. Chapter Three: is where past literature concerning the study is reviewed. Its contents include the concept of employability, theoretical models, and factors that influences graduate employability. Chapter four outlines the theoretical and conceptual framework of the study. The next chapter **(**chapter Five**)** : includes the research design, population, data collection methods, sample, and sampling procedure, research instruments, data processing, and data analysis. It also highlights the ethical issues considered for data collection. Chapter Six**:** provides the empirical findings based on the questionnaires and interview analysis and interpretation of the data gathered .The final chapter **(**chapter seven**):** includes the summary of the study, conclusions, implication for policy and practice, implications of the research, and recommendations for future research.

CHAPTER TWO

2. CONTEXTUAL ANALYSIS

2.1. INTRODUCTION

This chapter provides the background and the historical development of modern education, in Ethiopia. Further, it describes the current education system with emphasis to the Technical and Vocational Education and Training (TVET)system. The final section discusses the development of TVET in Oromia Regional State.

2.2. COUNTRY'S BACKGROUND

2.2.1. Ethiopia

Ethiopia is credited for being the origin of humankind. In addition, it is the oldest independent country in Africa and one of the oldest in the world.(MOI,2004:2). Located in the Horn of Africa, it covers an area of more than 1.1 million square kilometers. It has a high central plateau rising up to 4,533m. Two third of the country is estimated to be potentially suitable for agricultural production (AFORDAD, 2006). Out of the total land suitable for agriculture, the cultivated land is estimated to be only 16.5 million hectares (22% of the total). Only 10-15% of the land is presently covered by forest because of rapid deforestation for the expansion of rain fed agriculture over the past 30 years. The main occupation of the highland population that is estimated to be about 65 million is farming. Pastoral population mostly occupies the remaining proportion that occupies the lowlands that accounts about 60% of the landmass of the country (AFRODAD, 2006).

Currently, Ethiopia is the second most populous country in Africa, after Nigeria. According to the projection based on the 2007 population census, its population in the year 2012 is estimated at about 84,320,987 out of which females constitute 41,763,988 (49.5%). Urban population has grown from 16.1% in 2007 to 17.2 % (14,502,555) in 2012. Among the urban population, 21% resides in the capital city Addis Ababa. The country is also characterized by a steady population growth. While some data sources indicate the average annual growth rate of the population was 2.6% between 1994 and 2008 (MoE, 2010) other sources (Berhanu, Aberham & Van der Deijil, 2005/07) shows that it grew by 3.6 % yearly between 1984 and 2005. In one way or the other most data, sources affirm that steady population growth has resulted in an annual addition of more than two million members to the population.

With regard to ethnic composition, Ethiopia has about 85 ethnic groups all with their own distinct languages and 25 of them implemented for the instruction of primary education. The main ethnic groups with more than a million population sizes in 2007 are Oromo, Amhara, Somali, Tigray, Sidama, Guragae, Wolaita, Hadia,Afar and Gamo.

Ethiopia has a federalist government system, comprising nine federal governments or administrative regions and two chartered city administrations. The federal government is committed to decentralization that provides each region with autonomy accompanied by fiscal decentralization, which devolves decision-making powers to lower government echelons. The implementation of the new TVET strategy is in line with this general policy of decentralization. The strategy devolves the responsibility for all functions to lower levels in the system in order to increase efficiency of services and responsiveness to the needs of the actual target groups and local needs.

2.2.2. General Profile of the Oromia National Regional State

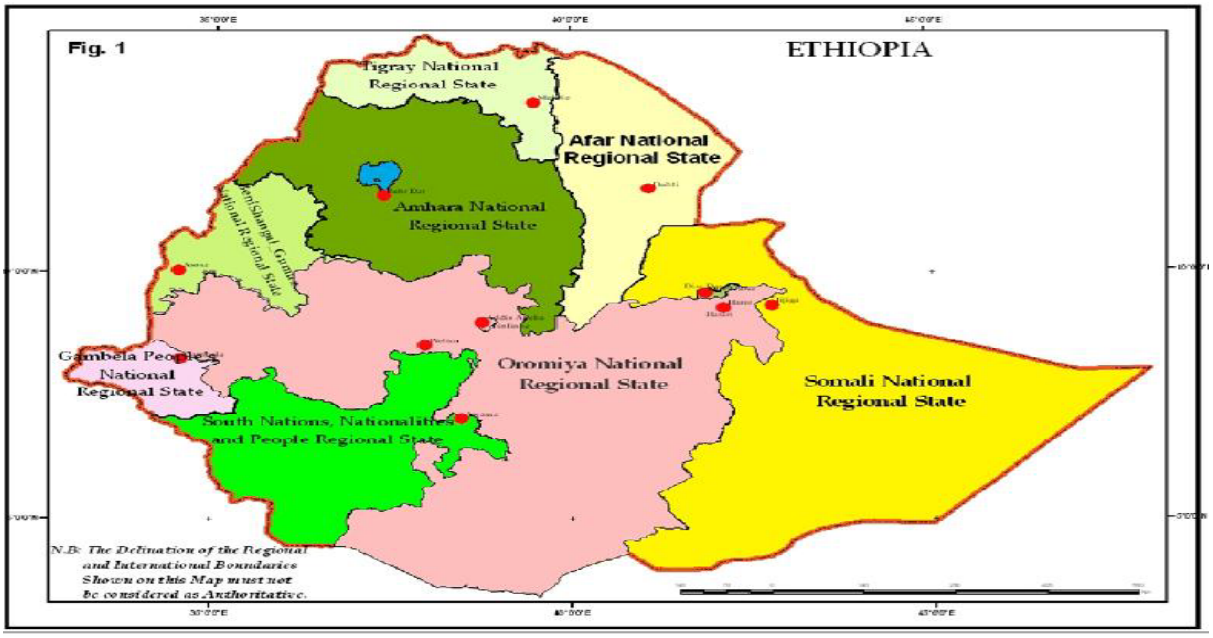


Figure 1.Location Map of Oromia Regional State

Oromia National Regional State is one of the Regional States in the Federal Democratic Republic of Ethiopia. Geographically, the Region extends from 3o24'20"– 10o23'26"N latitudes and 34o07'37"-42o58'51"E longitudes. It shares borderlines with all the Regional States in the Federal Democratic Republic of Ethiopia, except Tigray. It also shares international borderlines with the Republic of the Sudan (with 66 km border) and Kenya (BoFED, 2008).

Oromia National Regional State is the largest regional state of Federal Democratic Republic of Ethiopia. The total area of the Region is 363,136 km2, accounting for about 34.3 percent of the total area of the country. Administratively, the Region is divided into 18 administrative zones, 304 woredas (out of which 39 are towns structured with the level of woredas and 265 rural woredas), more than 6,342 farmer and 482 urban dwellers.(BoFED,2008).

According to the population and housing census report of CSA (2007), the total population of Oromia National Regional State is 27, 158,471million, which accounted 36.7% of the total country's population. In Oromia National Regional State the rural population is 23,788,431 which represents 87.8% of the total population of the region, while the urban population is 3,858,567, which accounts 12.2%. Of the total population in the national regional state, women constitute about 49.6%, while men constitute 50.4%. According to CSA (2007), the annual population growth rate of the national regional state was 2.9.

As per CSA (2007), the region has an estimated average crude population density of 77 persons per square kilometer. The total family size of the region is 4.8, with 5.0 for rural areas and 3.8 persons for urban areas. As the Census result of 2007 indicates, the total number of households was 5,638,268, with 4,746,381 rural and 891,887 urban households. The religious composition of the population of the region is 47.5% Muslims, 30.4% Orthodox Christians, 17.7% Protestants, and 3.3% traditional, 0.5% catholic and 0.6% were followers of other religions. In terms of ethnic composition, based on CSA (2007) census result, the major ethnic groups within the regional State include 85% Oromo, 9.1% Amhara and the remaining 5.9% constitute other ethnic groups. Afan Oromo, presently inscribed with Latin characters, is the official language of Oromia National Regional State.

2.3. THE EDUCATION SYSTEM IN ETHIOPIA

2.3.1. The Introduction of Modern Education in Ethiopia

Until the early 1900s, formal education was confined to a system of religious instructions organized under church schools for preparing individuals for the clergy and for other religious duties and positions. In the process, these schools also provided religious education to the children of the nobility and others associated with the elite families (MoE, 2005).

Attempting to bring change from traditional models of education to the modern and secular forms was not a simple task for previous secular rulers, as there were significant obstacles (Birhanu and Demeke, 1995). This was due in part to the conservative attitude of church leaders (Popes from the Egyptian

Coptic Church) and the noblemen. A modest attempt was made by Emperor Menelik II (1889-1913) to open the first school in his palace (Teshome, 1979). It was primarily for the sons of the nobility, and the fundamental principle that dictated the development of its curriculum was political interest. The education policy makers (the Emperor, aristocracy and foreign advisors) were interested in the prevailing international order, modernizing Ethiopia and the training of interpreters for international communication (Marew, 2000).

Emperor Menelik II strongly believed that the building of Ethiopia as a modern state, as well as the strengthening of existing political power, necessitated the introduction of modern education. It was believed that the country's independence could be linked to an educated populace that was fluent in foreign languages (Birhanu and Demeke, 1995).

Observing the shortcomings of traditional schools to meet the demands of the international political atmosphere, and felt a need to advance the nation, Menelik II opened the first modern school at Addis Ababa in 1908 (Teshome, 1979).Next, Emperor Haile Selassie I opened Teferi Mekonen School in 1925 and Empress Menen founded Menen School for girls in 1931. Following the involvement of these political leaders, the aristocracy established others modern schools in the different places of the country (Marew,2000).

Between 1908 and 1935, the aim of education was to master different languages. As a result, the curriculum was mostly composed of such language courses as French, Italian, Geez, Arabic and Amharic. Additionally, some courses in religion, mathematics, law and calligraphy were offered (Adane, 1996).

The efforts of the two successive governments to expand modern education in Ethiopia, hoped by many to be the basis for the country's development, were disrupted by the Italian Occupation. According to Seyoum, "the occupation was short lived; however, it did a lot of harm" (1996:3). Indeed, a pronounced bottleneck for the growth of education was created by the Italian invasion of Ethiopia from 1935 to 1941.In stating the situation, Teshome Wagaw (1979) and Tekeste Negash (1990) noted that the Italian invasion disrupted the emerging Ethiopia's educational system. The findings by the authors reveals that the invaders eliminated educated Ethiopians; schools were closed for military purposes; shortage of teachers and teaching materials were created. In general, the devastating war of aggression and its consequences resulted in a significant and lasting negative effect on the growth and development of education.

The education sector between 1950s and early 1960s was characterized as an era where the demand for education remain unmet, access to education were limited to the few and its equity unfair, high student failure in national examinations and by increased demand for a relevant and contextualized curricula and text books. It was also an era where the country has opened its first higher education institution - the Haile Selassie University College in 1950 (MoE, 2005, Abraham, 1993).

One of the major studies, which came to be known as the Education Sector Review (ESR), was indeed one of the boldest attempts at educational reform taken by the imperial regime (Seyoum, 1996). The aims of Education Sector Review were to analyze the education and training system of Ethiopia and its capability of promoting economic, social and cultural development. It also aimed to make education relevant to the society, national integration and development, and to prioritize studies and investments in education and training.

Despite its critical review, it was not publicly published until February 1974, which in the meantime the urban population generated opposition mainly through the urban students, parents, and the teachers' union. Most opponents resented what they considered as the removal of education from its elite position. Strikes and widespread disturbances ensued, and the education crisis became one of the contributing factors in the Imperial regime's fall in 1974 (Teferra and Altbach, 2004; Abraham, 1993).

The Military Regime came to power in 1974, with socialism as the fundamental political philosophy of the government. Marxist-Leninist philosophy was the central theme that guided the political, economic and social life of the country. There had been no other time in the Ethiopian history that education was conceptualized as an important means to secure political power. As a result, the curriculum during this period was highly politicized that students were required to take courses in political education (Tekeste, 1990).

One of the significant contributions of the military regime was its launching of a vigorous national campaign against illiteracy in 1979. By July 1990, which marked the Eleventh Anniversary of the Literacy Campaign, a 75.3 percent national literacy rate was reported. The reduction in illiteracy rate from 95 percent at the start of the Ethiopian National Literacy Campaign (ENLC) to 24.7 is certainly an outstanding achievement (Seyoum, 1996). In terms of expansion, the number of primary schools increased at a high rate in all parts of the country. The national enrollment rate reached 34.1 percent (Ayalew, 1989).

2.3.2. Education in Federalist Ethiopia

After the downfall of the military regime, the ruling political party of the Ethiopian People's Revolutionary Democratic Front (EPRDF) came to power in1991.At that time the government realized that, the objectives of education do not take cognizance of the society's needs and do not adequately indicate future direction (FDRE, 1994). Due to this fact, the reform of the education and training system became crucial.

To expand the educational infrastructure, access to educational opportunity, and to improve the quality of education, Ethiopia's government adopted an Education and Training Policy in 1994. The Ethiopian Education and Training Policy aimed to achieve four educational goals namely: quality, access, relevance, and equity (FDRE, 1994).

As stated in the New Education and Training Policy (1994), the Ethiopian educational system has three major levels. These are primary secondary and tertiary. The primary level has two cycles. The first cycle consists of grades 1-4 and the second cycle consists of grade 5-8.The secondary level also has two cycles having different goals. The first cycle (grades 9-10) is for general secondary education or for TVET areas. Either after completing grade 10, students join TVET programs or academic stream (college preparatory, i.e., grades 11&12) based on their performance in general secondary education. The others who plan to join tertiary level education are required to sit for placement examination after completing their two year preparatory program.

The present government of Ethiopia recognized the importance of improving education as a key to the success for overall development of the country. The government issued proclamations to improve the education system in the country. Accordingly, Higher education proclamation No.351/2003 was adopted to revitalize and strengthen the tertiary level education so that it can play pivotal role in the country's social, political and economic development. Besides, TVET proclamation No.391/2004 was put in place to transform this sub-sector into an effective program so that it can play a major role in the process of skill development needed in all sectors of the economy.

In order to implement its education policy the government of Ethiopia has designed what is called ESDP (i.e. Education Sector Development Plan).The main thrust of ESDPs was to improve educational quality, relevance, efficiency, equity and expand access to education with special emphasis on primary education in rural areas and underserved areas as well as the promotion of education for girls as a first step to achieve universal primary education by 2015 (ESDP-3, 2005). The major purpose of ESDPs is to translate the policy statement into action. As the result of the aforementioned Education and Training

Policy (1994) and the implementation of ESDP- 1, 2, 3 and 4 modest progress has been made in all levels of education.

In the last three decades, efforts have been made for the expansion of education in a short span of time. But, quality, relevance as well efficiency has been seriously compromised at all levels. On all levels of the educational system, education and training has little relevance to practice and context and to preparation for the workforce and employability both in the urban and rural areas(Wubet, 2006). Consequently, the quality of graduates from different levels of educational institutions has been affected. This phenomenon has become a source of concern for government officials, educators, stakeholders as well as parents.

2.4. HISTORICAL DEVELOPMENT OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING IN ETHIOPIA

TVET in Ethiopia followed school- based model of training from its conception. It was after the expulsion of the Italians that the Ethiopian government paid some attention to the establishment of technical and vocational schools in Ethiopia as part of its educational system. As a result, some technical and vocational schools were established. In 1942E.C, Addis Ababa Technical School established to meet the growing demands for technicians. This school provided training in occupational areas like auto mechanics, carpentry, economics, accounting and management. Admission to the program was for those who completed 8th grade. The training lasted three years for each entry or batch of trainees, and diplomas were awarded upon successful completion. By that time, Addis Ababa Technical School underwent a number of changes in terms of training offered and their entry level and duration. The programs offered by the school included 8+4, 10+2, and 10+3 program and applicants from many parts of the country with the best academic achievements competed for admission to the school (Ayele,2010).

This was followed by Addis Ababa Commercial School and Engineering College 1952.Subsequently Ambo and Jimma Agricultural School as well as the Bahir Dar Polytechnic institutes were established. From the fifties up to the seventies the technical school used incentive mechanisms that helped them to admit high achieving students from different parts of the country. However, this situation, gradually deteriorated and its quality was affected (TekleHaimanot, 2oo2).

In 1960s, in order to alleviate the problem of unemployment among high school completers, the Ethiopian government in 1962 changed the existing high school in to what is called ‘Comprehensive High Schools’. This period mainly characterized the attempt to vocationalize high school education

program. The first comprehensive education program started at W/ro Sihen comprehensive high school in 1962.Reports related to these schools indicated that the programs commenced without proper study and as a result there was lack of human and material resources, shortage of qualified teachers and limited budget. Thus, the quality of graduates was not as expected and the problem of unemployment among high school completers did not improve much. Moreover, as compared to the academic stream, relatively few percentages of high school students attended vocational technical programs. Thus, one can say that the program failed to achieve its mission-that is reducing unemployment among high school completers (Wanna, 1998).

As time went by, the training given in comprehensive secondary schools needed revisiting (Wanna, 1996). In 1978/1979, a study was made by MoE to review the quality of training in comprehensive secondary schools. The results of the study recommended that a few comprehensive secondary schools be selected and strengthened to give effective training. As a result, 14 consolidated government training schools and 3 non-government schools were established. These schools were organized to admit students who completed Grade 10.There were two streams in secondary schools– academic and vocational. Students who performed well in completing Grade 10 and who were interested in entering a technical school were assigned and trained for three years.

Wanna (1998) indicates that the aforementioned vocational /technical schools had been in operation since 1984 as a '10+3 program' and all 14 government technical schools were managed by the Ministry of Education. Of the 14 technical schools, Entoto Vocational and Technical School, General Wingate Construction School and Addis Ababa Technical School were in Addis Ababa. All the technical schools continued providing their training at the 10+3 level up to the 2000/2001 academic year. In 2001/2002, the new education and training policy came into effect and 10+1, 10+2, 10+3 TVET programs began.

Following the introduction of the new Education and Training Policy in 1994 , the Ethiopian government has made tremendous efforts at the expansion of both public& private TVET institutions .It has been also engaged in reform of its TVET system. The reform is being carried out at the federal and regional levels with the goal of creating a TVET system that is responsible to the development needs of the Ethiopian economy and that can effectively provide the skills needed by those working for wages and self-employment. To this end, curriculum reform and strategies were designed and implemented accordingly.

In line with the education and training policy of 1994, 25 skills development centers were opened in1997 in different regions.(TekleHaimanot,2002).Based on the 1995 regulation regulation(according

to education and training policy many private institutions started giving training in 10+1, 10+2, 10+3 and 10+4 in Addis Ababa and in the regions based on the curriculum prepared by Ministry of Education. The responsibility of control and supervision was given to regional education bureaus (TekeleHaimanot, 2002). A national TVET capacity-building taskforce was established by the prime minister's office to study ways of enhancing the TVET. Accordingly, the strategy was set and the implementation of an expanded, diversified and integrated TVET system began in the 2001/2002 academic year when over 50,000 TVET trainees (including agriculture)were enrolled in 169 government and nongovernment institutions, using new modules of training and curriculum (Tekle Haimanot, 2002).

Starting from 2001/2002, the TVET program came into practice according to the 1994 education and training policy. Students who completed Grade 10 and were unable to continue academic learning were assigned in 10+1, 10+2, 10+3 (MoE, 2002: 2).In an Ethiopian context, the term TVET combines the theoretical and practical elements of education, such as specific calculation, knowledge about certain materials, working methods and also practical training through instruction in the workshop of an institution or practical Work in an enterprise (MoE, 2002).

As the result of the reform, Ethiopian TVET system is undergoing fundamental change in its teaching-learning approach, which enhances the goal of poverty reduction strategy. According to MoE (2008), TVET of the country is re-organized into an outcome-based system. This reform is intended to ensure competences needed in the labor market and it became the final benchmark of teaching, training and learning.

The outcome based approach to learning places most emphasis on what the learners should be able to do; is focused on performance rather than on learning process; and is concerned with the demonstration or provision of evidence of knowledge, skills and attitude to a specific level of competence.

It is important to note that the curriculum design and structure play an important role in realizing this goal. An outcome based curriculum help facilitate the learning process in a way that learners can acquire set of competences required at the workplace as defined in the Occupational Standards (OS).Competency based TVET programs are organized in a modular fashion to meet the requirements as defined in the occupational standards. Each module or combination of modules describes an employable set of competences. Successful completion of each training module shall be dependent on assessment and certification in conjunction with the assessment specification stipulated in occupational standards. The modularization of TVET is a central mechanism of making TVET delivery flexible and providing for flexible entry and exit point, (MoE, 2008).

According to TVET strategy document of MoE (2008), different modules are combined into long term programs representing the entire teaching, training and learning necessary to achieve an occupational qualification. Through this modularization, a trainee may for personal reasons, exit a long term program prematurely while having acquired competences that would allow him/her to successfully perform certain jobs in the labor market.

The national TVET strategy reflects an important paradigm shift of recent years which places quality and relevance of TVET as its priority. Global experience has shown that the mere expansion of TVET does not solve the problems of unemployment and low productivity of the economy(MoE,2008). TVET has to respond to the labor market and create a competent, motivated and adaptable workforce capable of driving economic growth and development(MoE,2008).

The overall objective of the National TVET Strategy is to create a competent, motivated, adaptable and innovative workforce in Ethiopia contributing to poverty reduction and social and economic development through facilitating demand-driven, high quality technical and vocational education and training, relevant to all sectors of the economy, at all levels and to all people.(MoE,2008).

Based on the objectives indicated above, the Ethiopian TVET programs is intended to play crucial roles in producing human capital contributing to economic development. In line with this, the Ethiopian TVET Qualification Framework (MoE, 2010) also explains that the reformed TVET system is to be wage and self-employment oriented, demand-driven and outcome-based, and thus appropriate to the development needs of the Ethiopian economy.

By the same token, TVET graduates career options having acquired the necessary skills at TVET institutions are either wage employment or self-employment ventures, in which both are important that the former is to feed the industry with required skilled manpower and the latter to create employment opportunities through starting micro and small business. In view of this, the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) assumed the TVET to offer the necessary “relevant and demand-driven education and training that corresponds to the needs of economic and social sectors for employment and self-employment’’ (MoE, 2008).

In general, for the past two decades, the Ethiopian government has attempted to improve the quality of the TVET programs so that it can play a major role in the process of skill development needed in all sectors of the economy. However, different problems adversely affect the implementation of the TVET programs as intended.

2.5. TVET SYSTEM IN OROMIA REGION

As in many developing countries the world over, TVET has been given an insignificant attention and low status from the public of Ethiopia for many years. This situation has an adverse effect on the growth and expansion of the TVET system in the country as well as in the Oromia (OEB, 2005).

With the introduction of the New Education and Training policy in 1994, Technical and Vocational Education has become one of the priority areas in the Ethiopian Education System. Accordingly, the Ethiopian government expanded TVET institutions in regions to materialize quality and effective training.

In Oromia, up to 1995 there were only six TVET institutions(i.e.4 governments and 2 non-governments).These TVET centers were offering training with the old curricula in Industrial Construction, Business, Agriculture and Home Economics trades and training was provided in line with the academic education. After the implementation of Education and Training Policy of 1994, the number of TVET centers reached 38 providing training in 20 trades. These numbers rose to 196 in 2011/2012(MoE, 2011/12).

The Oromia Regional State TVET Commission designed regional TVET policy in 2003.The objective of this policy is to supply qualified human power ranging from lower level to higher skill level. In addition, the policy is to establish a system that allows proper organization and co- ordinate deployment of qualified workforce. Through implementing competency based TVET program, the attempt is to create competent, creative and responsible citizens who with attitudinal change bring cultural, economic and social development of the region. Moreover, the linking of TVET to the world of work is strengthened and developed through the participation of public and private stakeholders in policy formulation, standardization, provision of training, trade testing and certification to improve the quality of TVET in Oromia. A flexible TVET system, which integrates within the federal system, is implemented recognizing prior learning and emphasizing in-company learning. An occupational standard set at federal level is the guiding principle for TVET training in the region. Based on the Occupational Standard set the established Oromia Centre of Competence (OCOC) assesses the competence of trainees in the region.

2.6.THE EMPLOYABILITY OF YOUIH WITHIN THE ETHIOPIAN CONTEXT

The transition from education to work can be very difficult for all young people. Many have to face unemployment for several months; if not years, before finding their first job after leaving education. Although a period of transition is normal, a slow or difficult transition to the labor market can have a lasting impact on an individual's career and future income(Eurofund,2012).

With the two third of its population are below 25 years, in Ethiopia youth employment is one of the pressing issues that demands development policy concerns(Denu et al.,2005:4).Though the economy of the country has been somehow growing it is unable to keep the pace with the growth of the population and increased education attainments. Therefore, the employment creation has been slow in all employing sectors.

TVET contributes to skill development by enhancing the individual's knowledge of science and technology in a broad occupational area that requires technical and professional competencies that include problem solving, initiative ,team work and specific occupational skills(Cheethan &Epstein and Hundert,2002;UNESCO,2002).It is the recognition of the foregoing that in all Ethiopian educational development endeavors, TVET has been considered to play a key role in tackling the country's socio-economic underdevelopment through knowledgeable and skillful manpower(Abebe,2010;MoE,2008).

Following the introduction of Education and Training Policy in1994,TVET has been restructured to provide relevant and demand-driven education and training that corresponds to the needs of economic and social sectors for employment.

However, several local studies confirmed that TVET institutions were producing graduates that failed to fulfill the needs of the labor market. For instance, Tola's (2016)research finding reveals, the current TVET curriculum that developed at TVET college level not sufficiently consider local labor market requirements and national occupational standards. This is due to low competence of trainers to develop curricula that satisfy the need of the labor market and follow national occupational standards. From this it is possible to conclude that out-come based TVET reform implementation may negatively, be affected by less relevance of TVET curriculum. In such cases, there exists a mismatch between the supply of education and training and the requirements of the labor market(2016:46).In addition, Birhane (2014) finding shows that the designed TVET reform program was not fully implemented. The reasons given were: TVET trainers lack capacity and practical competence in developing relevant curricula, weak cooperative and apprenticeship training, and inability to develop curricula that consider labor market(2014:112).

From the aforementioned research findings, one can realize that the quality and relevance of the TVET has now become a major issue in Ethiopia in general and Oromia in particular. Thus, linking TVET to the labor market demand is of prime importance for both employment opportunities of graduates and growth in the economic sector.

CHAPTER THREE

3. REVIEW OF RELATED LITERATURE

3.1. INTRODUCTION

This chapter presents the related literatures that were collected and synchronized according to the objectives of the study**.** It takes an in-depth look at the available literature that relates to the employability of graduates. The first part deals with the discussion about the concept of employability, models of employability, and important factors influencing employability.

Secondly, this chapter focuses on the key drivers influencing the reform of the education and training sector to respond to new changing demands at the workplace . It is argued that the manifestation of globalization, knowledge society, emerging new technologies, expansion of ICT, changing structures of firms and industries as well as production processes demand new forms of skills other than technical skills.

The last part of this chapter stresses on the employability of TVET graduates. Employability skills are discussed from the perspectives of employers and graduates. Moreover, determining factors for employability of TVET graduates is also identified and discussed at the end.

3.2. CONCEPT OF EMPLOYABILITY

3.2.1.The Definition of Employability

Employability remains a difficult concept to measure and define (Harvey, 2001). The issue has been largely framed by the perspectives of policy makers and employers. Similarly, the issue has tended to be approached in a way which focuses either on supply-side features of the labour market or the structure of labour market demand (McQuaid& Lindsay, 2005).

It is argued that the focus of employability as mainly a supply-side construct has dominated the literature and governments' responses to employability(Hillage& & Pollard, 1998; McQuaid & Lindsay, 2005).The point is stressed by Peck&Theodore (2000),who contend that even though attention to employability is relatively novel, “the kind of supply-side fundamentalism that it signifies most certainly is not’’.Supply-side conception of employability generally focus on narrow definitions which, according to Bridge Stock (2009),underline the skills and dispositions that individuals capitalize on to make themselves marketable to potential employers while mainly focusing on short-range employment

outcomes. In this view, according to Nielsen (1999), employability conceptually "expresses how well the individuals' competencies and skills meet the requirements of the labor market, e.g., if it is possible to be employed with the present skills and competencies". This approach implies that individuals lack employability as a result of their own readiness and work motivation and not because of the lack of demand for work from employers in the labor market as a result of limited job opportunities (Hartshorn & Sear, 2005).

The concept of employability has been expanded even more to include everyone in the labor market since the mid-1990s, focuses on the capacities and abilities of the individual. Being employable is determined by how well individuals fit into the labor market based on, for example their human and social skills (Fugate, Kinicki, and Ashforth, 2004). Emphasis on the interaction between individual skills and labor market opportunities has developed the concept of interactive employability, discussed by Gazier (2001) and McQuaid and Lindsay (2005).

Other attempts, more in line with Gazier's(2001) interactive version of employability, have indicated a more holistic perspective to employability by stressing contextual factors such as the effect of labor market conditions and employer behavior over and above individual characteristics, in other words, both demand and supply- side aspects of employability (Gore,2005;Mc Quaid Lindsay,2005).

An example of such a broader definition of employability is offered by de Grip et al. (2004:216).

> *Employability refers to the capacity and willingness of workers to remain attractive for the labor market(supply factors),by reacting to and anticipating changes in task and work environment(demand factors),facilitate by the human resource development instruments available to them(institutions).*

In similar way, attempts to define the concept have hinted at a more holistic approach, emphasizing the impact of both individual characteristics and labor market conditions. The Canadian government offered the following definition in 1994 (Canadian Labor Force Development Board, 1994:viii)," Employability is the relative capacity of an individual to achieve meaningful employment given the interaction of person circumstances and the labor market."

Despite the demand and supply-side debate in the literature, the concept remains ambiguous and both side suffer from a lack of theoretical defined research (Brown et al.,2003; McQuaid & Lindsay,2005).Even though focusing on both contextual and individual factors of employability adds to its conceptual clarification and is important in terms of policy development, the concept always relates back to the individual and the individual's suitability for appropriate employment(York& Knight, 2006).

Definitions of employability that are approached from an individual perspective include those of Sanders and De Grip, who define employability as: " The capacity and willingness to be and to remain attractive in the labor market, by anticipating changes in tasks and work environment and reacting to these changes in proactive way.''(Sanders&de Grip, 2004).

In a similar way, Fugate et al. (2004) argue that employability represents a form of workspecific (pro) active adaptability that encompasses career identity, personal adaptability and social and human capital. In short, employability is: "…a psycho-social construct that embodies individual characteristics that foster adaptive cognition, behaviour, and affect, and enhance the individual-work interface'' (Fugate et al., 2004:14).

Employability is about being capable of getting and keeping fulfilling work. More comprehensively, employability is the capability to move self-sufficiently within the labor market to realize potential throughsustainable employment. For the individual employability depends onthe knowledge, skills and attitudes they possess, the way they use those assets and present them to employers and the context(e.g. personal circumstances and labor market environment) within which they seek work (Hillage and Pollard, 1998:2).

For Hillage and Pollard, employability can be understood as being the result of a complex interaction of four different components, namely:

1. **Employability assets** (knowledge, skills and attitudes);
2. **Deployment** (career management skills, including job search skills);
3. **Presentation** (job getting skills, e.g. CV writing and interview techniques);
4. **Personal circumstances** (family responsibilities and external factors impact on whether someone can make the most of their 'employability assets', e.g. opportunities in the current labor market).

From Hillage and Pollard definition, one can infer important points. Their definition for employability seeks to highlight the full range of skills that affect the ability of individuals to secure and retain employment. It also draws attention to the importance of strategic skills whilst seeking work and the presentational skills that enable job seekers to convince recruiters of their abilities.

Finally, it concurs with the view that demand factors, personal and social circumstances can be as important as individual characteristics in contributing to the employability of job seekers.

Thus, despite varying definitions and categorizations, employability skills in essence encompass the skills, attributes, behaviors, and characteristics that are ultimately deemed necessary for an individual to effectively attain and maintain successful employment, as well as manage their current and future careers.

3.2.2. The Historical Evolution of the Concept of Employability

The historical antecedents of the current employability debate can be tracked back at least a century. Gazier's (1998a, 1998b, 2001) work on employability provides a useful over-view of the concept's development towards currently accepted definition. He distinguishes between seven operational versions of the concept of employability-namely:

3.2.2.1. Dichotomy Employability

Dichotomy employability emerged at the beginning of the 20th century in the UK and the US. Gazier describes this formulation of the concept of employability as 'Dichotomy'' employable' and 'unemployable', initially with little or no gradation; employable referring to those who were able and willing to work; unemployable referring to those unable to work and in need of relief.

3.2.2.2. Socio-Medico Employability

During the 1950s, the socio-medico approach to employability was developed in the United States, United Kingdom, Germany and a number of other countries. The focus was on the labor market position of the handicapped such as the physically, mentally or social disabled.

More specifically, aspects such as deficiencies in vision, hearing, and the ability to reason and take initiative were considered. This version of employability brought with it a scale that measured individuals as being more or less employable and, according to the deficiencies identified, action was taken to improve employability (Gazier, 2001).

3.2.2.3. Human power Policy Employability

Man power policy employability, which was developed mainly in the United States, was an extension of the above deficit approach but applied to a broader population of the unemployed that had problems. The focus was on social and physical deficiencies as well as on mobility and presentation (Gazier, 2001). The promotion of employability here was solely for macroeconomic purposes and policy makers focused on employees' attitudes towards employment in general and on the development of their self-perception during their career.

3.2.2.4. Flow Employability

During the 1960s, the flow of employability approach developed mainly in France. During this time, the focus shifted to a collective initiative and more specifically, on how swiftly certain groups could find employment. As a mainly demand-side approach, flow employability emphasized the ease of access of the jobless to employment within local and national economies (Grazier,2001). Employability at this stage was defined as ‘’the objective expectation, or more or less high probability, that a person looking for a job can have of finding one" (Gazier in Mc Quaid&Lindsay,2005).

3.2.2.5. Labor Market Performance Employability

Towards the end of 1970, the notion of labor market performance employability developed internationally. This understanding of the concept focuses on the labor market out-comes achieved by policy interventions, measureable in terms of days employed, hours worked and payment rates, and other labor market out-comes for individuals participating in employability programs.

3.2.2.6. Initiative Employability

Initiative employability emerged in the human resource development literature of the late 1980s, reflecting an acceptance amongst individuals and organizations that successful career development requires the development of skills that are transferable and the flexibility to move between job roles. Again, the focus is on the individual, with the onus on workers to develop their skills and networks in the work place, so strengthening their position when they wish, or are required to move.

3.2.2.7. Interactive Employability

While initiative employability was, more individually focused, interactive employability encompassed a broader perspective, there by including policy makers and employers as shared stakeholders in employability. The interactive and collective dimensions of employability were therefore introduced to the employability debate in the 1990s.It was claimed that an individual’s employability is to some extent relative to the employability of other individuals in the labor market. The demand for labor locally and nationally is also taken in to consideration over and above the rules or institutions that direct labor market, therebydemonstrating the institutional nature of employability(Gazier,2001).In this sense, employability policies should not only target the interaction of individual attributes, but a host of other ‘context’ factors such as labor market conditions and demands, location of labor markets, employer preferences, and other barriers to employment(Mc.Quaid&Lindsay,2005).

3.3. Models of Employability

The notion of employability and what it should encompass has broadened over the years. For the purpose of this study, employability will be approached from an individual perspective, while still including a broad definition of the concept. In support of this, it is widely accepted that employability is based on various individual attributes (Fugate&Kinicki,2008;Hillage&Pollard,1998).This section will consequently focus on discussing a number of employability models that approach the concept from a supply-side perspective.

3.3.1. HARVEY (2001) MODEL OF EMPLOYABILITY

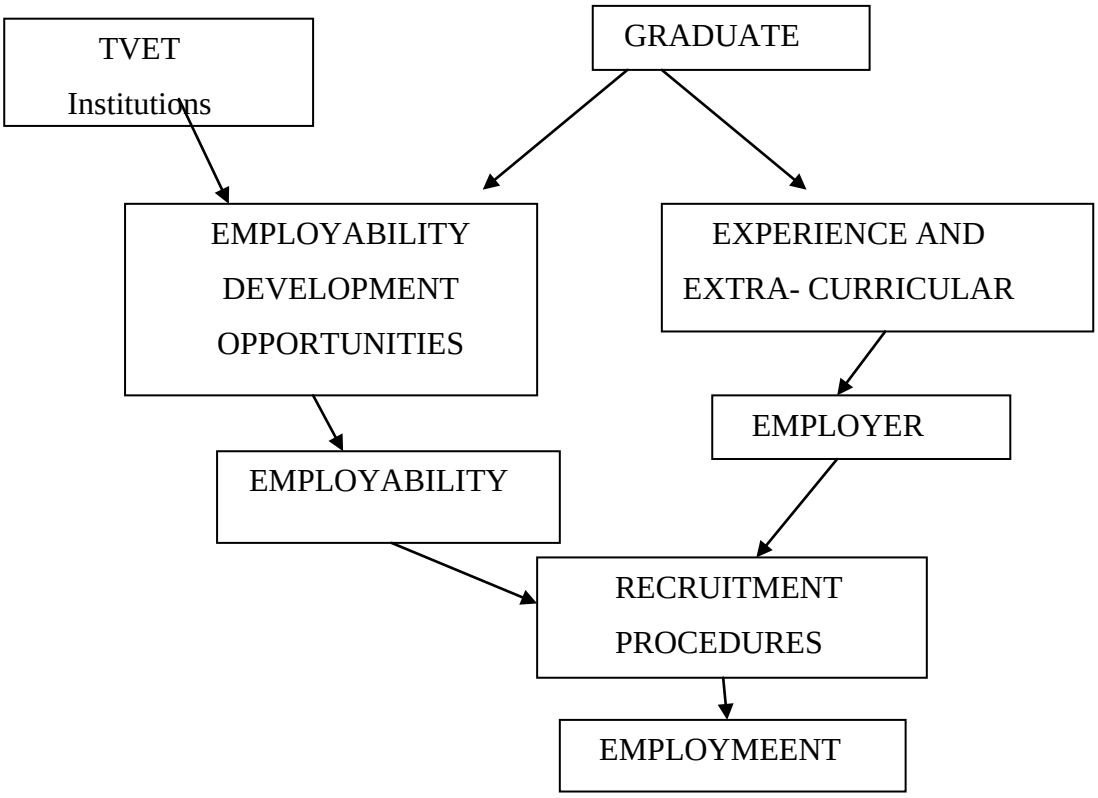


Figure 2. Model of employability-development and employment

Harvey (2001) presented a straightforward model of how graduates develop their employability, facilitated by Technical and Vocational Education and Training (TVET), and approved by employers to get employment. TVET institutions are responsible to provide students with employability development opportunities, for example soft-skills training, and allow students to participate in extracurricular activities. But it is completely depend on the students to utilize and capture opportunities provided to foster their employability.

Employability, however, does not promise employment. Graduates have to perform well throughout recruitment procedures by potential employers in order get job, because employers have the power to make final decision regarding any hiring take place in their organizations.

3.3.2. FUGATE, KINCKI AND ASHFORD"S (2004) MODEL OF EMPLOYABILITY

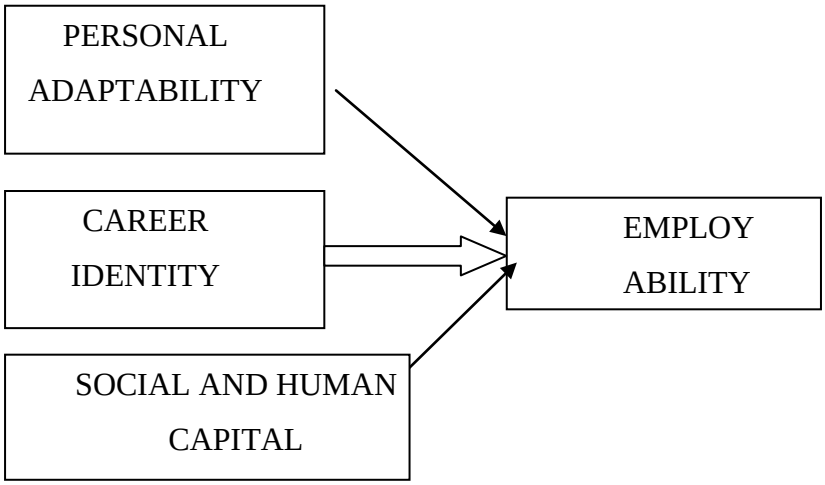


Figure 3. Employability as a psycho-social construct.

Fugate et al. (2004) conceptualize employability as a psycho- social construct that represents individual characteristics, which promote adaptive cognition, affect behavior and help individuals to recognize and leverage career opportunities. Employability therefore assists in moving between jobs, both within and between firms, and while it does not assure employment, it does improve the possibility of gaining employment (Fugate et.al, 2004). Employability is regarded as a type of work-specific active adaptability that consists of three dimensions namely, personal adaptability, career identity, and social and human capital.

Personal adaptability in this model is used as the conceptual foundation for employability, and can be described as the willingness, capacity, and competence to change. As such, it is an active and continuous process. Fugate et al. (2004) argues that personal traits such as optimism, a propensity to learn, openness, and generalized self-efficacy combine at a cognitive and an affective level in those individuals who display high employability, leading to the ability to identify and secure work opportunities.

The second dimension of Fugate et al. (2004) employability model is career identity, which represents constructs such as role identity, occupational identity, and organizational identity, all of which refer to how individuals define themselves in a certain job context. Career identity can be viewed as the'

knowing-why' competencies that Arthur et al. (2005) identified. Attributes such as career motivation, personal meaning and personal values are included in these 'knowing why' competencies (Mc. Ardle et al.2007).

The last dimension of employability is human and social capital .Human capital denotes the personal variables that can affect an individual's career advancement. It may include amongst others age, education, training, skills, work experience, and knowledge (Fugate et al, 2004; Mc Ardle et al., 2007).Human capital includes Arthur et al. (2005) notion of 'knowing how' career meta-competency, which refers to expertise, capabilities and tacit and explicit knowledge. Social capital on the other hand relates to the size and quality of the support network an individual is able to organize and capitalize on (Gazier, 2001).

Social capital is also encompassed in Arthur et al.'s (2005)'knowing who' career meta-competency, which refers to the various relationships, either formal or informal, that an individual forms as part of an organization's networking actions. This provides individuals with the knowledge on how to find the right person when the situation demands it, that is, having the right connections.

With regard to this research, Fugate et al. (2004) model may prove useful to the graduate population since the dimension are applicable outside organizational boundaries and across career contexts.

The model is valuable in the sense that it focuses on important career meta-competencies, comprising cognitive, dispositional and market interactional variables, which highlights the model's inclusion of a wider collection of personal characteristics needed to be employable.

3.3.3. KNIGHT AND YORKE (2004) USEM MODEL

Knight and Yorke (2004) not only proposed a definition for employability but also a framework for embedding it into the curriculum. Their definition is widely quoted and still used today: "A set of achievements - skills, understandings and personal attributes - that make individuals more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy."

They suggested that there is a close relationship between employability and good learning and stressed that employability results from a blend of achievements in four broad areas. They represented this in their USEM model of employability, one of the best known and respected in the area of employability. Their model proposes four inter-related components of employability:

-Understanding (of disciplinary subject matter and how organizations work);

-Skillful practices (academic, employment, and life in general);

-Efficacy beliefs (reflects the learner's notion of self, their self-belief, and the possibility for self-improvement and development);

-Meta cognition (complements efficacy, embraces self-awareness, how to learn and reflection. It encompasses knowledge of strategies for learning, thinking and problem solving, and supports and promotes continued learning/lifelong learning.

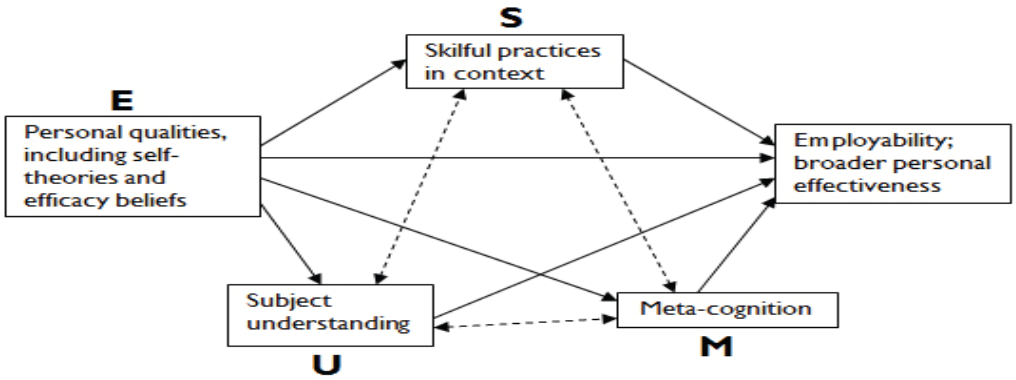


Figure 4. USEM EMPLOYABILITY MODEL

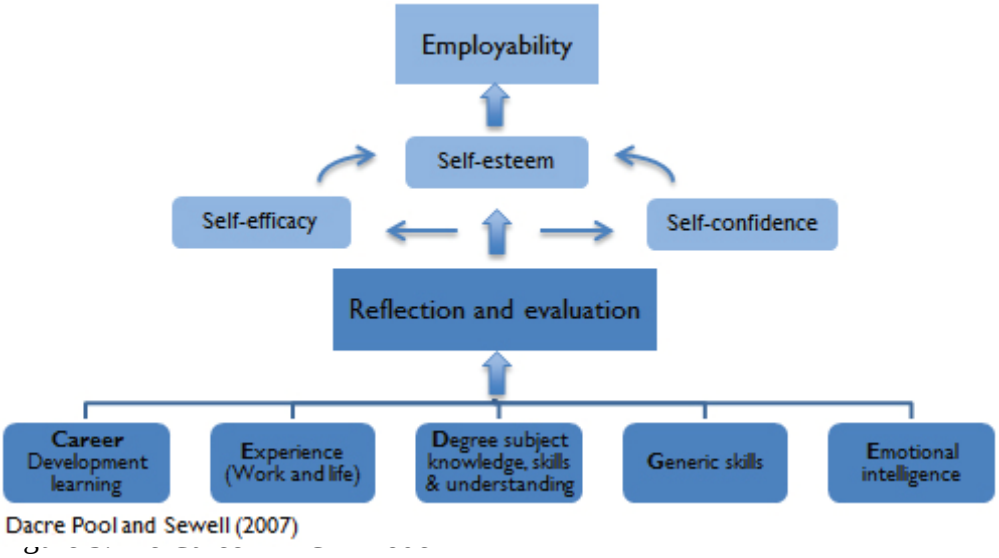
Knight and Yorke developed this model in an attempt to put thinking about employability on a more scientific basis, partly because of the need to appeal to academic staff on their own terms by referring to research evidence and theory' (Knight &Yorke, 2004).

The USEM model provides a framework for thinking about how to embed employability into the curriculum and acknowledges the needs of students, employers and other stakeholders must be taken into account. It also encourages us to reflect on the way curricula includes assessment that develops the student's efficacy and meta cognition and relate this to the development of subject knowledge and professional skills that are transferable to the practice context.

3.3.4. POOL AND SWELL'S (2007) ,THE CAREER EDGE MODEL

Pool& Swell(2007)based their key to employability model on the following definition; "Employability is having a set of skills, knowledge, understanding and, personal attributes that make a person more likely to choose and secure occupation in which they can be satisfied and successful". The authors accordingly focus on individual facets that will allow students to adapt to the demands of the new world of work, and better prospects for career success and satisfaction.

Figure 5. The Career EDGE Model



The Career EDGE model is valuable in that it can be used to explain the concept of employability to those new to the subject, and to students and their parents as well as appealing to academics. It will therefore be a useful tool for those involved in employability activities and support. It can also be used to develop a way of evaluating employability that can be adapted for use at different stages and with different groups of people.

In terms of the current research, the model is sufficiently including many aspects identified in the literature as important to employability. Career development learning is a crucial aspect in the context of graduates, as they need to be able to identify job and career opportunities and be able to network and market themselves in order to be viewed as desirable to employers. Emotional intelligence (Pool& Swell, 2007) is also particularly important to graduates as they need to manage their own and others emotions in order to effectively cope with environmental demands.

According to Pool and Swell (2007), graduates need to develop their emotional intelligence competencies in order to realize their full employability potential since individuals with enhanced emotional intelligence have been shown to be successful in their career, relationships and life in general.

The model also gives emphasis on reflection and evaluation. They are important to develop oneself by investigating what is needed to succeed, what one currently good at and in what areas one needs

improvement. By reflecting and evaluating, individuals will become more self-confident in their abilities and develop self-efficacy and self-esteem that can, in turn, enhance their employability. Individuals who are able to reflect can moreover identify their own shortcomings and proactively take action to gain the necessary competencies to adapt in the changing work environment and to make a success of their career.

3.4. FACTORS AFFECTING EMPLOYABILITY

The following sections review some of the evidence on how individual and external factors influence individuals' labor market outcomes and employability.

3.4.1. Individual Factors Affecting Employability

3.4.1.1 Essential attributes and personal competencies

At the most basic level, it must be acknowledged that essential attributes and personal competencies, what might be called 'life skills' (Taylor, 2005),form part of the foundation for individual employability.

James (2007) acknowledges that employability is contingent on both labor markets context and personal circumstances, but that self-efficacy plays an important role, in relation to basic beliefs (for example, the belief that 'I will never work'); job matching (the belief that 'I'll never find someone who will employ me'); and presentation (the belief that 'they'll look at me and say no'). James argues for a strengthening of psychological services to address these issues. Basic self-efficacy and personal presentation skills are viewed as absolutely essential by most employers, some of whom have noted that some young people appear not to have been prepared for the 'world of work' by the TVET and even higher education systems (Devins and Johnson, 2003).

3.4.1.2 Skills and Work-knowledge base

Basic skills (defined in terms of literacy and numeracy) form one of the fundamental building blocks of employability. There is strong evidence to suggest that literacy and numeracy problems increase the risk of no employment (Sanderson, 2006).

Work experience and general work skills also form an important element of the 'work-knowledge base' of employability. For many employers and especially those recruiting to entry-level positions that may be more accessible for lower skilled job seekers, work experience is often the most important factor in recruitment decisions (Devins and Hogarth, 2005).

3.4.1.3. Job Search and Presentation Skills

The use of appropriate and efficient job search methods will clearly impact on the extent to which job seekers are able to identify and pursue opportunities. A number of studies have focused on the effectiveness of different methods, with informal direct approaches and the use of social networks often emerging as most associated with job search success in many cases (Boheim and Taylor, 2001).

The extent and range of job search effort, using whatever method, has become of focus for many researchers interested in the behavior of the unemployed. Job search intensity - defined in terms of the frequency and scope of individuals' engagement with search activities, and the range of methods used - has been shown to be positively associated with job entry outcomes (Boheim and Taylor, 2001). However, it is important to place such findings in context, as search effort clearly has the capacity to be affected by a wide range of individual factors. For example, it has been demonstrated that psychological factors relating to personal and work identity can impact on search and intensity (Kanfer et al.,2001).

3.4. 1.4.Labor Market Adaptability

In relation to labor market adaptability, the willingness and ability to pursue occupations across a range of sectors has been shown to be conducive with successful job seeking (Bridges, 1994). Human resource management literature strongly emphasizes the need for adaptability to changing tasks and work contexts as a prerequisite for career development and progression (Fugate et aI., 2004). It has therefore been suggested that openness to change (in the workplace and the labor market) is important to the individual's long-term employability (Wanberg and Banas,2000).But there can be a mismatch between some job seekers' preferences and needs in terms of occupations, and what it available in the labor market.

3.4.2.Personal Circumstances and Employability

3.4.2.1 Household circumstances and work culture

Berthoud's (2007) analysis suggests that lone adults are among those whose chances of being in work have declined most in the last three decades. Sanderson (2006) similarly reports that men living alone have a higher probability of unemployment, while Green and Owen (2006) have found that living in a household where there are 'other earners significantly increases the likelihood of finding employment. There is also evidence that employers can assume that lone parents will struggle to organize childcare for their dependents, and that this will impact on their reliability as employees (Lewis etal, 2000).

3.4.2.2. Family and caring responsibilities

Caring responsibilities can limit the ability of people with children to take on full-time and/or time and place-specific work. Jackson et al. (2001) note that lone parents are more likely to face multiple barriers to work, which combined with caring responsibilities can result in prolonged labor market exclusion and poverty.

3.4.2.3. Transport-mobility issues

There is a growing literature on the link between access to transport and employability. Access to private transport has been shown to have a significant impact on the probability of unemployed young people entering work, due to benefits associated with increased mobility in looking for and travelling to work, and the ability to consider jobs that require individual access to transport (Green and Owen, 2006). Earlier studies of youth unemployment similarly showed that young people living with parents were also more successful in finding work, with one apparent reason being the help that parents can provide with transport to interviews and jobs (Stafford et al., 1999).Furthermore, job seekers' ability to access transport can be important in determining how far they are able to travel to work (Mc Quaid et al., 2001).

3.4.2.4. Health, well-being and disability

Those experiencing poor health will inevitably face additional problems in finding and sustaining work (Berthoud, 2003). Green and Owen (2006) highlight how health and other factors can combine to severely limit opportunity, so that, for example, those job seekers with low educational attainment and health problems are significantly less likely to make transitions to work. The complex nature of how health issues affect employability calls for highly specific services to address particular problems.

3.4.2.5. Social Capital

In the employability literature, social capital has been recognized by several authors as a potential determinant of employability. For example, Fugate et al. (2004) emphasize the role of social capital in the formation of employability. People with strong social capital are presumed to engage not only in formal networks, but also in informal networks (Fugate et al., 2004).

3.4.3. External Factors Affecting Employability

3.4.3.1. Local Labor Market Factors

The dynamics of local labor demand therefore provide a crucial element of context that will help to explain the success or otherwise unemployed people's job search. Boushey (2005) also notes the importance of local labor demand in facilitating sustained exits from unemployment for lower skilled workers - their progression to better, more stable employment is more likely in labor markets characterized by higher levels of overall employment.

Even where local labor demand is relatively strong, there can be problems fitting unemployed people to jobs. Devins and Hogarth (2005) note that individuals' employability is affected by problems of mismatch between the mainly service-oriented opportunities that are growing in local, especially urban, labor markets and the large numbers of redundant workers who would prefer manual jobs. Houston (2005) has similarly argued that the long-term unemployed suffer from a mismatch between the skills they possess and the skills required by employers.

3.4.3.2. Vacancy Characteristics Factors

The vacancies provided by employers clearly provide much of the context for the job search process. The quality of employment opportunities and particularly the remuneration offered by employers, impacts both on the ability of job seekers to pursue opportunities and the sustainability of employment once entered (White and Geddes, 2002).

3.4.3.3. Recruitment Factors

The other major way in which employers are important to employability relates to how they recruit people; and the qualities that they seek and their attitudes towards unemployed job seekers. Survey research with employers has suggested that less than one-third of all vacancies are notified to Job centers; but that word-of-mouth referrals are still regularly used by over two-fifths of employers to recruit (Sanderson and Johnson, 2002). In more general terms, employers have long reported that personal referrals and word of mouth play an important role in filling vacancies (Geddes et al., 1993).

Devins and Hogarth (2005) argue that long-term unemployed and economically inactive people are often disadvantaged when employers use word of mouth (inevitably tapping those closest to the labor market). Such practices can further disadvantage already groups already more prone to unemployment, such as migrant minority ethnic groups (Petersen et al., 2000).

In general, the individual's assets are indeed an important aspect of the employability, but they are not the only important aspect. There may be circumstances where job seekers with strong 'employability assets' in terms of transferable skills and even labor market awareness and strategic job seeking, will still struggle to find work .Thus, their actual 'employability' limited by, for example: family and caring responsibilities; problems in accessing transport and/or geographical remoteness; the numbers and/or type of vacancies within local labor markets; and the attitudes or recruiting methods of employers.

3.5. Rationale for Employability

There are different factors that increased the demand for employability in general and employability skills in particular throughout the world.

3.5.1. The Knowledge Society

As Europe and the rest of the world moves towards a knowledge society, an effective system of vocational education is becoming increasingly important to the economy and to society at large (Enders & Fulton, 2002).

This presents some impressive challenges and opportunities, not only to those responsible for the content and form of vocational education courses, but also to those employees, employers and private citizens who make use of the knowledge and skills produced by these courses. At the same time, it is important to recognise that the term “knowledge society” includes a much wider range of phenomena than simply the relation between vocational education and society.

It indicates a complex situation whereby knowledge increasingly shapes all spheres of life and becomes the most important factor affecting economic growth (World Bank, 2002).This is not merely a gradual change, but rather a transition to a fundamentally new kind of economy and society.

The increasing socio-economic relevance of knowledge involves more than a simple expansion of knowledge-intensive and high technology sectors, or of the proportion of vocational education graduates in the labour market. In all areas of employment and work, the characteristics of work organisations change under influence of the increasing importance of knowledge (Teichler, 1999).

More than any other factor, technological innovation has been the driving force behind the shift to a knowledge economy in advanced capitalist economies. Within a knowledge economy, value is created by productivity and innovation; thus the knowledge held by technical, scientific and other highly skilled professional workers is regarded as a key resource that enables firms to achieve performance

and competitiveness(Van der Heijde &Van der Heijden,2006).In this context, employability is increasingly seen as a potential source of national competitive advantage(Brown et al.,2003).Moreover, it is increasingly argued that, given the realities of an increasingly competitive global market place, national governments cannot be relied upon to guarantee employment for all. Instead, the role of government is to ensure all citizens are given the opportunity to enhance employability, a strategy that is believed to have positive outcomes for labor market participation for even the most disadvantages workers (Brown et al., 2003; Mc Quaid &Lindsay, 2005).

3.5.2. Globalization

Globalization is characterized by fast flows of ideas, financial capital, goods, services and people across national borders. As a result, interaction with people from other cultures and with other linguistic backgrounds becomes more common and is now part of the working life of a substantial proportion of the higher educated workforce. Around one third of European graduates work in organizations whose scope of operation is international (Pavlin and Svetlik, 2011).

In the context of globalization, Ashton and Green (1996) are of the view that the world has become one trading place, while Stetar (2000) sees globalization as “the increasing integration of world capital, knowledge and trade”. According to the OECD (1994a), globalization refers to an “evolving pattern of cross-border activities of firms, involving international investment, trade and collaboration for the purposes of product development, production and sourcing and marketing”.

Stasz (2001) observes that,“ Changes in the nature of work and the workplace in the post-industrial economy are transforming the kinds of knowledge, skills and attitudes needed for successful employment and work performances.” The need for soft skills, sometimes referred to as 'key generic skills' by employers, is also expressed by Buhler (2001), who argues that employers of the 21st century should be committed to soft skills. Meyer (2003) recognizes the challenges globalization imposes on the workforce and notes that the effects of globalization require workers to demonstrate knowledge and skills to function effectively in a globalized environment.

The pressure of globalization has put new demands on the education and training sector such that the education and training sector should adopt new forms of knowledge production.

A central tenet of globalization is the need for a highly skilled labor force that is able to use new technology and to add value to existing goods and services (Kraak, 2000). Kraak further argues that it is not only specialized skills that are in demand, but more well-rounded and diverse skill competencies are also in demand, and enterprises expect from the labor force to be adequately skilled to unpredictable

and volatile global product markets and rapid technological change. He further argues that such capabilities can only be offered by the education and training system.

Global economic competitiveness depends on the knowledge and skills of the workers in the working environment. Therefore, organizations are seeking ways to develop the knowledge, skills and attitudes of their workers so that they can be more productive in the workplace. The researcher regards skills transformation and the acquisition of skills demanded by the 21st century business as vital for the success of a business as well as for employees to be able to secure employment.

3.5.3. Flexibility for Workforce

Flexibility has been held to be one of the key features of the labor market, both for organizations and for individuals (Reilly,2007). The flexible nature of the labor market implies that it is constantly changing. The concept has been defined as " the capacity to adapt " (Golden & Powell, 2000), implying that being flexible means being able to respond to external changes.

Trends in economic reform, particularly in the context of the global economy, have placed emphasis on the need of the workforce to possess a set of skills that makes employees flexible and adaptable in a workplace (Mulcahy, 2000). During the mid-20th century, many world economies underwent major transformations from manufacturing economies to service- and technology-oriented economies. This transformation resulted in major shifts in the skills needed in the workplace (Barker, 2000). Butterwick and Benjamin (2006) are in agreement with Mulcahy, stating that "life and employability skills are a response to post-industrial revolution needs."

High employability translates in to the ability to not only make a smooth transition between organizations but to be able to adapt to all types of change within the labor market. The dimension of personal flexibility thus details the extent to which individuals can effectively react to organizational and market changes which they themselves did not initiate (Van der Heidge &Van der Heidge,2006). Flexible employees are able to derive the maximum benefit from operating in the current employability context, because they are able to cope with changes more easily.

3.5.4. Information and Communication Technology

The diffusion of information and communication technologies (ICTs) across all economic sectors is placing new demands on workers skills. In today's job market, basic ICT skills are considered essential for people entering the workforce and for those trying to find a better job. Governments consider an

ICT-skilled work force a strategic asset that spurs economic growth, promotes competitiveness, and improves business productivity.

A nation's economic well-being depends on“both the effective use of ICT for businesses and industrial processes and on the knowledge, competencies, and skills of current and new employees’’ (European Commission, 2004).

One growing aspect of technology, Information and Communication Technology (ICT), is perhaps the most important of any technological revolution in the past two centuries. The new technologies have led to the introduction of a wide range of new products, sharp declines in transaction costs and vastly improved economic efficiency. Surveys on the introduction of new IT technologies have found a strong association between the use of new technologies and the rise of skills and educational requirements. (ILO,1998a).

There is widespread consensus that the introduction of ICT into workplaces is skill-biased - that it favors higher skilled workers. For repetitive, routine tasks - often performed by low and medium skilled workers. ICT can be seen as labor replacing. ICT is faster and cheaper than people in performing these tasks. With regard to knowledge work and professional expertise, however, ICT is mostly instrumental and complements labor (Levy, 2010). Besides being a complement to (mostly skilled) labor, instruments in the form of upgraded equipment make job tasks more complex (Hage and Powers, 1992). The introduction of ICT has revolutionized the way data and knowledge is generated and diffused. There is today an unprecedented range of resources easily available. In the 21st century, the challenge is not to access knowledge, but to manage, integrate and evaluate it. In this regard, TVET graduates play a crucial role within organizations.

The changing skill demands in today’s knowledge economy have been the subject of thorough policy and academic discussions. The diffusion of ICTs across industrial sectors, along with changing business models, has induced “skill-biased organizational and technological change’’ (Green, 2009).Workers in a wide variety of fields have had to adapt and incorporate ICT in to their jobs (Green, 2009).

The relevant literature on the relationship between ICT skills and employability focuses on theeffect of computer skills on compensation and opportunities for upward mobility (Riley, 2007).Green et al.(2007) argues that the effect of ICT skills on productivity and wage differentials is greater for employees who have the ability to assess “ the potential benefits to be gained from successful ICT use and be able to persuade, influence, and educate others in the workplace’’.

The researcher is of the view that people, be it in social contexts or the in workplace, are confronted with daily challenges that affect their lives and, as such, should possess skills that will enable them to cope with such situational demands. The researcher therefore argues that if individuals possess a variety of skills, such individuals can become more employable in a changing environment.

3.5.5. High Performance Work Places

Traditional forms of work organization minimized the skills, and training, required of most employees to perform the job. However, increased competition, and the introduction of ICT have prompted many firms to undertake fundamental changes in their internal organization and work practices.

These include changes in factory layout, flow of production, quality assurance and use of inventory. There is no one model of such transformation , but collectively recognized firms are called " high performances enterprises" (ILO,1998a).High performance enterprises are based on the assumption that competition is based not just on cost but also on incremental improvements in the quality of goods or services produced.

The changes of organization and work practices in high performance enterprises have profound implications on skills required of employees (that is, skills are a derived demand based on theway in which work is organized).High performance work organizations typically use self-managed work teams, multi-skilling, job rotation and cross training and the devolution of decision making. These methods confer greater flexibility on the organization, but can only work if employees acquire technical in addition those normally required in traditional organization. (Ashton and Sung, 2002).Designing work in this way inevitably demands higher levels of skills from employees.

Competing in a world market of rapid technological advancements has necessitated a redesign of the workplace in to an innovative work environment known as the high-performance workplace (Overtoom,2000).This environment requires a behavior and orientation toward work that goes beyond step-by-step task performance. Workers at all levels are expected to solve problems, create ways to improve the methods they use, and engage effectively with their co-worker.

Bailey, Hughes, Barr (1998) identified teaching and learning employability skills to be consistent with the emerging needs a world economy in a high-performance work environment. Workplace principles are comparable to principles of effective instructional learning. Tasks and jobs are integrated through broad job definitions or cross functional teams. In the high-performance work environment, employees take more initiative and are given more responsibility. Moreover, employees solve problems in non-routine situations in various workplace settings.

3.5.6. Change in the Economic Structure

Ever since the Industrial Revolution in the late 18th century, progress and prosperity have been closely identified with economic development (Jomo,1993). The economic competitiveness of a country depends on the skills of its work force. The skills and competencies of the work force, in turn, are dependent upon the quality of the country's education and training systems.

Vocational education is perceived as one of the crucial elements in enhancing economic productivity (Min, 1995). Based on social efficiency theory, schools should prepare and supply future workers with appropriate knowledge and skills to enhance their productivity and, therefore, promote economic growth (Finch, 1993).

Nevertheless, vocational education has sometimes become a tool for addressing the economic, political, and social crises that are threatening the political and economic stability of some nations. Rising unemployment, lack of skilled workers, high dropout rates, and the changing demographic nature of the work force have placed the issue of workforce education high on the educational reform agenda (Giroux, 1991).

Traditionally, vocational education has prepared students for specific skills. However, in the post-Taylorist work environment, workers are expected to perform more broadly-defined jobs (Hirsch & Wagner,1995).Therefore, a broad-based education is required. In the new economic ,vocational education is expected to produce an educated, skilled, and motivated work force (Mustapha,1999).

The economic argument in favor of vocational education is linked to the perceived need to orient the formal educational system to the needs of the world of work (Middleton, Ziderman, & Adams,1993).It is based on the assumption that economic growth and development are technology-driven and human capital-dependent.

Danson (2005) asserts that due to the structural changes taking place in industriesacross sectors employers are now looking for skills other than technical skills based on traditional apprenticeships. Nowadays, the demand rather appears to be for ‘soft’ skills such as customer handling, oral communication, team working and problem-solving skills. In support of the above assertion, Mc Quaid and Lindsay (2005) have identified various employability factors such as individual factors, personal circumstances and external factors which can contribute to the development of individuals’ employability skills and thus help support successful employment.

3.6. Employability of TVET Graduates

3.6.1. Employability skills of TVET graduates

The global economy has evolved in to 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 is changing and the need for highly skilled and productive workforce is shaping economies worldwide. To increase their chances of employability, TVET students need skills that are flexible and relevant to the demands of today's industry.

To promote employability of graduates TVETs' take vital initiatives to review the attributes needed by graduates as well as to support employability skills development (Wilton, 2008; 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 work places or occupational situations after finishing their TVET programs (de Guzman &de Castro, 2008).

The continued deliberation on employability have involved the recognition and development of transferable employability skills of graduates of TVET institutions and have created implications for TVET reform (Wilton, 2008).

In order to overcome, challenges of skill acquisition, Reddan and Harrison (2010) argued that TVET institutions need to restructure their program to be responsive to the needs of the job market, especially the industry. To achieve this goal, TVET curricula must focus on outcome in terms of the skills, knowledge and attitudes required in industry.

Moreover, it is essential for Technical and Vocational Education and Training (TVET) educators to constantly evaluate its program to ensure that its content remains relevant, of high quality and is in tune with the demand of the job market. This necessitates reviews of curricula and pedagogies which inevitable calls for the evaluation of the efficiency of courses and training program (Teh and Pendergast, 2009).

Finch and Crunkilton (1999) propose that the success of technical education curricula is not only measured by students' achievement in school, but also through the results of that achievement in the world of work. Therefore, curricula must be oriented and justified by both the process (learning

experiences within the school setting) and the product (employment opportunities derived from in-school experiences).

They suggest that curricula must simultaneously be justified by industry, yet remain pedagogically focused .Under this model, technical education curricula must directly help students develop a broad range of knowledge, skills, attitudes, and values that clearly contribute to the graduate's employability.In order to accomplish these tasks successfully, technical education curricula must be responsive to the technological changes in society.

According to Kearns (2001b), " fostering employability skills requires active learning strategies in which learners take responsibility for their own learning so that they develop the attitude, habits and skills of motivated lifelong learners and the acquisition of employability skills becomes a lifelong process." Kearns has found many examples of good practice in countries such as Australia and the United Kingdom using strategies such as active learning, situated learning and project-based learning in transferring employability skills.

According to McGrath et al.(2010), there is a link between employability and quality teaching of employability skills, arguing that good teaching improves learners' employability.

The researcher thus argues that students learn more effectively if the teaching and learning situation is interactive between the teacher and students, while students are afforded the opportunity to put in practice the content they have learnt. Thus, to ensure the transfer of employability skills at TVET, teachers should adopt the learner-centered approach in teaching employability skills so that learners can take responsibility in developing skills that will facilitate their employment in the labor market.

3.6.2. 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, 2012). Two of the greatest concerns expressed by employers included acquiring and training good workers (Robinson, 2000). Because soft skills are important for productive performance in today's workplace, there is an extreme emphasis placed on the development of soft skills (Robles, 2012).

Yorke (2004) 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 team-work, communication, leadership, critical thinking, problem solving and managerial abilities. McCabe

(2010) contends that jobs are not guaranteed to graduates unless they successfully use their personal 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 it. 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.

The skills that employers typically indicate they seek are not the same as the skills that students believe employers desire (Krahn, Lowe & Lehmann, 2002). Employers seek workers who can communicate, demonstrate positive attitudes and behaviors, responsibility, adaptability, and people who can work with others (McLaughlin, 1995). For many entry-level jobs open to TVET graduates, employers emphasize “good work attitudes” rather than specific job-relevant skills (Krahn, Lowe & Lehmann, 2002). “Employers place a high value on employees who work well as team members, who respect the gender, cultural and ethnic differences among colleagues, who arrive at work on time, who have good work habits and take pride in their work” (DeLeon, 1998). Communication skills is an area in which entry-level employees do best, although some have difficulty following the intent of oral instructions and using appropriate vocabulary and grammar (Ascher, 1988). With interpersonal skills, workers have the most difficulty asking for clarification and accepting constructive criticism (Ascher, 1988).

Employability skills enable individuals to prove their value to an organization and act as a key to job survival (Overtoom, 2000). Substantial research has been conducted on the importance of soft skills in the workforce. Many of the studies addressed high school and college graduates and share similar findings. One study found that 75% of long-term job success depends on people skills, while only 25% is dependent upon technical knowledge (Klaus, 2010). As industries change, employers seek employees who are adaptable and have skills beyond technical knowledge (Deloza, 2013).

Robles (2012) identified the top 10 soft skills perceived as the most important by industry executives. These skills include integrity, communication, courtesy, responsibility, social skills, positive attitude, professionalism, flexibility, teamwork, and work ethic (Robles, 2012). Another study reported that employers desired workers to be competent n four areas: managing self; communicating; managing people and tasks; and mobilizing innovation and change (Krahn, Lowe & Lehmann, 2002).

The researcher sees employability skills as the skills required by industry that are not restricted to a given occupation and which make it easier to transition from school to work and which increase employment opportunities for TVET graduates. Thus, without employability skills, a person would find it difficult to cope in a changing work environment and would have difficulties in retaining his job.

3.6.3. Factors Influencing Employability of TVET Graduates

3.6.3.1. Generic Skills development

Employers expect graduates to not only have technical expertise but to be equipped with a wealth of generic skills. These typically comprise team working, self-management, problem solving, analysis and self-awareness skills (AAGE, 2012; CBI, 2011).

Employers consistently highlight generic skills as being of fore most importance when selecting graduates (AAGE 2012; CBI, 2011), implying a highly skilled graduate is therefore more likely to attain full-time employment upon graduation. Thus, TVET institutions should pay attention to this fact and incorporate appropriate learning activities to develop these skills through the study programs.

3.6.3.2. 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.

3.6.3.3. Professional Expertise

In order 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 affects 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 Heidjen, 2006).It is thus often seen as the pre-requisite for successful career outcomes, at both an individual and organizational level. It is thus a central determinant of employability (Enders, 2002).

3.6.3.4. 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 pertaining to the job opportunities available are yet another important factor that affects employability of graduates.

3.6.3.5. Work Experience

Work experience is being seen as a major vehicle to enable students to make connections between their academic study and the world of work and to familiarize themselves with the skills necessary to be effective in the work setting. Work experience can take a variety of forms ranging from traditional placements through live project work to part-time employment. (Little et al., 2001).In line with this, Mason et al. (2006) found that structured work experience had positive effects on the ability of graduates to find employment within six months of graduation and to secure employment in graduate-level jobs.

3.6.3.6. Recruitment Criteria by Employers

The other factor that influence TVET graduates employability is the selection criteria used by employers during hiring new employee. In this regard, Allen and van der Velden (2001) indicate that the selection criteria used by employers when screening job applicants may include factors such as work experience, gender and social background which are distributed unevenly within educational qualification categories. This is another potential line of explanation why individuals with similar levels of formal certification may encounter varying degrees of success in securing employment in jobs which make use of their graduate-level skills and knowledge.

In line with this, Branine (2008) investigated changes in the procedures of graduate recruitment and selection that have been used by UK employers. He found that, irrespective of their organizations size or type of activity, employers tend to use more sophisticated and cost-effective recruitment and selection procedures than before.

Branine (2008) revealed that the process of graduate recruitment and selection is becoming more person-related than job-oriented since many employers are more interested in the attitudes, personality and transferable skills of applicants than the type or level of qualification acquired.

3.6.3.7. Demographic characteristics and other factors

Age determines employment outcomes, mature graduates experiencing more difficulties in accessing suitable employment than their younger counterparts (Wilton, 2011). Wilton also notes that younger graduates may benefit more from employability interventions at TVET, such as skill development. Wilton found variations in employment trends by gender, supporting previous studies which indicate salary differentials (Webster, Castano and Palmen, 2011) and better long-term employment prospects for male graduates (Coates and Edwards, 2011).

3.6.3.8. Extra-curricular activities

Extra-curricular activities is one of the factors that influence graduates employability. Thus, participation in extracurricular activities is one example of activitiesthatimprovesoftskills among students. In fact, success during the later stages of one's profession is influenced by knowledge gained by the individual through involvement in extra-curricular activities while attending TVET (Vermeulen and Schmidt, 2008). Extracurricular activities provide students with hands-on skills and training, alongside opportunities to increase self-esteem. Many studiesshow that student participation in sports, clubs and societies increase graduate employment prospects (Purcell & Hogarth, 1999).

3.6.3.9. Job search strategies

Career management, including labor market awareness, networking and applying for positions, is increasingly acknowledged as important to graduate employability (Bridgstock 2009; Pegg et al., 2012).There is evidence, although Bridgstock argues somewhat limited, these skills will positively impact on employment outcomes (Mayston,2002) and that actively seeking work will result in more employment success (Krug and Rebien, 2011). Students may search for jobs via centralized or college-level-based career services although these are criticized for focusing excessively on short-term employment outcomes (Watts, 2005).

Purcell et al.(2013) found no empirical link between take-up of university careers advice and graduate employment outcomes although there was evidence of a positive relationship between perceived quality of advice and job attainment.

Strategic networking enhances employment prospects (Eby, Butts and Lockwood, 2003) and having access to a social network, which is able to provide constructive and helpful careers advice, is also important (Purcell et al., 2013).Traditional job search strategies, such as responding to newspaper

advertisements, online job searches and circulating résumés, also remain popular methods of seeking employment (McKeown and Lindorff , 2011).

3.6.3.10. Labor market factors

Labor demand at local, regional and national levels may impact on the level and nature of employability skills that TVET graduates require to gain employment.

It could be argued that the structure of the labor market is one of the most fundamental determinants of employability. If there were no jobs, it would be difficult for people to assess themselves as employable. Indeed, the total number of available jobs, as well as the percentages of part-time and full-time jobs and the percentages of temporary and permanent jobs available are examples of the structure-related factors within local and global labor markets that can affect individual's employability (Mc Quaid & Lindsay, 2005). This is a view that has received support from other research in the field. For example, national economic situation has been argued to be an important determinant of employability (Brown, Hesketh, & Williams, 2003).In this view, an economic upturn would serve to make it easier for people to get a job, whereas a decline would have a negative impact on people's general possibilities for getting employment.

CHAPTER IV

4. THEORETICAL FRAMEWORK

4.1. Introduction

The first section of the chapter provides the human capital theory as the basic theoretical framework upon which this research is grounded. The other issue discussed in this chapter focused on the philosophical assumption that guide the research. Accordingly, this study adopted pragmatism in search of understanding and sharing knowledge about the employability of graduates. The final section of this chapter presents and discussion of the conceptual framework of the study.

4.2. The Human Capital Theory

The theoretical perspective guiding this research is human capital theory. This theory serves as a framework in examining the employability of manufacturing technology graduates and are applicable in individual contexts.

Becker (1964) proposed a human capital theory that posited society and individuals derive benefits from investing in education and training and that the more educated the workforce, the more successful the workers and the stronger the economies. Becker further posited that the social and economic returns of individuals are directly proportional to their level of education and training. Becker's prepositions were relevant and applicable to this study in that skills-training tends to improve learners' chances for employment, thereby contributing to their ability to cater to their welfare. In addition to benefits to the individuals, skill training also contributes to the human resource development of a nation and positively impacts its economic development (Becker, 1964).

The human capital theory (Schultz, 1961; Becker, 1964) argues that education increases individuals' productivity, which consequently enhances job performance. As such, education provides marketable skills and abilities relevant to job performance, and thus the more highly educated people are, the more successful they will be in labor market in terms of both incomes and work opportunities.

As a form of human capital (Becker, 1964; Schultz, 1963), general employability skills is further seen as a key contributor to aggregate economic growth and improved labor market outcomes for individuals. Lowe and Schulenburg (2001) alluded to the fact that, at an individual level, the acquisition of general employability skills contribute to personal development, through improved participation in society and professionally, in relation to favorable labor market outcomes and earnings, for example,

individuals invest time and money in order to become more skilled. Firms and societies typically invest in the human capital development of their employees and citizens in hopes of a future return on these investments. Skill development builds the human capital framework so vital for a healthy economy, which becomes the cornerstone for a knowledge-based economy (2001).

Bouchard (1998) summarized Schultz's human capital theory into seven assumptions (pp. 3–6):

1. Human capital is an investment for the future;
2. More training leads to better work skills;
3. Educational institutions play a central role in the development of human capital;
4. Employees need to improve their skills;
5. Training enhances employability;
6. Training can compensate for skill shortage; and
7. Employment and unemployment are economic concepts.

According to Becker (1964) as highlighted by DiRenzo (2010), human capital represents the individual's personal and professional experiences that can enhance one's career. In other words, it refers to the personal variables that may affect one's career advancement, such as education, work experience, training, skills, and knowledge (Mc Ardle et al., 2007).

According to DeFillippi and Arthur (1994), human capital also comprises the competencies of knowing-how, which refers to the accumulation of career related skills and knowledge that contribute toward organization's and individual's knowledge base (as cited in DiRenzo, 2010). Therefore, from the perspective of human capital theory, individuals can actually build employability by developing their human capital via continuous learning as they are teachable and attainable.

Moreover, human capital is a set of skills learned and accumulated through various paths such as working experiences, and this was found to be one of the crucial factors toward seeking employment over the years. Working experience is a good example of the significance of human capital in the role of seeking employment as it is one way for graduates to demonstrate what key employability skills they have acquired by providing this evidence of work-related or experiential learning (as cited in Crossman and Clarke, 2009). Employers generally prefer to hire people who have workplace experience, especially those who can show what they have learned from it, so one simple way of increasing

students‘ competitiveness in the labor market is to design work attachments into TVET programs such as internships or industrial training (Knight and Yorke, 2003).

In general, human capital theory correlates investment in individuals, via education and training, with increased economic prosperity (Schultz, 1961). Human capital theory is therefore strongly allied to the education systems as TVETs have a greater responsibility for the development of knowledge, and skills of the future workforce.

With the theoretical framework in place, the next stage is to discuss the philosophical approach that will underpin the research; which is what this chapter moves on to discuss. The philosophy of the research governs all elements of the research process, including the research methods chosen and the overall research design adopted. The research philosophy therefore is the determining factor in how the data is collected before the data findings can be tested against the theoretical framework.

The key questions are what philosophical paradigm is the best foundation for mixed methods research. Many authors advocate for a pragmatism worldview for mixed methods (Cherry Holmes, 1992). Pragmatism advances multiple pluralistic approaches to knowing, using "what works", and a focus on the research questions as important with all types of methods to follow to answer the questions, and a rejection of a forced choice between post positivism and constructivism. Thus, a major tenet of pragmatism is that quantitative and qualitative methods are compatible.

The rationale behind the choice of approach is the research questions, where the use of either quantitative or qualitative approaches does not completely address the research problem, whilst a combination of approaches does (Creswell & Plano Clark, 2011). The pragmatic approach emphasizes that multiple realities exist in any given proviso, and that, the researcher’s choice of paradigm is dependent on the research question the study is trying to solve (Saunders et al., 2009). The pragmatic approach provides for the use of both qualitative and quantitative research methodologies to collect information and make inquiry into complex phenomenon of social and natural contexts (Creswell, 2009; Morgan, 2007).

Therefore, the pragmatic research philosophy provides for the adoption of mixed methods as the data collection method which opens the opportunity to be objective and subjective in analyzing the points of view of the participants (Saunders et al., 2009).

The philosophical perspective adopted for this research is that of pragmatic approach. The researcher focused on this approach; because it is important in building a basis upon which mixed method research

is conducted. Creswell (2009) suggests that a pragmatic research approach seems to be the most prominent paradigm with a strong philosophical relationship for a mixed method approach.

Pragmatism is generally regarded as the philosophical partner for the mixed-methods approach. It provides a set of assumptions about knowledge and inquiry that underpins the mixed-methods approach, and distinguishes the approach from purely quantitative approaches that are based on a philosophy of (post)positivism, and from purely qualitative approaches that are based on a philosophy of interpretive or constructivism (Johnson &Onwuegbuzie, 2004).

Pragmatism also helps to shed light on how research approaches can be mixed fruitfully; the bottom line is that research approaches should be mixed in ways that offer the best opportunities for answering important research questions (Denscombe, 2008). Pragmatism has emerged as a common alternative to the either/or choice of positivism and constructivism (Creswell & Plano, 2007). Thus, instead of relying on deductive reasoning and general premises to reach specific conclusions, or inductive approaches that seek general conclusions based on specific premises, pragmatism allows for a more flexible abductive approach. By focusing on solving practical problems, the debate about the existence of objective “truth” or the value of subjective perceptions, can be usefully side stepped. As such, pragmatists have no problem with asserting both that there is a single “real world”, and that all individuals have their own unique interpretations of that world (Morgan, 2007).

The pragmatic approach similarly sees the separation of subjectivity and objectivity as a “forced dichotomy” and “an artificial summary of the relationship between the researcher and the research process” (Morgan, 2007), since the reality is that complete objectivity and complete subjectivity are equally unattainable. It recognizes that “research is not helped by making it appear value free" (Stake,1995). The pragmatic approach recognizes that the relationship between researcher and research is characterized by intersubjectivity, and that intersubjectivity is an integral part of social life and therefore characterizes research in practice.

This study adopted pragmatism in search of understanding and sharing knowledge about the employability of manufacturing technology graduates. As the researcher believe the purpose of research is to find practical, generalizable answers to real-world problems using information learned from one method in one specific situation and making the most suitable use of that knowledge in other environments. As a researcher, mixed-methods and data collection and analysis appear to me as a logical way to approach my proposed research. Such an approach enabled me, to find practical solution to questions in this study.

What is real or practical to the participants and how they react to that in their environment is what is considered a practical approach to determine the truth in research (Johnson&Onwuegbuzie,2004; Dewey,1938). Therefore, the logic of meaning or epistemology should be derived from the very practical experiences and consequences of these experiences on the people who live the situation under observation. In terms of research methods, it is practicality and consequences of the methods used that should be the focus of the finding of the truth and not just what the truth, itself, might be (ontology).In short, "when judging ideas we should consider their empirical and practical consequences " (Johnson & Onwuegbuzie , 2004).

There are six common elements for doing social research: ontology, epistemology, axiology, methodology, research methods and rhetoric.(Creswell &Plano Clark, 2007). These are philosophically determined, so vary by world view. Each element plays a role in the design and execution of research because they determine what and how we can know the social world and the problems it faces (Creswell & Plano Clark, 2007). In this part of the discussion, each element is described in relation to the research process of this thesis.

The first element is ontology, which asks questions about the nature of reality. This is relevant to this thesis in two respects. On the one hand, the researcher agrees with objectivism's assertion that there is an independent external reality that can be revealed through hypothesis testing. But, on the other hand, the researcher also sees this as problematic because it is not clear if one explanation of reality can be considered 'better ' than any other. This second point is important because it leads one to sympathize with the constructivist's view that the 'truth' about reality cannot be determined. If this is the case, then perhaps all we can look to provide is multiple perspectives of phenomena that taken together account for the subjective experience of socially situated agents (Teddlie & Tashakkori, 2009; Cherry Holmes, 1992).

By re-conceptualizing ontology in this research in less rigid and negotiable terms, enables something interesting to be said about the practice of recycling in everyday life and social reality that goes beyond contingent beliefs and interests.

If ontology asks questions about the nature of reality, epistemology asks different ones about the nature of knowledge. Within the social sciences epistemology has usually been addressed in relation to an epistemological dualism that separates research along objective-subjective lines (Bryman,1998): objectivism being associated with the impartial research of post-positivist approaches; subjectivism with the interpretive research of constructivist ones. In countering this dichotomy, the researcher welcomes pragmatist researcher's efforts to replace epistemology with a principle of practicality

(Creswell & Plano Clark, 2007). This is about collecting, analyzing and integrating together whatever forms of data necessary to answer the research questions. As Teddlie and Tashakkori (2009) have suggested, viewing epistemology as operating on a continuum, rather than two opposing sides, is probably closer to how most researchers approach research in the real world anyway.

The third element in the research process is axiology, something that often gets glossed over when presenting research findings. This refers to the role of values in shaping research(Creswell&Plano Clark,2007).Axiology is important because, in addition to influencing the whole research process, values also enable meaningful inferences and conclusions to be drawn. Many social researchers remain divided in relation to values. Those operating within the post-positivist tradition have traditionally sought to be unbiased in their research, using checks to eliminate any bias. In contrast, constructivists viewing the researcher's interpretation which flows from their personal, cultural and historical experiences. The researcher's intent is to make sense (or interpret) the meanings other have about the world.

In the research process, methodology refers to the philosophy underpinning the research and its design. This can be contrasted with research methods, which are the specific techniques of data collection and analysis (Creswell & Plano Clark, 2007). Social researchers have traditionally treated quantitative and qualitative methods as incompatible at the level of reasoning. Quantitative methodologies and methods are grounded in deductive reasoning, which involves the testing and refining of a priori theories. Qualitative methodologies and methods deal with inductive reasoning, which involves generating theory 'bottom-up'. Sharing the pragmatist's view, the researcher attempts to counter the link between methodology and methods, replacing it with a problem-centered, plurality of method (Olsen, 2004). The point being that whatever data types and analysis techniques necessary to answer the research questions at hand get used, which it is claimed should lead to holistic answers being generated that are based on multi-dimensional accounts.

The final element of the research process is rhetoric, or the language and presentation of research findings (Creswell & Plano Clark,2007).This is important because it establishes how a community of scholars shares and communicates their knowledge, at the same time as setting the boundaries of what is deemed professionally acceptable.

The dichotomy that splits all other parts of the research process operates here too. In an effort to emulate the natural sciences, those operating in the post-positivist worldview tend to adopt formal language and use agreed upon definitions when it comes to presenting research findings. Those operating from a constructivist worldview tend to adopt an informal, literary style that attempts to

retain the subjective meanings and experiences of the original accounts. This research used both formal and informal language in the reporting of the findings, in an attempt typical of pragmatic researchers to bridge the gap between worldviews.

4.3. Conceptual Framework of the study

Literature identifies three different perspectives of employability; the socio-economic perspective – the ability of different labor force groups to gain and maintain employment (McQuaidand Lindsay, 2005 pg. 209), the organizational perspective – where recruiters through different approaches attract competent people to attain organizational goals (Nauta etal.2009), and the individual perspective, which includes individual dispositions, skills, attributes and behaviors that improve a person's suitability for appropriate and sustainable employability (Hillage and Pollard, 1998; Coetzee, 2008; Fugate et al. 2004). Employability is also influenced by institutional factors such as education, reflected in the human capital theory (Becker, 1964), and socio-demographic factors (Blasko et al. 2002).In relation to employability, this study focuses on the third perspective of individual disposition and the role of education in enhancing the employability of graduates.

The ideas and arguments presented in this study are guided by the concept of 'employability' and its links to TVET. Thus, employability in this study links TVET with the world of work. The conceptual framework that has been developed is an adaptation of three models (i.e. Harvey,2001;Knight&Yorke ,2004 and Pool &Swell,2007) that can be modified to fit the purpose of this study.

In explaining the framework developed for this study, the definition of employability as used in this study needs to be addressed. Accordingly, the definition applied in this study is:

> *"a set of achievements-skills, understanding and attributes-that make graduates more likely to gain employment and be successful in their chosen occupation- which benefit them ,the working force, the community and the economy"(York,2004,p.410).*

York's definition of employability is adopted in this study because it focuses on the ability to a get a job based on the knowledge, skills and competencies that graduates have.

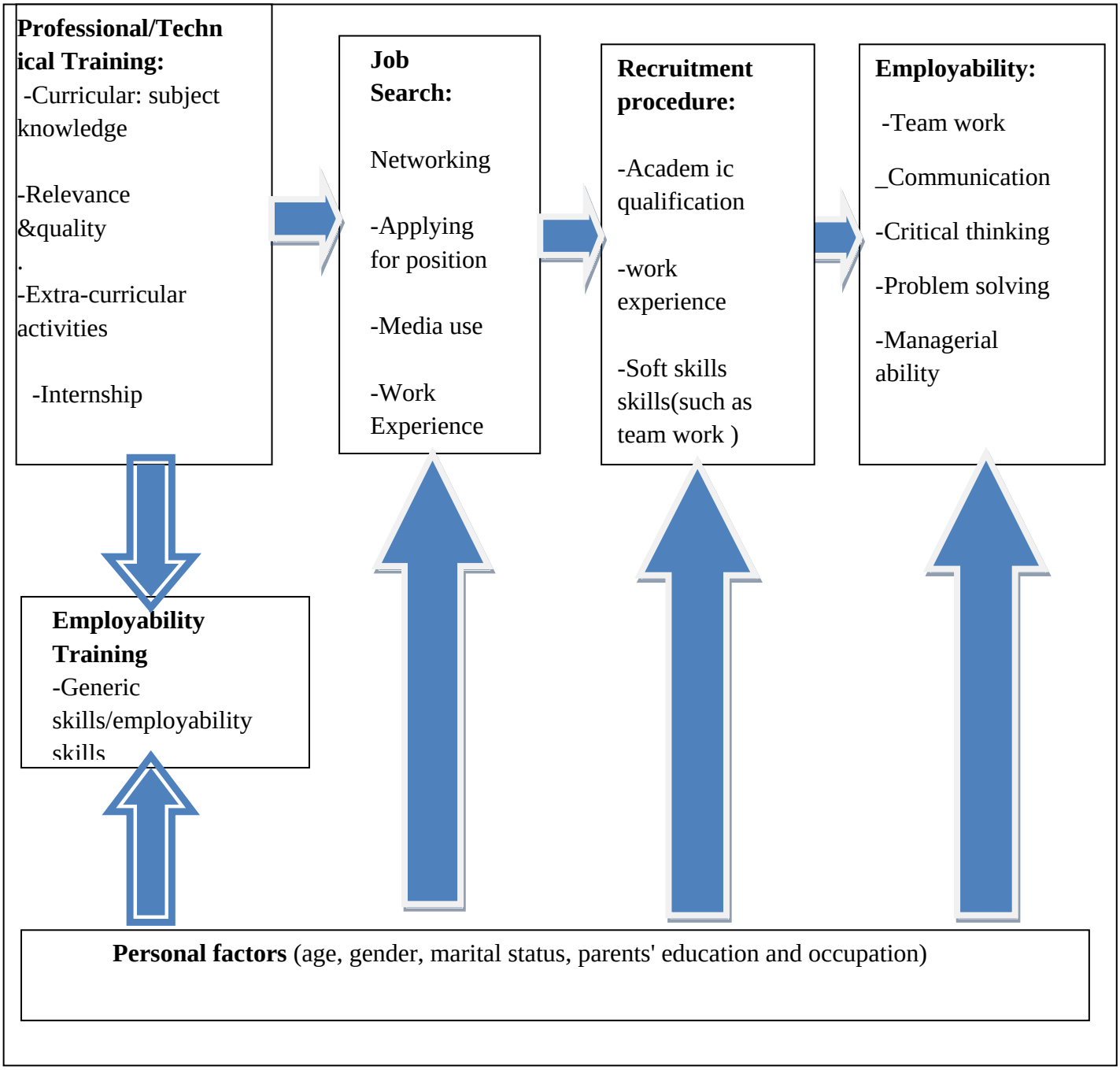
The study focus on employability which means having the qualities needed to maintain a job and progress at the work place. The figure 6 illustrates a coherent and logical set of variables that primarily guided the study. The study sought to find out how the manufacturing technology graduates of GMF rate the training process in terms of capacity of teachers' to deliver manufacturing content, the

relevance of skills taught in TVET, the level of linkages and collaboration with industries ,adequate finance and availability and use of physical resources.

Based on the literature that focuses research on employability, it was found that many factors affects graduates employability. To be employed immediately upon graduating depends on many factors that could be controlled or outside the control of the graduate. External factors not within the control of the graduate includes economic growth that is in direct relationship with the creation of job opportunities, the fluctuation in the demand and supply of the labor market, the quality of and reputation of the TVET, as well as organizational factors involving the employer's practices in employee selection. The conceptual framework focusing on to analyses intervention at individual's level of the graduate to increase their employability during their term at the TVET. It is important matter because the individuals (students) are involved in increasing their employability level in the job market except those who aims to be self-employed or being an entrepreneur. Being sensitive to job market needs and a good career planning do assist the students to be more competitive in the job market. Employability then has potentials that the graduates should seek to develop to land and succeed in a suitable employment in the context of the current labor market (Clarke, 2008).

The relationship between graduate, institution and employer is not simple .It depends on the way in which graduates have engaged with employability development opportunities provided by institutions, and central support services, experiences embedded in the curriculum, work experience or opportunities to reflect on and record experience. The pedagogical processes and reflection on and articulation of learning are essential elements that are mediated by subject discipline and external factors, not least the extra-curricular experience of graduates and, ultimately, the recruitment practices of employers (Harvey, 2001).

Figure 6.Conceptual Framework of the Study



The conceptual framework indicates the variables to be studied and the relationship between the variables. The variables shown in figure 6 above include, personal factors namely sex, age, marital status, parents' education and occupations. The independent variables include professional technical training, employability training, job search, recruitment procedures. The dependent variable is employability. The graduate personal characteristics will have a direct influence on the independent variables. Similarly, the independent variable will have direct and indirect influence on the dependent variable. The basis of the conceptual framework is to show how the graduate's personal factors,

professional-technical training, employability training, job search behaviors, recruitment procedures determine the employability of manufacturing technology graduates.

In this study, the most important skills considered to graduate employability(i.e. dependent variables) dimensions include, team work, communication, critical thinking, problem solving, and managerial ability etc. Besides, indicators of independent variables in this study could be measured using the following dimensions and indicators as illustrated in Figure-6 above:

1. **Professional-technical training**

1.1. **Curricular: Subject knowledge**

The academic knowledge, skills and understanding gained during TVET and ultimate achievement has significant effects on their future success in the workplace (Copps & Plimmer, 2013).

As well as imparting academic knowledge through TVET courses, the Vocational education system increase the quality of human capital by improving employability of its graduates (Knight and Yorke, 2004) including the related skills. Knight and Yorke (2004, pg. 25) define employability and the related skills as a synergistic combination of personal qualities, skills of various kinds and subject understanding. The skills are also categorized as hard skills (subject understanding) and soft skills (skills transferable across occupations and working environment) and have been summarized differently by several researchers (Finch et al. 2013; McLarty, 1998; Elias and Purcell, 2004)

1.2. Extra-curricular activities: the present study argues that participating in extracurricular activities is considered an individual human capital investment. The involvement in such activities assists in the development of good personal characteristics (e.g., motivation, leadership, communication skills) that will, in turn, strengthen the employability attributes of graduates in the labor market.

Thus, the knowledge and experiences gained through participation in extra-curricular activities becomes a value added to graduate labor during process of seeking employment.

1.3. Quality and Relevance of Training:

!.3.1. **Quality:** focused on the teaching and learning process and its effectiveness. It is a measure of the of any TVET program, that it is effectively conducted and relevant in terms of meeting skill needs.

1.3.2**. Relevance:** this component considers the extent to which TVET is responsive to labor market needs and requirements. This component reflects the assumption that the primary and key role of

TVET is to raise skills levels and to help matching skills needs at all levels in today's complex and changing labor markets.

1.4. **Apprentship/Internship:** the formal apprenticeship training refers to a structured plan of learning shared between the workplaces (industries, trades, offices, etc.)and training centers (schools or Technical and Vocational Educational and Training colleges). It indicates a model where individuals receive practical training at workplaces and general or theoretical education at training schools, colleges or other related centers that are established to provide trainings (UNESCO & ILO, 2002).

2. Employability Training

2.1. Employability Skills:

This study used a list of the employability skills adopted from the Employability Skills Framework by Mc Quaid and Lindsay (2005).This adopted Employability Framework contains employability skills which come under three categories of essential attributes, personal competencies, transferable skills.

2.1.1. **Essential attributes**: include basic social skills, honesty and integrity, basic personal presentation, reliability, willingness to work, understanding of actions and consequences, positive attitude to work, responsibility, and self-discipline.

2.1.2**. Personal competencies**: proactively, self- motivation, initiative, assertiveness confidence, act autonomously.

2.1.3. **Transferable skills:** reasoning**,** problem solving**,** adaptability**,** team work**,** ICT skills, occupational specific skills, interpersonal; and communication skills, customer service skills, job-specific skills, planning and management skills.

3. Job Search

Job search activities are regarded as an important indication of employability, especially from the perspective of individual employment. Job search activities include the individual desire to overcome unemployment and the capability to under take appropriate steps to succeed on this way. The assumption here is that person with more job search activities are more employable and will find more often a job.

Job seeking' refers to job seekers' skills and the strengths and weaknesses of a job seeker's approach to the job market (M&L, 2005; McQuaid, 2006). Urwin and Shackleton (1999) found that a lack of appropriate job seeking skills had a negative impact on employability. And, at the institutional level, Harvey (2004) found that providing opportunities to students using central support services, labor

market information, interview techniques and curriculum vitae writing had a positive impact on employability.

4. Recruitment Procedures

Thus, this study seek to examine the recruitment processes used by industry to employ graduates and what factors impede or enhance the recruitment of manufacturing technology graduates within the labor market.

4.1. **Academic Qualification**: is a factor that determines graduate employability. A study findings suggest that 'educational qualifications significantly increase an individual's chance of being in employment. In fact, individuals with qualifications are not only more likely to be in employment, but also less likely to be economically inactive or unemployed than individuals with no qualifications' (O'Leary et al., 2005).

4.2**. Soft skills:** The non technical traits and behaviors needed for successful career navigation" (Klaus, 2007, p. 1). Klaus (2007) further suggested that soft skills include "personal, social, communication, and self-management behaviors" (p. 2).Additionally, Hargis (2011) classified "work ethic, critical thinking, and problem solving" skills as soft skills (p. 2).

Soft skills are very important for student in their transition from TVET to the world of work. That is why the need for educational institutions to incorporate and emphasize soft skills training and development in their curricula. The employers are expecting that new recruits possess soft skills prior to their employment, and therefore, expect that the learning institutions take responsibility for facilitating students' development of such skills.

4.3**. Work experience:** is also a factor that influence graduate employability. So much research points to work experience as being something that prospective employers value greatly in graduates. Some of the key findings of the Work Experience Group (2002), appointed by government to look at work experience opportunities in TVET, were as follows:

- With guidance, students of all ages can learn from their experiences in the world of work to develop their key competences and skills and enhance their employability.
- Employers value people who have undertaken work experience, been able to reflect upon that experience and then go on to articulate and apply what they have learnt.

- Partnership between employers and education are valuable in promoting work related learning and in improving the quality and quantity of such experiences.

Therefore, appropriate work experience provides industrial exposure and is used by employers as a selection criteria when recruiting graduates (Mason, 1999). Graduates' work experience is also viewed as an indicator of workplace readiness (Andrews and Higson, 2008; Jackson, 2013).

5. Personal Factors

Graduate employability is also predisposed by socio- demographic factors (gender and parents' level of education and occupation) and work experience. The literature also shows that employability and the related skills are influenced by social-demographic factors such as age and parents' occupation (Blasko et al. 2002), education (Schultz, 1961) and work experience (Groot and van den Brink, 2000). This implies that socio-demographic factors also determines on the employability of individuals.

Since there is a clear link to attributes of graduates which are valuable to employers, graduates' employability is a crucial goal for Technical and Vocational Education and Training institutions (TVET) to guide their curriculum development. Also students preparing for job search, and employers seeking to identify their potential means to impact it, need to understand the genesis of employability. As Figure 6 shows, employability can be conceptualized as the result of both TVET's ability to provide employability development opportunities, and graduate characteristics and efforts, including their work and extra-curricular experiences such as internships.

CHAPTER FIVE

5. RESEARCH DESIGN AND METHODOLOGY

5.1. INTRODUCTION

This chapter presents the research design and methodology used in this study. Methodology is here understood as the strategy that guides the actual research design and the conduct of the research plan. The chapter organized as follows: The first section deals with the research approach and research design while the second section discusses the methods, sources of data and sampling, instruments of data collection and data analysis techniques. Finally, the chapter concluded with the issues of ethics, validity and reliability, in the context of this study.

5.2. RESEARCH APPROACH

A mixed-methods approach or strategy is defined as research in which the investigator collects and analysis data, integrates the findings, and draws inferences using both qualitative and quantitative approaches and methods in a single study or program of inquiry (Tashakkori& Creswell, 2007).

There are six major strategies of mixed research methods, namely, sequential explanatory strategy, sequential exploratory strategy, sequential transformative strategy, concurrent triangulation strategy, concurrent embedded strategy and concurrent transformative strategy (Creswell, 2003).

From the six mixed research methods or strategies listed above, this study employed the concurrent nested (embedded) mixed research method or strategy. More emphasis was given for quantitative approach, and the qualitative method was embedded in it. The strategy employed when a researcher chooses to utilize different methods to study different groups or levels (Creswell, 2003).

The study employed mixed method approach which is an aspect of both quantitative and qualitative procedures (Creswell, 2003).This method emanates from the conviction that neither quantitative nor qualitative approach is self-sufficient. The study employed a mixed method approach using the concurrent nested strategy. The approach to research combines the elements of quantitative and qualitative data collection strategies, which allowed the researcher to present a complete analysis of the problem. This was advantageous to the research, as either the quantitative or qualitative method would not present a holistic view of the situation.

Creswell (2003) and Johnson and Christensen (2004) suggested that data collection for the mixed method design can be conducted concurrently or in phases. Creswell posited "The concurrent nested model may be used to serve a variety of purposes. Often, this model is used so that a researcher can gain broader perspectives as a result of using the different methods as opposed to using the predominant method alone" (p. 218). By using the concurrent nested strategy, the researcher was able to collect the quantitative and qualitative data simultaneously and give priority to the quantitative paradigm in this study. In mixed methods procedures, the concurrent nested design gives the researcher flexibility in elevating one paradigm while embedding the other in the research.

Quantitative data collection method allowed the researcher to survey a significant group of participants (i.e. graduates and employers) to capture information that yielded data, which quantified the level of employability of manufacturing technology graduates. On the other hand, the qualitative data collection method allowed the researcher to conduct interviews that further explained the teachers' perceptions of the employability of manufacturing technology graduates.

The use of mixed methods was chosen because of the complex nature of the problem under investigation. Issues concerning the employability of graduates are complex and require a vast range of participants to give variety of perspectives. In this study, through quantitative research it was made possible to describe the perspectives of graduates and employers on the issues of graduate employability and their views on what needs to be done to improve the situation. On the other hand, the use of qualitative research method gave insight in to the experiences of teachers concerning the employability of graduates. Teachers were able to describe what they understood about employability skills and how it could be achieved.

Thus, the use of a mixed- method intended to search for complementarity by seeking an elaboration and clarification of the results from self-completed questionnaires by comparing them with the results from the interview (Johnson&Onuegbuzie,2004). The expectation was that two research methods(i.e. quantitative &qualitative)would produce data that complement one another.

More specifically, answers to the research questions of this study were complex and a single method may not have been as effective in seeking solutions to the research questions. According to Tashakorri and Teddie (2003), these complex combinations of methods and approaches provide greater opportunities for mapping, analysis and interpretation so that holistic understandings of the research area would be gained.

A mixed-method approach was also used for the triangulation of data collected. The triangulation here was done by using questionnaires with graduates and employers and interviews with teachers of manufacturing technology department. The supplementing of face-to-face interviews with closed ended questionnaires considered important for this research. What the graduates and employers said could be validated with what teachers thought about the same issues. Furthermore, statistical results obtained from quantitative analyses were better explained through the findings of the qualitative data analyses from interviews. Hence, using both descriptive and statistical analytical tools that were available off set the weaknesses of both methods (Sale et al., 2002).With the mixed-methods approach the researcher was not limited by the strict confines of either quantitative or qualitative research.

Therefore, the use of both quantitative and qualitative methods was necessary to capture the experiences and views of all participants and to make objective measurement and a logical analysis of the employability of manufacturing technology graduates.

5.3. RESEARCH DESIGN

Research design is a strategy or a plan used in conducting research to obtain data that will respond to research questions or hypotheses. Borg and Gall (1989) state that a "researcher attempts to design a study so that it will yield the strongest possible evidence to support or refute a knowledge claim."

According to Bak (2004), "research design provides an indication of the means to be used to attain the research objectives." Bak further argues that it "outlines the procedures to be followed during the research and the sources for data collection". In other words, a research design is a combination of methods and procedures to be followed in conducting research to eventually come to the findings or testing of a hypothesis.

In this study, survey questionnaire used to conduct the quantitative research for examining the employability of manufacturing technology graduates. A qualitative interviews employed for exploring the experience of GMFA teachers of the four selected TVET institutions. The researcher argues that graduate employability can best be understood when triangulated by data collected from different actors in their context. The quantitative statistics from survey research cannot be enough to uncover the graduate attitudes and views. So enriching with the interview result becomes very vital.

Besides, graduate employability also related to the characteristics of the interpretive paradigm of research according to which: humans actively construct their own meanings of situations; meaning arises out of social situations and it is handled through interpretive processes; behavior and, thereby,

data are socially situated, context-related, context-dependent and context-rich (Cohen, Manion& Morrison, 2007). Triangulating data sources is a means for seeking convergence a cross qualitative and quantitative methods (Creswell, 2003).

5.4. RESEARCH SETTING

The study was carried out in the four towns (i.e. Adama, Bishoftu, Asela and Ambo) in Oromia. Purposive sampling was employed for selection of these research sites. The vicinities and industries were selected based on the following assumptions.

1. The concentration of industries and small enterprises are found in those areas.
2. Since potential employers to absorb the majority of TVET graduates are found in those areas.

Basing oneself on the factors indicated above, the following industries were selected for the purpose of this study. From these industries, manufacturing technology graduates of 2009-2011G.C were taken from each industry that constitute a sample of 300 graduates.

Table:1 Sample of Industries

No	Name of Industries	M	F	Total
1.	Adama Garment Industry.	13	37	50
2.	Adama Agricultural Machinery Industry.	23	27	50
3.	Belayab Cable Manufacturing PLC.	22	7	29
4.	Asela Malt Factory.	22	8	30
5.	Bishoftu Automotive Industry.	55	26	81
6.	Homicho Ammunition and Chemical Engineering	34	26	60
	Total	169	131	300

The above Table 1, shows selected industries and sampled graduates from each industry. For this study, four government TVET colleges (i.e. Adama TVET, Athlete Kenenisa Bekele TVET, Bishoftu TVET, and Ambo TVET) were purposely selected for their location and proximity to industries and

enterprises. Each of these institutions has different departments. From the existing departments manufacturing technology department was purposely selected. This department selected for this study, because the researcher thinks that this stream is the major supplier of skilled labor force for industries and enterprises. This implies that training of skilled human power requires for economic growth and productivity of Oromia Region. Finally, from nine field of studies in the department of manufacturing technology department, General Metal Fabrication Assembly(GMFA) was selected by using simple random sampling techniques.

5.5. Demographic Characteristics of Respondents

The demographic and profile of participants who took part in this study, namely, graduates, employers, and teachers are presented in this section.

5.5.1. Background Information of Graduates

The background seeks information about the participants including gender, age, marital status, and work experiences . Data for each of these characteristics are indicated in the table below.

Table 2: Graduates profile

	Variables	Frequency	%
1.	Gender		
	1) Male	169	56
	2) Female	131	44
	Total	300	100
2.	Age in years		
	1) 16-20	8	3
	2) 21-25	164	55
	3) 26-30	88	29
	4)Above 30	40	13
	Total	300	100
3.	Marital Status		
	1)Single	219	73
	2) Married	69	23
	3) Separated	12	4.0
	4) Widowed	_	_
	Total	300	100
4.	Work Experience		
	1) Less than 6 months	32	11
	2) 6-12 months	51	17
	3) 1-2 years	96	32
	4) More than 2 years	12 1	40
	Total	300	100

Table, 2 reveals that (56 %)of respondents were males and (44%) were females. The table above also shows the distribution of the respondents by age. The majority of the respondents(55%) within the age category of 21 and 25, followed by those who are between 26-30 (29%).The others (13%) were in the category of above 30 years. The remaining (8%) of respondents were in the age category 16 and 20.

The marital status of the respondents shows that the majority were single (73%) followed by married (22.7%).The remaining (4%) were divorced, whereas (.3%) was widowed.

With regard to the work experience, the table shows that majority of the respondents (40%) have more than two years of experience in their work. It is also clear that (11%) and (17%) of the respondents have an experience of less than 6 months and 6-12 months respectively. The remaining (32%) of the respondents have 1-2 years of service in their enterprise.

5.5.2. Background Information of Employers

The demographic characteristics of respondents include gender, age, qualifications, position, and work experience. Data for each of these characteristics are indicated in the table below.

Table 3:Managing directors ,Human resource managers, supervisors etc. Profile

No	Variables	Number	%
1.	Gender		
	1) Male	50	83%
	2) Female	10	17%
	Total	60	100
2.	Age in years		
	1) 18-25	9	15%
	2) 26-30	19	32%
	3) 31-35	8	13%
	4) 36 and above	24	40%
	Total	60	100
3.	Education Level		
	1) Masters	8	13%
	2) Bachelor	25	42%
	3) Diploma	23	38%
	4) Other qualification	4	7%
	Total	60	100
4.	Position		
	1) Managing Director	6	10%
	2)Human Resource Manager	7	12%
	3) Project Manager	3	5%
	4) Supervisor	24	40%
	5) Others	20	33%
	Total	60	100
5.	Work Experience		
	1) 1---3years	9	15
	2) 4--6years	10	17
	3) 7--10years	35	58
	4) Above 10 years	6	10
	Total	60	100

Table 3, shows the demographic background of the employers who participated in the study. A majority of the employers 50(83%) were males, whereas 10(17%) were females. As to employer's age, it was found that 9(15%) were between 18-25 years of age, whereas 19(32%) of them were between 26-30 years of age. Besides, 8 (13%) of respondents were between 31-35 years of age. The rest 24(40%) of the respondents were 36 and above years of age.

With respect to qualification, the majority of respondents 25 (42%) had bachelor degree and 23(38 %) had diploma. The remaining 8(13%) had master's degree, whereas 4(7%) of them had other qualifications.

As to their position in the organization, 6(10%) were managing directors, whereas 7(12%) were human resource managers. Responses also show that 3(5%) were project managers and 24(40%)were supervisors. The remaining 20(33%) of them were worked in others different positions.

Responses with regard to working experiences, 9(15%) of employers have served between 1 to 3 years of services, and 10(17%) of them have served between 4 to 6 years of services. Besides, 35(58%) of them served between 7-10 years, whereas 6(10%) have served above 10 years.

5.5.3. Profile of Teachers

There are twelve respondents participated in the interview. They were manufacturing technology trainers .The letters A1, A2, A3... A12 were used as codes instead of names of the interviewees for convenience as regard to ethical issues.

Table 4: Background Information of Teachers

No	Code	sex	Age	Name of TVET Center	qualification	Work experience
1	A1	M	27	Adama poly. technical College	BSc	6
2	A2	M	42	Adama. poly. technical College	MSc	22
3	A3	M	45	Adama poly. technical College	MSc	23
4	A4	M	40	Athlete kenenisa poly. technical College	MSc	20
5	A5	M	50	Athlete kenenisa poly. technical College.	BSc	30
6	A6	M	28	Athlete kenenisa poly. technical College	BEd	6
7	A7	M	46	Bishoftu poly. technical College.	MSc	27
8	A8	M	26	Bishoftu poly. technical College	Diploma	4
9	A9	F	50	Bishoftu poly. technical College.	BEd	31
10	A10	M	26	Ambo poly .technical College.	BSc	4
11	A11	M	24	Ambo poly. technical College.	Level IV	3
12	A12	M	25	Ambo poly. technical College.	Level IV	4

Table 4 above, indicates the back ground information of informants. Among the informants, eleven of them were males, whereas one was female. The age distribution of teachers indicated that, 5(42%) were between 41-50 years, while 6 (50%) were between 20-30 years of age. The remaining 1(8%) was in the category of 31-40 years of age. Out of the 12 teachers interviewed, 5(42%) had bachelor degree, whereas 4(33%) had master's degree. In addition,2(16.7%) had level 4 qualification and the remaining 1(8%) had diploma.

5.6. SAMPLE AND SAMPLING TECHNIQUE

Sampling is the process of selecting a sub-set of cases in order to draw conclusion. The study applied both probability and non probability sampling designs.

5.6.1. Graduate Sample

Simple random and available sampling was used to select graduates for questionnaire. Regarding those graduates, the consolidated list of General Metal Fabrication Assembly graduates for the year 2009-2011 was collected from the sample TVET institutions. The total number of graduates were 685. Accordingly , out of the total population, 340 graduates were randomly selected using systematic random sampling. Finally from those graduates, 300 graduates were selected using available sampling.

Prior to selecting the sample, the researcher sought the necessary approvals from the deans of the four selected TVET institutions. After obtaining the relevant approvals, the researcher accessed the participants through student enrollment list from the record office. The researcher used the following steps to access and conduct this sampling procedure:

1. Request access to documents with graduates' data from relevant personnel.
2. Access data with alphabetic listing of the general metal fabrication assembly graduates (2009-2011G.C) from the samples TVET colleges record office.
3. Take the list of graduates.
4. Assign a number to each participant's name.
5. Select every 2nd name until the required number of participants is drawn.

Table 5: Sample of Graduates

No	Name of TVET	Total population	Graduates Sample and year of graduation						
			2009G.C		2010 G.C		2011G,C		
			M	F	M	F	M	F	Total
1	Adama poly. technical College.	264	17	16	21	12	26	16	108
2	Athlete kenenisa poly. technical College.	216	16	14	18	15	10	17	90
3.	Bishoftu poly. technical College.	119	12	6	10	8	7	9	52
4,	Ambo poly .technical College.	86	8	4	11	3	11	13	50
	Total	685							300

5.6.2. Employer's Sample

The second cohort to be identified in this research samples section is the employer group. From the total of 168 employers working in six industries, 60 employers was randomly selected using systematic random sampling. The majority of the respondents were immediate supervisors of the graduates in the workplaces; team leaders; and administrators. The reason for selection of employers was based on the assumption that the managers and supervisors were the direct assessor of their employees' in terms of skills, competence and job performance in the work place.

Table:6. Sample of Employers

No	Name of industry	Total population.	Sample population		
			M	F	Total
1	Adama Agricultural Machinery Industry.	29	8	2	10
2	Adama Garment Industry.	20	3	2	5
3	Belayab Cable Manufacturing P.L.C.	10	5	_	5
4	Bishoftu Automotive industry.	56	18	3	21
5	Asela Malt Factory.	15	4	1	5
6	Homiicho Ammunition &Chemical Engineering Industry.	38	12	2	14
	Total	168			60

Prior to selecting the sample, the researcher sought the necessary approvals from the managers of the selected industries. After obtaining the relevant approvals, the researcher accessed the participants through employers enrollment list from the administration personnel. Finally, used the following steps to access and conduct this sampling procedure:

1. Request access to documents with employers' data from relevant personnel.
2. Access to lists of employers who are currently working in the sample industries from the office of administrative personnel.
3. Take the lists of employers.
4. Assign a number to each participant's name.
5. Select every 2nd name until the required number of participants is drawn.

5.6.3. Teachers Sample

The total number of teachers in the manufacturing technology department in the four TVET institutions is 38.Out of these teachers,12 teachers were selected by using purposive sampling technique, from four TVET colleges. Accordingly, three representatives from each TVET institution was obtained in keeping with the case study approach. The three representative within each TVET institution held as a teacher with responsibility over the teaching-learning process with regard to manufacturing technology department. In line with assumption, participants were selected for participation in the semi-structured one-to-one interviews.

The purposive sampling technique was employed to select the key participants for the interviews of the study who were perceived as possessing the information needed to make a contribution to the phenomenon under study. The selection of interview participants were based on their qualification, field of study and work experiences.

Based on the procedures indicated above, the researcher has obtained a sample size of 300 graduates, 60 employers and 12 teachers to represent the targeted population.

5.7. INSTRUMENTS OF DATA COLLECTION

The primary method of data collection was survey questionnaire and semi-structured interviews. The data gathering instruments designed on the basis of the review of the literature, study objectives and identified variables. The instruments were pre-tested prior to the actual survey to identify areas for

modification and refinement. The quantitative data collection instrument focused on collecting numeric data from the participants to measure the employability of manufacturing technology graduates For qualitative data, the researcher created open-ended questions to engage the participants in semi - structured interviews.

5.7.1.Graduates Questionnaires

This research focuses on graduate perspectives of their own employability development. In order to obtain the graduates viewpoint, a questionnaire was the main data collecting instrument from manufacturing technology graduates.

The questionnaire was distributed for selected manufacturing technology graduates of the year 2009-2011 G.C (i.e. level III) and currently working in selected government and non-government industries in Oromia. .

The first part of graduate questionnaire include questions that focused on the personal characteristics of the respondents. The second and third part of the questionnaire consists of closed questions (i.e. such as multiple choice, dichotomy responses and Likert scale ratings). These questions presented to the graduates to ascertain wide information on the issue of graduate employability to obtain an understanding of their viewpoints. The fourth part (i.e. part iv) ,item1 of the graduate instrument is comprised 23items that asked graduates to indicate their level of competencies for each employability skill. A 5-point Likert- scale with response choices ranging from 1= not at all to 5=to a very high extent , was used in this part of the instrument. The last part includes open-ended questions that is prepared to elicit graduates opinions and suggestions that could improve the employability skills and employment opportunities of future TVET graduates.

5.7.2. Employer's Questionnaires

The second type of questionnaire was provided to management personnel, who are currently working in the same industries with graduate respondents.

In the first part of the employer questionnaire, items include multiple choice items that were designed to elicit personal background information of the employers. Respondents were asked to answer each question by recording a check mark in the appropriate space.

In part II, of the questionnaire, consists of multiple choice items that focused on gathering information about employability of graduates from the views of employers. In part III, item1,employers were asked to indicate competency level of graduates for each employability skill in the work place using the same

Likert-scale with responses ranging from 1=not competent to 5=extremely competent. In the last part of employer questionnaire (i.e. part iv), items 1,2,3, were open-ended questions used to elicit information regarding the observed employability skills deficiencies, ideas and activities that address skills development. Moreover, it was anticipated that the responses might prove useful in the discussion of proposed interventions to mitigate the problems with regard to employability of manufacturing technology graduates.

The nominal scale was used for comparing categories of respondents, such as gender, marital status etc.It was also used in the questionnaires for "Yes" or "No" answers, such as work experience during study. Ordinal scales form categories that are different from each other which can be ranked or ordered in terms of attributes, such as "disagree" and "strongly disagree".Ordinal scales were used to measure ,such as quality and relevance of training. The Likert scales were used to measure graduates' employability skills, knowledge and competencies.

Since the questionnaire is designed specifically for this study, it is imperative to pilot test it in terms of clarity of questions and statements, choice of words, missing items, effectiveness of instructions, completeness of response items, and length and amount of time it would take to complete. The purpose of the pilot analysis was to check the data-collection instrument for face validity, and to check that the questions elicited appropriate responses (Cohen, Manion & Morrison, 2007).

A pilot study of the questionnaire was conducted using simple random sampling of 30 manufacturing technology graduates and 10 employers in one industry which is similar to the ones included in the study. The participants in the pilot study were chosen because they had a similar background and knowledge to the target population about the issues being investigated. They did not form part of the group to be surveyed. Verbal consent to participate in the pilot study was obtained from the respondents. They were given the opportunity to make comments (in writing) regarding the content of the questionnaire. All the 30 questionnaires distributed for graduates and 10 questionnaires for employers, all were completed and returned.

Based on the pilot study result, questionnaire were modified in such a way that items 8, 21, 22, 23 on the graduates questionnaire were omitted from the questionnaire. Additionally, comments forwarded by the participants during the pilot test were incorporated to make the instruments more valid and reliable.

The analysis of the pilot study data indicated that the sub-scales of the questionnaires have good item characteristics in terms of internal consistency and homogeneity of the items. The results showed that the reliability coefficient (Cronbach's Alpha) was 0.81 for the graduates' questionnaire and 0.83 for the

employers' questionnaire (i.e. for the levels of competence of employability skills), which are considered good for the purpose of this study.

Moreover, the interview questions was carried out on a small sample of six 6 teachers(i.e. from manufacturing technology department).The pilot study took place at two selected TVET institutions (i.e. Mojo and Wonji).Accordingly, the pilot participants' were asked for feedback on the interview questions to identify any problems or ambiguities. Finally, based on the pilot participants' feedback, all unnecessary or ambiguous interview questions were discarded, or revised.

5.7.3. Teacher's Interview Questions

The interview questions were used in the sample TVET institutions for manufacturing technology trainers. Thus, conducting interview has been important in order to determine teachers' in-depth views regarding their experience on the issues of employability of manufacturing technology graduates of the four TVET institutions in Oromia. Interviews were important because each teacher's answers reflected his or her views about Vocational Education and Training with regard to the employability of its graduates.

An interview guide was prepared well before the interviews were conducted. The In-depth interview guide study has two parts. The interview guide was divided into two parts. The first part of the interview was to obtain background profile of the participants, that is; their age, sex, qualifications, and teaching experience. The second part of the interview guide consist a set of open-ended interview questions which eventually formed the basis of the interview content and direction. In fact, depending upon the interviewees' response, additional probe questions were asked. This opportunity has provided much better understanding into the many issues the interviewees raised. The constructions of the open ended questions was mainly based on the research questions and is formulated in such a way that the responses by the interviewees will likely give relevant information or provide insights into the problem and answers to the research questions. Each interview question was asked to all the interviewees and their responses contributed to the achievement of the research aim.

The following interview themes and questions were used during the interview to probe the necessary information from the informants.

Table 7: Themes and Interview Questions

No	Themes	Interview Questions
1.	The role of TVET program in meeting to labor market demand.	Q.1.Do you think TVET programs meet labor market requirements?
2.	Relevance of manufacturing technology curriculum to labor market.	Q.2.How relevant is the current manufacturing technology curriculum to the labor market demand?
3	Effective engagement of TVET providers in developing graduate employability.	Q.3.How should employability skills be promoted?
4.	TVET and Industry linkage.	Q.4.To what extent TVET institutions have linkage with industries?
5	Graduates' employability.	Q.5.What are the major factors that influence graduates employability?
6.	Strategy to improve the employability skills.	Q.6.What strategies could improve the employability of graduates?

Generally, the interview questions focused on the understanding of employability, how this concept is incorporated into the curriculum, to investigate which employability skills they valued more. Measures taken by department teachers to ensure that students obtain employability skills. Furthermore, factors which influence graduates employability and measures that could be used to ensure the employability of manufacturing technology graduates. All these and other issues discussed with teachers during the interview sessions. The researcher gathered important points about employability, which could not be achieved by means of the questionnaires.

5.8. DATA COLLECTION PROCEDURE

This section discusses the procedures that were followed when carrying out the research. All the steps taken in the research process are discussed and explained in detail.

5.8.1. Quantitative Data Collection Procedure

Firstly, the researcher visited the sampled factories and informed its officials about a formal letter he had from Addis Ababa University in order to facilitate his study. The researcher also briefed to the officials as to the content and purpose of the study and explained the assistance he needed from them.

Before administering the questionnaire, the researcher gave a brief explanation to respondents about the objectives of the study. Finally, the questionnaires were distributed in the selected sample industries.

Based on the schedule time limit given for respondents in each sample, the researcher went to the selected sites and collected the questionnaire from the respondents. Finally, three hundred graduates and sixty employers' filled the questionnaires.

5.8.2. Qualitative Data Collection Procedure

In the study, semi-structured interviews considered to be appropriate in eliciting specific information about the study. The interviews planned in such a way that they would not interfere with normal College activities. The interviews scheduled to last forty-five minutes to one hour in a convenient and peaceful atmosphere in the four Technical Colleges. However the interviews lasted longer than the planned schedule. After the interviewee had given consent to be interviewed, the researcher briefly introduced himself and gave the interviewees the aims of the investigation. In the introduction the interviewer encouraged the interviewees to give their opinions freely. They were also told that the information collected was strictly confidential and private. Prior to the visits, the researcher had sent letters to the sampled Technical Colleges and various participants as identified by the deans. The letters detailed the researcher's reasons and the basis for the research as well the guidelines for conducting of the interviews.

A tape recorder used during the interviews so that all the information that the teachers supplied could be captured. After the information recorded through the tape it was transcribed into text so that it could be analyzed with ease. Prior to use of the tape recorder in the interviews permission was asked from participants. After the actual interviews, some of the interviewees made separate appointments with the researcher on his way out to discuss some personal and pressing issues regarding the employability manufacturing technology graduates. Overall the interviews lasted for two weeks.

5.9. DATA ANALYSIS AND INTERPERTATION

As this research design adopted a mixed methods approach, the data analysis involved both quantitative and qualitative data analysis. These two distinct types of data need to be analyzed in different ways and therefore the data obtained from each sample discussed in turn as to how the data analyzed.

The data analysis of this research project was guided by Onwuegbuzie and Teddlie's (2003) seven-stage conceptualization of the mixed-methods data analysis process. According to these scholars, the

seven data analysis stages are as follows: data reduction, data display, data transformation, data correlation, data consolidation, data comparison, and data integration (Onwuegbuzie & Teddlie, 2003).According to Onwuegbuzie and Teddlie (2003), data reduction involves reducing the dimensionality of the qualitative data (e.g. via exploratory thematic analysis and memoing) and quantitative data (e.g. via descriptive statistics, exploratory factor analysis, and cluster analysis). Data display involves describing pictorially the qualitative data (e.g. matrices, charts, graphs, networks, lists, rubrics, and Venn diagrams) and quantitative data (e.g. tables and graphs). This is followed (optionally) by the data transformation stage, where in quantitative data are converted into narrative data, that can be analyzed qualitatively and/or qualitative data are converted into numerical codes that can be represented statistically. Data correlation involves the quantitative data being correlated with the qualitative data, or the qualitative data being correlated data with the quantitative data. This is followed by data consolidation, wherein both quantitative and qualitative data are combined to create new or consolidated variables or data sets.

The next stage, data comparison, involves comparing data from the qualitative and quantitative data sources. Data integration characterizes the final stage, whereby both quantitative and qualitative data are integrated into either a coherent whole, or two separate sets (i.e. qualitative and quantitative) of coherent wholes (Johnson & Onwuegbuzie , 2004). From Onwuegbuzie and Teddlie's (2003) seven stages of mixed-method data analysis, the data reduction, data display, data consolidation and data integration stages were applied in this study.

The information obtained from the respondents using questionnaires, interviews were organized, framed and structured to suit analysis and interpretation. In the study, the data collected through the questionnaire were coded, entered, cleaned and analyzed using the Statistical Package for Social Science (SPSS 20)computer software. After entering all the data the researcher under took the process of data screening to remove odd and other incoherent data as well as other outliers.

Based on the type of basic questions and the nature of data collected, both descriptive and inferential statistics were used to analyze the quantitative data with the help of Statistical Package for Social Science Soft Ware (SPSS).Percentages, means and standard deviation used for descriptive statistics. T-test and binary logistic regression used to test the relation between independent and dependent variables and to identify the impact of independent variables on dependent variables.

The analysis of qualitative data was based on the text transcribed from the interviews made with manufacturing technology trainers of the samples TVET institutions. The responses of the interviewees for the interview questions recorded in a digital audio recorder and notes also taken. All the responses

transcribed in to a text. Much emphasis was given to the accurate transfer of the content of the speech in to text format. The transcribed text read and re-read to understand the responses to the interview questions

Following significant statements and phrases pertaining to the study extracted from each transcript meaning formulated from the significant statements. Then meanings organized in to themes based on the basic questions of the study. Themes are patterns across the data sets are important to the description of phenomena and are associated to a specific research questions. The themes become the categories for analysis. Thematic analysis performed the process of coding phases to create established meaningful patterns. These phases were familiarization with data, generating initial codes, searching for themes among codes, reviewing codes, defining and naming themes, and producing the final report. The final report used to support the findings of the quantitative data.

The researcher used a number of approaches to establish the trustworthiness of the data. One of the key approaches was the use of thick description (Mertens, 2005), which involves the extensive utilization of participant's own words in describing a central theme or finding. This practice also allows the reader to determine the transferability of the findings to other contexts with which they are familiar. Using the participants' quotes and personal inferences also adds authenticity to the findings described. The researcher also used member checking, which according to Mertens (2005) builds the credibility of the findings by verifying with the respondents the interpretations of the data.

5.10. VALIDITY AND RELIABILITY

The researcher endeavored to ensure that the research findings of the study were valid and reliable. Denscombe (2002:100) argues that "validity concerns the accuracy of the questions asked, the data collected and the explanations offered." Generally, validity and reliability relate to the data and the analysis used in the research.

The researcher evaluate content validity by examining the plan and the procedures used in constructing the instrument, examining information about the objectives of the instrument, the content areas and the level of difficulty of the questions. Typically, researchers use a panel of judges or experts to help identify whether the questions are valid (Creswell, 2005:166). This method of testing content validity considered useful and applied. Content validity established for this study through an assessment made by three instructors from the university. Based on their comments and suggestions, modifications to the questionnaires were made.

In order to ensure reliability of this study, the researcher was as consistent as possible when gathering data from all respondents. In the process the researcher have been able to avoid any form of bias towards the responses of the participants. This was achieved by keeping to time frames and the predetermined plan of action. Moreover, the researcher used the same instruments and ensured consistency throughout the process. Reliability was also improved by ensuring that my expectations and opinions did not influence the responses of the respondents.

In general, the following strategies were used to enhance the validity and reliability of the study: triangulation, a pilot study, and member checks and peer scrutiny of the research project.

5.11. RESEARCH ETHICS

In this section of the study, ethical consideration incorporated and discussed. In all studies, ethical dilemmas are likely to emerge with regard to the collection of data, the dissemination of findings, and, in particular, in the relationship between the researcher and each of the respondents or participants.

Ethics in research is about ensuring that the research conducted is legal and protects the rights of the individuals who participated in the study. Hence, when collecting research data, it is very important that strict ethical standards maintained at all times. The main ethical issues that must be considered in this study were confidentiality, anonymity, privacy, sensitivity, and voluntariness.

In this study, the personal data of the interviewees presented in an anonymous way. Respondents or participants' right to privacy was also maintained through the promise of confidentiality. This follows the advice from Cohen et al.(2007:64) that anonymity ensures that information provided by respondents and participants does not reveal their identity. A number of techniques included to ensure anonymity and confidentiality in terms of the findings. The use of codes instead of the respondents' and participants' real names ensured that people other than the researcher cannot identify the respondents and participants from the information presented in this study. All role players, the manufacturing technology graduates, employers, and teachers informed of the purpose, methods, and time frame of the study as it is unethical in terms of human relationships to conduct an investigation when the subjects are unaware of the real purpose. The respondents and participants in this study informed that they are to participate without feeling coerced, and were free to withdraw from participation at any time. The principle of informed consent was the most important ethical consideration in doing this research, which also involved the right to participate and refuse to take part.

For the survey questionnaire, respondents reminded not to write their name on the questionnaire. In order to reduce the possibility of losing confidentiality through the involvement of many interviewers (Patton, 2002) the data in this study collected only by the researcher. The process of getting access to the sample TVET institutions and industries began by requesting permission formally, in writing, through the official channels. The first step the researcher took regarding this matter was to write and explain in detail the purpose of the study and the data-collection methods used to the target industries to get permission to conduct the research.

Another consideration in terms of ethical considerations was the storage of the data during and after the study. The forms of data collected from the semi-structured interviews included a hard copy of demographic information, audiotapes of the interviews, and a hard copy of the transcribed interview data. The forms of data collected from the survey questionnaires included a hard copy of respondents' questionnaires, compact discs (CD) and memory sticks containing the data from the questionnaires. The data from the audio-tapes, disks and hard copies will remain in the possession of the researcher, and be accessed only by the researcher and his supervisor.

CHAPTER SIX

6. DATA ANALYSIS AND INTERPRETATIONS

6.1. INTRODUCTION

This chapter deals with the presentation of the results and discussion of the main findings of the study. In the first section of data presentation and analysis, an attempt is made to analyze the data in terms of quality and relevance of TVET training in Oromia. The second section of the chapter examines the level of competency of graduates. In the third section, job search methods and employers recruitment procedures are assessed, and the final section of the chapter presents the data analyzed and interpreted with regards to the determinants of graduate employability.

6.2. GRADUATES WORK EXPERIENCE AND INTEREST

The aim is to assess whether graduates had work experience and interest while they were studying at TVET institutions. Respondents answered 1=yes and 2=no.

Table 8: Graduate's work experience and interest to join manufacturing technology department

No	Items	Response	Sex	
			Male	Female
1	Respondents work experience during the study.	1=Yes	53 (31.4%)	47(35.9)
		2=No	116(68.4)	84(64.1%)
		Total	169	131
2	Respondents interest to be trained in manufacturing technology department.	1=Yes	158(93.5)	113(86.3%)
		2=No	11(6.5%)	18(13.7%)
		Total	169	131

Based on the above Table 8 item 1, graduates were asked whether they had work experiences during their study. Accordingly, majority of male graduates (68.4%) and (64.1%) of female graduates did not acquire any experience during their college studies, whereas (31.4%) of male graduates and (35.9%) of female graduates had work experience.

As indicated in the above Table 8, item 2, most of male graduates (93.5%) and (86.3%) of female graduates revealed that they have interest with regard to the field of study, whereas (6.5%) of male graduates and (13.7%) of female graduates did not have interest when they chose manufacturing technology department. From this result one can infer that being interested in this field of study may be one of the positive factors for their career success.

6.3. MANUFACTURING TECHNOLOGY GRADUATES VIEWS ON QUALITY AND RELEVANCE OF TVET TRAINING

In order to assess the link between educational quality and graduates' preparation for the labor market, employed graduates were asked to indicate their satisfaction with how well various aspects of their program prepared them for their current job. These were primarily related to educational quality, including satisfaction with course content, whether courses relevant, overall quality of instruction, whether the equipment was up-to-date, practical skills and preparation for the job market.

Table 9, shows the findings of the survey questionnaire data analysis on the graduates' views on the quality and relevance of manufacturing technology training at the four selected TVET institutions in Oromia. To this end, the graduates' were asked on a five-point Likert- Scale (i.e. 1=strongly disagree to 5=strongly agree) to rate the extent to which they agree or disagree with the ten factors relating to the quality and relevance of training . The mean scores were compared with 3(which is hypothetical mean) to find out whether or not their views are positive or negative.

Table 9: One Sample T-test of graduates' views on the quality and relevance of TVET

No	Items	Mean value=3			
		mean	SD	$t_{(299)}$	P -Value
1	Manufacturing technology courses provide chances of acquiring skills.	2.55	1.334	-5.842	0.000 **
2	There are sufficient class rooms, equipment, workshops, and machinery for practical training.	3.05	1.224	0.707	0.480
3	My teachers/trainers were competent &committed.	2.60	1.383	-5.05	0.000**
4	The lessons at the training center were interesting.	3.08	1.331	1.041	0.299
5	The supplied training materials (manuals, handouts, illustrations) were relevant and useful	3.75	1.193	10.935	0.000**
6	My training included enough practical lessons.	2.50	1.175	-7.32	0.000**
7	Extra-curricular activities at the training center helped me to acquire different skills.	2.45	1.2	-7.941	0.000**
8	While at TVET program, I had plenty of chances to gain work experiences (e.g. apprenticeship).	2.39	1.23	-8.561	0.000**
9	TVET institutions provide adequate guidance and counseling services.	3.53	.149	7.939	0.000**
10.	Training offered at TVET institutions relevant to the existing labor market demands.	2.49	1.184	-7.413	0.000**

**Statistically significant at 0.05 alpha level.

The result in Table 9 shows the value of ten observed variables ranging from 2.39 to 3.75.The variable relating to “Chances to gain work experiences” has the lowest point while the variable referring to the relevance and usefulness of training materials has the highest point.

The result indicates that graduates agreed on the relevance of training materials item 5 (mean=3.75) and the provisions of adequate guidance and counseling services item 9 (3.53).This implies that the mean rating of graduates regarding those items were significantly greater than the hypothetical mean 3.0.The remaining items (i.e.2, 4) were not statistically very different from the test value, which is 3. or undecided.

As indicated in Table 9 above, the graduates mean scores on six of the Items (1, 3, 6, 7, 8, 10)were significantly and negatively different from the mean value 3 ,signifying that they tended to disagree with those issues raised in the items.

From the above findings, it can be inferred that graduates were not satisfied with course material, instructional quality, practical lessons, work experience and relevance of the training to the labor market demand (See Table 9,items 1,3,6,7,8,10). This implies that the program has not adequately prepared students for the job market. Since the focus of the training is employment, the skills should be linked to the job market to ensure that there is no mismatch among the training and competencies required in the labor market.

Successful employment or self-employment of TVET programs usually gives a great deal of emphasis to a relevance of the curriculum to the labor market & sensitively to the regularly changing nature of it (Wanna, 1998:61). In this regard, TVET programs relevancy can be judged in terms of content as well as training. The relevancy of any training curriculum, according to TGE (1994:2-3) is determined heavily by the extent it meets the ultimate education & training objectives and the degree it gears towards the socio-economic needs of the country.

A major curricular issue is whether the present curriculum in TVET institutions is adequate & relevant to the needs of the modern world of work which constantly changing.

With regard to manufacturing technology courses, graduates responses revealed that the curriculum did not equip them with adequate knowledge and practice for the world of work.

Moreover, it is essential for Technical and Vocational Education and Training (TVET) educators to constantly evaluate its program to ensure that its content remains relevant, of high quality and is in tune

with the demand of the job market. This necessitates reviews of curricula and pedagogies which calls for the evaluation of the efficiency of courses and training program.

The interview data also confirmed the above presented quantitative findings. Majority of teachers indicated that the curriculum was not adequately address the labor market demands.

The participants commented on the present manufacturing technology curriculum. Two participants (A2,A4) expressed their views as follows ; " The current TVET curricula developed at the institutional level was not up to the expected standard."(A2)."The reason was the low competence of teachers to adapt and develop curricula that satisfies the need of the labor market.''(A4).

From the above finding one can infer that, manufacturing technology curriculum not align with the needs of the industry. This implies that courses are not effectively developed and presented based on the required quality standards. This further suggests that, courses are not adequately relevant in providing students with knowledge and skills necessary for acquiring, developing and mastering desired job skills.

Two participants (A6, A11,) shared similar views with problems associated to relevance of TVET curriculum. They stated their opinion as; "TVET institutions did not carry out adequate needs assessment. As a result of this, there is a gap between TVET curriculum and industry realities."(A6). Therefore," identifying the needs of industry was crucial to inform changes and improvements in TVET courses.''(A11).

The finding shows that no training need assessments were conducted at sample TVET institutions before developing the curriculum. This implies that, unless TVET institutions carry out need assessment, courses remain predominantly supply driven.

The non- revision of the current curriculum in selected TVET institutions affects the training levels of its trainees. Commenting on this, one teacher (A3) noted; "TVET should make it more relevant to what pertains in the industries. The other participant (A9) also indicated that, "there is still a need for improvement in order to meet the labor market demands. ''

The majority of the trainers agreed that the curriculum prepared at the institutional level does not satisfy the need of the labor market. This is due to lack of adequate training of teachers in the preparing of course materials.

From the analysis of the findings of this study, it was revealed that curriculum implemented in selected TVET institutions did not sufficiently address the needs of the labor market demand. The findings of

this study is also in agreement with the work of Kenneke (1995)which states that the existing TVET curricula are deficient and in many respects do not fully meet the requirements of industries'.

The existing education and training system produces students that lack basic skills required for accessing employment, i.e. employability skills which include having the right attitude for the world-of work.

There is need therefore to occasionally review the TVET curriculum in order to produce employable graduates with relevant knowledge, skills and attitude to the world of work. Thus, Harvey's model (2001) of employability makes reference to employability development opportunities embedded in the curriculum at TVET level.

Both the questionnaires and interview responses confirmed that manufacturing technology curriculum was not satisfactory to prepare students for the world of work. The researcher also thinks that manufacturing technology graduates involved in the study are not provided with adequate knowledge and practice that make them competent for their present job. Despite the fact the Task of TVET is not limited to assessing student knowledge through examination only, but showing students how to learn and life-long learning, providing students with knowledge and expertise that qualify them to be accepted in the labor market (Albadri, 2007).However, this goal is not achieved in sample TVET institutions to the required standard because of low quality and relevance of the training. This situation is a setback in TVET due to their in ability to undertake a appropriate preparation of the human resources required by the labor market (Albadri, 2007). This requires TVET to examine the quality and relevance of the training in order to bring the desired change in the system. The current curriculum needs to be re-evaluated and change in order to meet the labor market demand. To this effect, the findings are consistent with (Sirnivasen et al.(1999)view that curriculum needs to be redesigned by TVET institutions and developed in cooperation with the corporate partners(relevant industries) .

The argument for aligning TVET curricula to the demands of the market, can be placed within a wider context of a debate on the relevance and purpose of TVET systems in general in the 21st century (ILO, 2000).The skill mismatch debate is the more acute and apparent, because the primary purpose of TVET is to train people for jobs. According to ILO (2000), one reason for the mismatch phenomenon links with the increased focus on skills in new knowledge based industries, rapid globalization, upward technology bias, and the resultant new organizational structures and work cultures which lead to new kinds of jobs that require a wider and more adaptable range of skills.

Making the TVET curricula responsive to the labor market demand becomes very crucial. The way to make TVET more demand focused and responsive to the market is to involve potential employers themselves in the design of the curricula and training delivery of the program.

With regard to the sufficient classrooms, equipment and machines for practical lessons,(item 2,Table 9), graduates rating was around the cutting point of 3.05.The result of the study reveals that the mean score of graduates is not significantly different from the average mean score. This implies that sample training institutions did not have adequate training facilities to implement the curriculum effectively.

Regarding lack of facilities and equipment, teachers provided various opinions during interviews. The first main compliant was about poor infrastructure of TVET providers. Some teachers expressed disappointment with facilities affecting the teaching –learning process including as the water system and electricity (A6). Others mentioned the non-existence of first aid services for unexpected accident in the workshops (A8).

The availability of facilities and infrastructures were not promising to ensure quality training. The finding of the study indicates that facilities and infrastructures were not encouraging both in quantity and quality/effectiveness to maintain a good and acceptable quality of training.

The second compliant revealed that there were insufficient materials for teaching and learning process. “The materials and supplies for practical lessons are not enough for the students to work with.’’(A4)

From the above results, the conditions that promote the teaching and the acquisition of practical skills in selected TVET Institutions were not encouraging. This confirmed Grierson’s (1997) point that lack of educational resources at sample TVET institutions will relegate practical skills training to mere theoretical work. If this anomaly is not corrected, it could lead to TVET graduates not being able to demonstrate practical skills which are important aspects of technical education.

From the findings one can infer that, lack of equipment, teaching and learning materials is a problem facing the sample TVET institutions. The situations negatively influence the teaching and learning process in those institutions as well as the quality of their graduates. Moreover, those limitations are constraining the teaching capabilities of teachers and students learning.

The third problem identified was concerned with the old and outdated practical equipment. One of the teachers said: “The equipment for practical teaching is out of date; some machines were used for many years and are still being used for teaching.’’(A8)

The result of graduates survey questionnaire indicated the inadequacy of resources such as machineries, equipment, and other facilities in the selected TVET colleges. These resources, when inadequately supplied, could give room to teachers to focus more on theoretical teaching and hence are likely to contribute to students' insufficient practical skills acquisition. In line with this, Lauglo's (2002) study on practical skills acquisition also attested that when practical training is supplied with inadequate training materials, the teaching of practical skills are more likely to end up being reduced to 'theory teaching.' Generally, there appears to be no glaring difference in teachers and graduates' responses to the items relating to the conditions that promote students' acquisition of practical skills. Thus, limited teaching and learning resources adversely affect the effectiveness of the training program.

In order to achieve high quality training in TVET institutions therefore, the provision of adequate teaching and learning materials is unquestionable. It is of paramount importance therefore that instructors get the required materials early enough to be able to give quality training.

As to Table 9, item3, graduates responded with the mean score of 2.60 .This means graduates were not satisfied with the competency of their teachers .The qualitative data obtained from the interview also shows that majority of the interviewee teachers complained about the quality of some teachers in the selected TVET institutions.

From the finding of the study, it can be realized that some manufacturing technology teachers are not competent to provide training in accordance with occupational standards. This is the result of the training system that long emphasized theoretical knowledge (though often not aligned with modern technology requirement), disregarding the importance of practical skills and appreciation of the world of work.

As with aspect of quality of teachers, they were indicated their points of view regarding the ability of teachers. One of the teachers stated that, "Most of the new teachers lack adequate skills in teaching methods, classroom control and English language.''(A3).

"Some teachers are less experienced, less exposed to the industry, and lack competencies'' (A8).

As the findings of study reveals, some teachers were found to be incapable of translating curricula into class environment due to lack of knowledge and resources. Lack of competency by some instructors in selected technical institutions is one factor contributing to lack of employable skills among manufacturing technology graduates.

In order for TVET training to be effective in training the youth for the world of work, instructors must be adequate and professionally qualified and trained. As the study shows there were teachers who were less experienced and incompetent. The finding supported by the view of Wallenberg (2010: 4) in which he argued the lack of experience and knowledge among the trainers in their respective fields will indirectly create the problems in providing high quality of education and training programs.

Good vocational training requires instructors who have technical and pedagogical skills as well as industrial work experience. Such instructors are expensive to train or attract to the teaching profession. Without qualified teachers, training programs could not be effective (Wanna, 1998:61).

Respondents were also asked whether the training included adequate practical lessons. Practical work is vital for manufacturing technology students where students can apply theory in practice and prepare them for their future career. It seems that there had been dissatisfaction of graduates(mean=2.50) with practical part of the course.

This finding shows the imbalance between theoretical and practical lessons delivered at sample TVET institutions. Thus, the poor delivery of practical lessons did not help graduates develop their practical skills and enabled them to become competent at the work place.

Moreover, it is clear from the findings that instruction in the sample TVET colleges tends to emphasize theoretical issues rather than practical applications. In this regard Alrubei (2004) has commented on the inadequate practical applications and insufficient work experience of technical fields:

> *Graduates of technical fields are often facing challenges in securing placement in the labor market. This is primarily because of the lack of work experience and insufficiency in areas related to specialization and occupation during their college study. This is also a result of the dominance of theoretical subjects at the expense of practical ones.*

As the result of this, courses are more theory-driven than practical oriented. This means that the TVET institutions where these students trained have failed to provide them with appropriate skills for their present work.

The extent to which extra-curricular activities are carried out at TVET institution enhances their employability skills, graduates' responded with low mean score of 2.45.The result shows the low participation of graduates in extra-curricular activities during their study at selected TVET institutions. There are many advantages involving students in extra-curricular activities. Extracurricular activities provide students with hands-on skills and training, alongside opportunities to increase self-esteem.

Many studies show that student participation in sports, clubs and societies increase graduate employment prospects (Purcell & Hogarth, 1999).

The literature suggests that extra-curricular activities provide evidence of graduates' suitability to employers. York and Knight have highlighted that there is a need to recognize that extra-curricular achievements of students contribute to graduate's employability (2006,).Moreover, in his model Harvey(2001)stressed that there might be extra-curricular activities that students engaged in that could enhance their employability skills, such as clubs, associations and work experiences that students may have while studying.

According to R.Syakir (2009), by enrolling in extra-curricular activities, students are able to develop their soft skills through their involvement in formal and informal activities, such as organizing seminars, workshops and conferences.

Similarly, Hassan, Ahmad &Bahari (2008) conclude that student participation in extracurricular activities exposes such students to potential avenues of soft skill and personal development that directly contribute to their employability. From this, it can be realized that extra-curricular activities have their own influence on the employability skills development of students.

With regard to item 8, " plenty of chances to gain work experiences'', graduates responded with mean score of 2.39, which is below the mean value 3.The finding shows that the apprenticeship experiences of graduates during their study was not adequate and satisfactory. This means graduates' were not properly trained and did not possess enough practical skills and experiences.

The interview data also confirmed the above presented quantitative findings. Teachers said that manufacturing technology graduates did not get sufficient practical experiences during their studies. They mentioned some of the major problems as follows:

One challenge, according to the respondent was that," trainees are not given opportunities in industries to practice on the same devices operated at work''(A9). The interview participants indicated that, most of industries especially private ones are not enthusiastic to admit trainees for practice in their industries. They do not allow trainers and trainees even to touch materials in the industries. Industries only allow trainers and trainees to observe what is going on in the industries. Because of this, there is no chance to practice on the machines.

Majority of the trainers suggest that the trainees should be given internship experiences as a preparation to work in the manufacturing technology. However, “there are some constraints and limitations of TVET institutes to effectively implement the program” (A4).

One of the informants (A5) commented that one of the problems with TVET programs is “lack of proper supervision and follow-ups of students sent on apprenticeship to industries”. These avenues are important for youths in TVET, to acquire on the job practical skills and knowledge.

The above results revealed teachers' discontent concerning the nature of internship program in selected TVET institutions as most of them indicated negative responses. The findings tend to agree with the observation by Roeske (2003) that, notwithstanding the important role industrial attachments plays in instilling in to trainees the practical skills, know-how and understanding necessary for employability in a particular trade or occupation. Many formal training have shown little or no interest in encouraging technical trainees to undertake such attachments.

The implication here is that the sample TVET institutions have not given serious attention to issues concerning industrial attachment. If this situation continues, trainees are likely to enter into the labor-market with little or no practical learning experiences which are relevant to the world of work or as a foundation for entry into further education and training for specific occupations.

The other interviewee (A7) stated that, “poor exposure of trainees with equipment, machineries etc. during cooperative training”. Similarly,(A2) mentioned that “inadequacies of well-furnished industries to accommodate trainees”.

From the above findings of the study, one can infer that trainees did not get adequate chance to work and learn the occupational practice in a real life situation. As one can realize from this, cooperative training was not effectively implemented as intended. This implies that TVET and industry linkage was weak which results in the production of incompetent graduates to the labor market.

Several studies demonstrated the advantages of work experiences. Velde and Cooper (2000) reported that students valued the work place experience and perceived it as an opportunity for hands-on-experiences, as part of preparation for work, developing a broader knowledge of work, and enhance their opportunity for employment. Similarly, Smith et al.(2000)recounted, in their longitudinal study of fifty-eight students who engaged in work placements in an engineering environment while still at secondary school, “placements had been successful in developing dispositional work place knowledge that increases employability; development of informed choice about career path ways; transition in to apprenticeships and further study” (p:287).

Phillips (2007) observed that in order for youth to acquire core skills required for future employment, there must be an on-going partnership between schools and industry. She has argued for the inclusion of work experience in the school curriculum on the basis that work experience improves students' employability and equips them with such skills as team building and business awareness. Evidently, there is a strong relationship between work experience and students' preparedness for the workplace. The writer is convinced that TVET and employers must work together to make sure that the curriculum meet the needs of students and employers.

The researcher argues that apprenticeship experience helps students to the acquisition of employability skills. This is supported by different studies. The finding by C.Paisey and N.Paisey (2010) shows that experience gained through work placements successfully develops a range of transferable personal skills. Participation in career development activities significantly predicted the students' level of employability skills. Exposure and experiences in the working world has a key role in preparing young people for adult world (Chandler, Ringsell, & Lindop, 2007).Thus, close cooperation between the TVET, students and employers is essential to enhance employability skills.

From the above studies one can infer that, work experience exposes students to industry and assists students to transition smoothly from the classroom environment to the workplace. Students are better prepared for the job market through work experience as it allows them to explore careers options before entering the work force and increases their chances of employability.

Regarding the relevance of training to the labor market demand (i.e.item10, See Table 9), graduates responded with the mean value of 2.49.This implies that there is a problem of mismatching between TVET system and the labor market.

The above finding also supported by the responses of the interview made with teachers. They also indicated that the training may not adequately address the issues of the labor market demands.

In the present time, employability skills became an issue for the providers of vocational education and the graduates themselves. The prime intent of most students attending TVET is not only to study or have in-depth knowledge of a course but to enhance their employability status (Steward and Knowles, 2000). Studies by De la Harpe, Radloff, and Wyber (2000) and Adams(2006)reported that TVET graduates are poorly prepared for world of work because there is a mismatch between the education and training provided by TVET and vacancies available in the labor market. Piant and Adedeji (2012) also conclude that there is a disparity between the skills acquired by TVET graduates and the ones needed by employers.

Reports examining the effectiveness and efficiency of TVET programs conclude that most programs offered at TVET institutions are irrelevant to the current needs of the economy. Further, the lack of financing, resources, and networks with industries and employers, outdated curricula and training programs that produce unemployable graduates (ILO, 2003; World Bank, 2006).

In general, inadequate instructor training, obsolete tools, machines and equipment, and lack of instructional materials are some of the factors that combine to reduce the effectiveness of training in meeting the required knowledge and skills required for gainful employment. High quality skills training requires appropriate workshop tools, machines and equipment, adequate supply of training materials, and practice by learners (African Union, 2007).

In order to produce “quality of graduates from the TVET system”, Alzu'be (2012) argues that what students have to learn through the training provided should be connected to what the actual labor market needs in an increasingly competitive global economy. In this way, it is of great importance to confirm the training's necessity to raise local man power's skills, abilities and qualifications, all of which aim at finding local man power with talents and high abilities that are closely matched with labor market needs.(Al-Ansari,2008).

It is therefore essential to adapt the content of the TVET programs to the needs of the labor market. TVET systems need to be flexible and proactive in their effort to adapt their content taking in to account the general economic trends of the region.

Table 10: Comparison of manufacturing technology graduates' of 2009,2009 and 2011 views on quality and relevance of TVET Institutions.

Items	Adama TVET		Bishoftu TVET		Asela TVET		Ambo TVET	
	M	SD	M	SD	M	SD	M	SD
1. Manufacturing technology courses provide chances of acquiring adequate skills.	2.71	1.39	2.54	1.36	2.34	1.20	2.55	1.33
2. There are sufficient class rooms, equipment, workshops, and machinery for practical training	3.18	1.19	2.73	1.35	3.09	1.14	3.05	1.22
3. My teachers/trainers were competent &committed.	2.55	1.32	2.46	1.39	2.56	1.31	2.92	1.58
4. The lessons at the training center were interesting	3.01	1.26	3.10	1.27	3.20	1.35	3.00	1.49
5. The supplied training materials (manuals, handouts, illustrations) were relevant and useful.	3.81	1.20	3.50	1.26	3.68	1.14	4.04	1.16
6. My training included enough practical lessons.	2.52	1.24	2.56	1.25	2.49	1.05	2.44	1.18
7. Extra-curricular activities at the training center helped me to acquire different skills.	2.49	1.20	2.38	1.19	2.28	1.13	2.74	1.29
8. While at TVET program, I had plenty of chances to gain work experiences (e.g. apprenticeship).	2.34	1.28	2.35	1.10	2.32	1.17	2.66	1.34
9. TVET institutions provide adequate guidance and counseling services.	3.65	1.06	3.38	1.08	3.40	1.18	3.53	1.14
10. Training offered at TVET institutions relevant to the existing labor market demands.	2.57	1.30	2.50	1.19	2.37	.988	2.54	1.23

As the above Table 10, item2 indicates, significant differences was not observed among the three TVET institutions(i.e. Adama, Asela and Ambo) in relation to facilities and equipment. Their mean scores were not statistical far from the test value(which is 3 or "undecided"),signifying that their responses were moderate. On the other hand, the result of Bishoftu TVET shows below the test value 3.This implies that inadequacy of sufficient facilities, equipment and materials seems to be a series problem in Bishoftu TVET.

With regard to the service of guidance and counseling (item 9) the result of the study reveals as the services were adequate and satisfactory. Moreover, significant difference was not observed among the four TVET institutions in relation to the availability of counseling services.

Moreover, the above Table10 shows the graduates responses with respect to curriculum, teachers competence, practical lesson, extra-curricular activities, work experience(i.e. apprentice training), and relevance of training to labor market demand .Thus, the mean values of all these variables are below the average mean value 3 in all the four TVET institutions.

The result of the study identified problem of the curriculum content, inadequate skills of teachers, less practical work, lack of attention to apprenticeship, and low participation of students in extra-curricular activities were found to be the factors that affected the quality and relevance of the four TVET institutions.

In general, the challenges identified adversely affected the proper training process that eventually results in the producing of competent and productive workforce equipped with the necessary skills and knowledge.

6.4. LINKAGES BETWEEN TVET AND INDUSTRY

The linkage between TVET and industry determines the effectiveness of the program. Since the aim of the training is to enable its graduates to find suitable jobs, a link between the curriculum and the labor market demand is necessary through a program that is appropriate and responsive to the industrial demands.

The most common reason advanced for partnerships is the need to ensure successful labor market outcomes by ensuring quick absorption of graduates into the workplace. Other reasons cited include upgrading machinery and equipment; improving supply of middle level skills; lecturer placements; reducing skill shortages and mismatches; adopting business principles in college management; and improving TVET college responsiveness (Piyasiri et al., 2008: 6).

This section attempts to examine the relationship between TVET providers and Employers. Employers were asked the extent they have relationship with TVET providers. Employers responded to the questions with a 4 point scale ranges from 1=weak to 4=strong.

Table 11: Relationships between TVET and industry

No	Items	N0	%
1.	The interaction between TVET providers and employers is:		
	a)Weak	29	48
	b)moderate	15	25
	C)Considerable	10	17
	D)Strong	6	10
	Total	60	100
2.	The involvement of employers in manufacturing technology curriculum development is:		
	A)Weak	35	58
	B)Moderate	14	23
	C)Considerable	7	12
	D)Strong	4	7
	Total	60	100

As Table 11, item1, reveals (48%) of employers responded the interaction as weak, whereas (25%) of them responded as moderate. The remaining (17%) of respondents replied as considerable while (10%) of them as strong.

This finding shows that there was not frequent contact and relationship between sample TVET providers and employers. This has its own influence on the effectiveness of the training program. For instance, skills mismatches could be an indicator to poor quality training and this is a manifestation of weak linkage between training providers and employers.

With respect to the involvement of employers in curriculum development, 35 (58%) of them replied as weak, whereas 14 (23%) of the respondents indicated as moderate. The others 7 (12%) of the respondents replied as considerable and 4(7%) of them responded as strong.

There is a clear indication from the above findings that the four TVET institutions curriculum is not aligned with industrial requirements due to lack of a cooperative partnership in the curriculum design process.. This finding is maintained by Berhe (2011) who contends that lack of curriculum alignment is due to lack of communication between training institutions and potential users of graduates.

The interview responses also supported the findings on the partnership between TVET and industry issues mentioned above, with no differences in opinion between the participants.

The view of teachers participating in the interview, responses concerning the issue of the relationship indicates a weak relationship between sample TVET providers and industry.

“Currently, businesses and vocational schools are not strongly linked to each other” (A5). “There are not common voices in the process of vocational education training.” (A10).

“The cooperation between enterprises and vocational schools is limited”(A7). “TVET institutions are failing to meet the demands from businesses in both quality and quantity of TVET outcomes.” (A3,)

The above responses reveal that, the sample TVET-industry partnership was found very low. If correct measures are not taken to solve this problem, a mismatch between the outputs of TVET and the actual needs of labor market will become more serious and challenging.

One should have to consider the importance of the relationship between the two parties could serve for advancing the training program. By so doing, they would understand their distinctive roles and complement each other which could lead to improvement in students’ attitudes, knowledge and skills. Maintaining and improving on the collaboration between TVET institutions and industry is an outcome for ensuring that students are better prepared for the world of work.

“Presently, there are only weak links between vocational training institutions and enterprises.”(A2). In the future, I would like to see close links between the two stakeholders.”(A12)

The other teachers (A1, A4 A6, A8, A9, A, 11) also shared similar views with ideas indicated above.

According to the finding of survey and interview result, respondents commented that the relationship between selected TVET colleges and industries was weak. Lack of institutional linkage between training institutions and the labor market can be blamed for the difficulties educated youth facing to enter the labor market (Donahoe and Tienda, 1999:5).

From the findings it can be realized that the four TVET providers have weak links with industries. Moreover, they did not provide opportunities for employers to participate in curriculum development. This lack of inputs from prospective employers in curriculum design is partly one of the reason for the mismatch between TVET curriculum and labor market demands.

The major reason of this employability gap is the inability of the sample TVET colleges to adapt or update their curricula and training programs according to the need and demand of the job markets. Various studies have revealed that this gap is primary due to lack of linkage with industries and understanding of their requirements.

In an attempt to address these challenges, Reddan and Harrison (2010) argued that TVET institutions need to restructure their programs to be responsive to the needs of the job market, especially the industry. As stated by Callan and Ashworth (2004) the major aim of working with industry is to develop and improve the TVET curriculum. To achieve this goal, TVET curricula must focus on outcomes in terms of the skills, knowledge and attitude required in industry.

6.5. THE EXTENT TO WHICH GRADUATES WERE PREPARED FOR THE WORLD OF WORK

In this section, Graduates were asked to consider how their TVET institutions had enhanced their employability, based upon the provision they received and the employability enhancing initiatives made available to them. The results of their answers are summarized in table12 .Employability skills are measured using ten indicators. The graduates were asked to respond on a five-point Likert-scale (1 representing not at all extent to 5 very great extent) their responses to these indicators.

Table.12: Graduates responses on acquired employability skills

No	Skills	Graduates	
		Mean	Std.
1	Team work	4.17	.985
2	Problem solving	2.59	1.01
3	Adaptability/flexibility	3.16	1.15
4.	Basic ICT skills	2.51	1.01
5.	Reasoning skills	3.07	.998
6.	Job-specific skills	4.03	.964
7.	Planning& organizing skills	3.72	1.07
8.	Interpersonal & communication skills.	3.57	1.18
9.	Customer service skills	2.67	1.15
10.	Written communication	2.84	1.07

The finding of the study indicated the extent to which TVET institutions equipped graduates with employability skills required in the world of work. Accordingly, graduates highlighted the following skills which they acquired from the sample TVET institutions in their order of ranking; team work work(mean=4.17), job-specific skills(mean=4.03), planning and organizing(mean=3.72) , interpersonal communication skills(mean=3.57), flexibility skills(mean=3.16),reasoning skills(mean=3.07). On the contrary, the study revealed that the selected TVET institutions did not equip the manufacturing technology graduates with the following employability skills; written communication(mean=2.84),

customer services (mean=2.67), problem-solving (mean=2.59), and information communication technology (mean=2.51). TVET institutions therefore need to review their curricula to address the skills gaps that the labor market needs.

Students should acquire employability skills while they are at TVET institutions. The skills can be learned through classroom instruction, in the field or outside the classroom. Thus, TVET institutions should make a greater effort to help students acquire the employability skills required by many organizations.

All skills indicated above have their own contribution for the success of employees' at the work place. For instance, employers expect workers to possess problem-solving skills, which are essential to solve challenges and tasks encountered in the work place. Challenges such as addressing disputes may arise during a normal working day. If employees do not possess problem-solving skills, productivity will be hampered because employers have to wait for the services of an expert, possible from outside, to assist with solving such a dispute. Moreover, organization require their employees to work in teams at some point in time.It is a possibility that graduates with past exposure during their TVET are able to adapt and adjust themselves well in the organizations' team working environment. This clearly is an added advantage for graduates and an essential skill required by most employers.

From the above discussion, one can infer that individuals are expected to have well developed technical skills, as well as employability skills that give them a chance for employment and ability to work in a range of jobs. Today TVET is expected to equip graduates not just with technical and vocational skills but also with generic/employability skills, which are increasingly important in preparing them for employment and for work advancement (The Young Foundation, 2012).

6.6: LEVELS OF COMPETENCE OF GRADUATES

6.6.1. Essential Skills

This section sought to describe graduates and employers views on the level of competencies and skills of graduates. The results of their answers are summarized in Table 13 .Essential skills are measured using seven indicators. The graduates and employers were asked to respond on a five-point Likert-scale (1representing not at all to 5very high extent) their responses to these indicators.

Table 13: Mean differences of the levels of essential skills graduates possess as perceived by graduates and employers

No	Essential Skills	Test value = 3				
		Graduates		Employers		Level of competency
			Sta. dev.	mean	Sta. dev.	
1.	Positive Attitude to work	4.31	.889	4.05	.769	.26
2.	Honesty and Integrity.	4.25	.952	4.13	.747	.12
3.	Responsibility	4.23	.953	3.90	.986	.33**
4.	Willingness to work	4.09	.978	4.12	.904	0.3
5.	Self discipline	3.98	1.149	3.68	1.049	.30**
6.	Social skills	4.11	1.149	3.33	.968	.78**
7.	Presentation skills	4.12	.941	3.25	.932	.87**

** Independent sample t-test is statistically significant at 0.05 levels

The above Table 13 reveals the results of graduates' and employers' perceptions of the graduates' level of competencies on the essential skills. From the above Table, one will notice that the mean rating of graduates for 6 essential skills are above the scale of 4, denoting that they are confident in viewing their ability of mastering the said qualities between good and very good. Among all the skills, they consider themselves as of especial competence in showing their positive attitude to work, responsibility, honesty and integrity.

The employers rated higher score for honesty and integrity, willingness to work and positive attitude to work while, responsibility, self-discipline, social skills and presentation skills were rated between fair and good (i.e. a mean rating between 3 and 4).

The significant difference between perceptions of graduates' and employers was found for presentation skills, social skills, responsibility and self-discipline. But, for the remaining skills no significant differences were observed between the two groups.

6.6.2. Personal Competence Skills

This section sought to describe graduates and employers views on the level of personal competence skills of graduates. The results of their answers are summarized in Table 14.Personal competence skills are measured using six indicators. The graduates and employers were asked to respond on a five-point Likert-scale (1=representing not at all to 5=very high extent) their responses to these indicators.

Table14:Mean difference between the levels of personal Competence of skills graduates possessed as perceived by graduates and employers.

No	Skills	Test value = 3				
		Graduates		Employers		Level of competency
		mean	Sta. dev.	mean	Sta. dev.	
1	Initiative	3.95	.769	4.03	.967	-0.08
2	Self-motivation	4.15	.799	3.93	1.05	0.22
3	Self-awareness &confidence	3.57	1.04	4.00	.993	-0 .43**
4	Reliability	3.48	1.00	3.75	1.08	- 0.27
5	Assertiveness	3.38	.922	3.56	1.11	- 0.18
6	Act independently	4.03	.823	3.81	.916	0.22**

** Independent sample t-test is statistically significant at 0.05 levels.

The above Table 14 shows the results of graduates' and employers' perceptions of the graduates' level of competence at performing the personal competence skills. Graduates rated high level of competence for self-motivation and independently acting skills while assertiveness skill was given the lowest priority.

With regard to level of personal competence skills, the highest mean scores for employers' was initiative, self-awareness and confidence skills, where as they rated assertiveness with lowest mean score. The highest score difference between graduates' and employers views was found for self-awareness and confidence skill.

6.6.3. Transferable Skills

This section sought to describe graduates and employers views on the level of competencies and skills of graduates. The results of their answers are summarized in Table 15. Transferable skills are measured using ten indicators. The graduates and employers were asked to respond on a five-point Likert-scale(1 representing not at all to 5 very high extent) their responses to these indicators.

Table15: Mean difference between the levels of transferable Competence of skills graduates possessed as perceived by graduates and employers

No.	Skills	Test value = 3				
		Graduates		Employers		Level of competency
		mean	Sta. dev.	mean	Sta. dev.	
1	Team work.	4.35	.915	4.27	.733	0 .08
2	Problem solving.	4.23	1.03	2.43	1.07	1.86**
3	Adaptability/flexibility	4.04	1.00	2.77	1.15	1.23**
4	Basic ICT skills.	2.90	.933	2.53	1.04	0.37**
5	Reasoning skills.	2.87	1.093	2.88	1.23	0.1
6	Job-specific skills.	4.25	.851	4.33	.705	- 0.08
7	Planning &organizing skills	3.95	1.02	3.48	.892	0 .47**
8	Interpersonal &communication skills.	4.04	.989	3.55	.982	0 .49**
9	Customer service skills	2.82	1.078	3.15	.936	0.43**
10	Written communication.	3.98	1.06	2.83	.847	1.15**

** Independent sample t-test is statistically significant at 0.05 levels.

The summary for the mean rating the graduates' level of competence on perceived transferable skills of graduates and employers is illustrated in Table 15.Among all skills, graduates consider themselves as of especial competence in team work, problem solving and job-specific skills. The graduates respondents also identified those skills which they felt they were not competent include skills such as customer services, reasoning skills and information communication technology.

Employers rated high level of competence on skills such as job-specific skills, and team work, where as they rated items 2,3,4,5,10(see Table 15)below the mean average value 3.These skills includes, problem solving(mean=2.43),adaptability (mean=2.77), ICT (mean=2.53),reasoning(mean=2.88),and written communication skills(mean=2.83). This finding reveals that graduates may have deficiencies in those skills that require improvement.

Using Independent-sample T-test, the results of the level of transferable skills competency generated from two different perspectives of graduates and employers on skills are statistically significant at 0.05 alpha level, except for such skills as team work, job-specific skills and reasoning skills.

The researcher intended to identify if there are any differences in perspective with respect to the employability skills inherent in employed graduates. It should be noted that, in the study, there was a

difference between employer and employed graduates competency perceptions for all skills. It can be argued that, since the graduates self-rated themselves, there is a possibility of self-rating bias where graduates had the perception that they were well equipped with seven skills out of the ten employability skills. The score results were higher than the ones given by the employers. Employers rated the graduates' competency much lower in terms of mean value. This could be due to employers' having reasonably higher expectations of their graduates.

Dafou(2009)found that, investment in education is positively correlated with employability and competence of graduates. An increase in employers' requirement from formal education and the gap between employees' capabilities and job requirements was also found (Tomlinson, 2008).Moreover, a study conducted by Ramlee and Grennan (2002) concluded that employers are not satisfied with the technical and vocational graduate's employability skills.

From the findings one can realize that, the sampleTVET institutions may not adequately equip manufacturing technology graduates with those employability skills which are required for their success in the job market.

Based on the ideas indicated above, teachers provided the following responses on how employability skills be promoted in the four TVET institutions.

In order to analyze the views of informants to this issue, answers were grouped in to the following five categories: participatory and group work, learner-centered approach, practical exposure, extra-curricular activities and assessment.

Table 16: Ways of developing employability skills

1. Participatory and Group work
2. Learner –centered approach
3. Practical exposure.
4. Extra-curricular activities
5. Assessment.

One of the respondents (A2) suggests the use of participatory methods and group work to promote employability skills. The following response was provided. " I think participatory mode of delivery will be more effective, because every learner will have a chance to take part.''

Similarly, one informant (A4) stated his views as follows; "…employability skills can be developed appropriately within specific disciplines in TVET institutions when teaching and learning involve more activity-oriented and student-focused activities that provide opportunities to explore creative ideas.''

This finding suggest that teachers should have to focus on class room activities that emphasize various employability skills during the teaching-learning process in order to enhance learner's skills.

One of the informants (A7) stated as; "Teachers should adapt the learner-centered approach in teaching employability skills, so that learners can take responsibility in developing skills that will facilitate their employability skills in the labor market.''

The above point indicates that the approach the teachers apply could determine students acquisition of different skills. Hence, effective teaching -learning process can enhance students employability skills. In supporting this, De la Harpe, Radloff and Wyber (2000:234) are of the view that a teaching and learning process that reflects a teacher-centered and content-focused approach could be an obstacle to developing employability skills. In contrast, they argue that a student-centered and process-focused approach to teaching and learning could promote the development of employability skills.

Similarly, one participant (A3,) expressed their ideas as; "employability skills are more developed and stimulated by sources outside TVET, such as employers and government agencies, through industry-based learning, internships and practicum.''

The effectiveness of TVET program depends on the efforts made by government, employers and TVET institutions. This linkage among the groups bring about the desired change in the training. From this one can infer that, TVET institutions and employers need to work together in terms of engaging in employability development activities such as internship or work placements that will assist students gain knowledge, skills and competencies needed in the world of work.

Two (A1,A4) respondents were of the view that employability skills could be acquired and promoted by means of project work during practical training while trainees are on experiential learning at a workplace.

The following comment was provided by one of the respondents:

Give the student a project where he can go in the society at home or industrial training period and then maybe coming up with answers how he will deal with that specific question in the project itself or in the assignment itself. (A4).

One interviewee (A2,) indicated the ways of promoting employability skills as: "The development of employability skills may also take place through extra-curricular activities such as sports, clubs etc. These activities can help students develop leadership, critical thinking and team work abilities.''

As the above teacher response demonstrate engagement of students in different activities outside classroom instruction, enhance students' acquisition of various skills.

The present study argues that participating in extracurricular activities is considered an individual human capital investment. The involvement in such activities assists in the development of good personal characteristics (e.g., motivation, leadership, communication skills) that will, in turn, strengthen the employability attributes of graduates in the labor market. Thus, the knowledge and experiences gained through participation in extracurricular activities becomes a value added to graduate skills during process of seeking employment. Therefore, organizing co-curricular activities at TVET institutions plays a paramount role for skills development of the students.

The assessment of generic skills encourages less motivated students to put more effort in developing not only technical but also more generic skills. Assessment reinforces the validation of what students learn, and is a key learning device. In line with this, Tariq et al. (2004:78) argue that "assessment provides evidence that the students have achieved the standards of proficiency required and have therefore met the learning outcomes." Therefore, students who have developed employability skills should demonstrate competence in the skills that they have acquired during the formal schooling system. The development of employability skills must be assessed to determine the extent to which the students have developed employability skills. Gopal and Stears (2007:17) argue that assessment is one of the most powerful influences on what and how teachers teach and what and how learners learn.

The majority of teachers agreed on the use of different assessment techniques for developing the employability skills of students. Based on this assumption, they stated their views as follows:

One of the respondents (A 12) reflected his views as: "The use of group projects and assignments will allow students to develop their ability to work as a team and share ideas in a group setting.''

In similar way, other informant (A9) provided the following explanation: “ If students are provided with inquiry-based assignment, they can develop their problem-solving and critical thinking skills.’’

Three respondents (A4, A6, and A7) considered the completion of assignments as well as case studies as alternative methods for promoting employability skills. As one of them (A6) mentioned, Students are given assignment on cases and problems and they will be asked to find a solution for the problems”.

The quotations above describe the viewpoints of teachers regarding ways used to promote employability skills in sample TVET classrooms. The study revealed that teachers need to be familiar with and capable of implementing a range of teaching and learning strategies to develop student employability skills in the existing TVET programs. As the teachers reported, this can be materialized through the application of techniques such as group work, problem-solving, and task-centered activities. They further stated that, teachers should design flexible learning arrangements in which learners are active rather than passive participants.

The majority of survey respondents in the open-ended question indicated that giving project work; group work and student independent work activities are the preferred options of promoting employability skills. Interviewees were also of the view that employability skills could be better promoted using teaching strategies such as practical demonstrations, project work, case studies and group work activities. The findings are in agreement with De la Harpe et al. (2000; 234) arguing that teaching that involves strategies that will encourage students to plan and monitor their own learning promotes the development of employability skills.

Moreover, students employability skills is enhanced if teachers provide them opportunities for reflection on and evaluation of their learning. According to Career EDGER model (Pool&Swell,2007) , providing students with the opportunities to gain the necessary skills, knowledge, understanding and attributes, but too is providing chances for reflection on and evaluation of the learning experiences that have already taken place. Without these opportunities, a student is unlikely to give full consideration to how far they have come in developing their employability and what they may need to do in order to develop it further.

The findings suggest that trainees learn better in a situation where they are involved and assume responsibilities for their own learning. Thus, teachers should create conducive environment where the trainees take responsibility for their own learning in order to contribute to effective development of employability skills.

6.7. GRADUATES JOB SEARCH

6.7.1. Time lag between graduation and securing employment

In this section, graduates were asked to state the job search duration, application they made for job and the methods used in finding a job. Job search duration was measured in months as 1=less than 3months, 2= 3 to 6 months, 3= 7 months to 1year, 4= more than 1year.Besides, the efforts they made in job search can be represented as, 1=a lot, 2=some, 3=a little, 4=none

Table.17: Period taken and effort made to get a job after graduation

No	Item	No	%
1	How long did it take to get the job after completing your training?		
	1) Less than3 months.	98	32.7
	2) 3 to 6 months.	58	19.3
	3) 7 months to 1 year.	64	21.3
	4) More than 1 year.	80	26.7
	Total	300	100
2	How much effort did you put to your job search?		
	1)A lot	90	30
	2)Some	145	48.3
	3)A little	45	15
	4)None	20	6.7
	Total	300	100

The lag time between graduation and employment can be informative with regard to easiness and/or difficulties by graduates in finding employment after graduation. Graduate were asked to state the length of time they have been looking for jobs after graduation. The results are summarized in Table 17 shows that for (32.7%) of graduates it took less than 3months to get their first employment while (19.3%) of them it took 3 to 6 months. More over (21.3%) of graduates got their first job 7 months to 1 year. This further supported by that (26.7%)of graduates identified the length of time more than 1 year it took to get a job as the main difficulty they experienced when job searching.

From the above result, one can infer that majority of the respondents (i.e. (32.7%) got their first employment with less than 3 months, whereas the second largest number of respondents (i.e. 26.7%) got their first employment after staying more than 1year.The former implies that those graduates took short time of job search process which is an indicator of their employment success in the transition

from school to work. The latter indicates the longer duration between graduation and employment that shows difficulties and problems graduates experienced in finding employment after graduation. The longer duration of job search process can be influenced by many factors. According to study made by Franklin, in Sub Saharan African youth job search is constrained by location, cost of transportation and access to information and other labor market frictions that systematically exclude the poor (Franklin 2014). According to the author young people from the poorest family who cannot afford to invest in job search and new migrants suffer most from longer unemployment duration and ended up with inferior job offers.

6.7.2. Methods used to search for a job

Mechanism used to find a job can be measured by the factors indicated in the questionnaire. The factors are represented as, 1= vacancy advertisement,2= contacting employers, 3=personal contact,4=employment agency,5=others.

Table 18:Methods used for finding a job.

No	Items	No	%
1.	How did you get your present job?		
	1) Vacancies advertised in newspaper	166	55.3
	2) Contacting employers.	55	18.3
	3) Through personal contacts	62	20.7
	4) Through employment agency	17	5.7
	5) Others.	___	____
	Total	300	100
2.	Can you estimate how many jobs you applied for?		
	1)1-5	175	58.4
	2) 6-10	70	23.3
	3) Above 10	55	18.3
	Total	300	100

The methods one used for looking work could be critical in linking vocational training institution to available jobs. The study finding indicate that the most common method of getting gainful employment among graduates was through vacancies advertised in newspaper(55.3%).This was followed by personal contacts(20.7%),and contacting employers (18.3%)also considered as a method for gainful employment. The remaining (5.7%) of respondents responded through employment agency.

In this study, the graduates were also asked to state the number of applications they made before their first employment and the general difficulties in finding a job. Knowing the number of contacts graduates make before securing employment is important in alerting would-be graduates to start contacts with employers before graduation or start applying for jobs after graduation.Table18 shows the distribution of the number of application made by graduates with employers before first employment. The majority of graduates (58.4%) applied between 1-5 times before securing a job. This shows that where jobs are available, it did not take a large amount of effort for the majority of those employed. Others (23.3%) applied between 6-10 times before getting a job. A significant proportion of graduates (18.3%) applied above 10 times before they were employed. This shows securing a job for vocational training graduates required some effort for some of them.

Several approaches could be used to seek for and secure employment upon graduation from TVET institutions. The study found that the predominant method used by graduates' in finding employment was responding to vacancies advertised in newspaper (55.3%).This finding is similar or familiar with the finding of Try (2005) who found that graduates were much more likely to use formal methods of job searching, such as responding to advertisements or using employment services, rather than informal methods, such as contacting employers or asking friends or family, Moreover, Holzer (1988) showed that higher probabilities of receiving an offer from using friends and family had no significant effect on how frequently job seekers used this source. In contrast, workers were more likely to search through newspapers or directly apply to employers the higher were the chances of receiving an offer.

6.7.3. Factors for the long duration of job search

This section deals with the identification of factors that influence long duration of job search. Graduates were asked to respond to the question based on the choices given. The factors are represented as, 1=limited job opportunities,2=lack of career guidance,3=lack of access to job search information ,4=lack of relevant work experience,5=lack of access to professional networks.

Table 19: Reasons for Long Job Search

No	Items	No	Percent
1.	What are the reasons for long job search?		
	1. Limited employment opportunities.	125	41.7
	2, Lack of career guidance.	37	12.3
	3. Lack of access to job search information.	55	18.3
	4, Lack of relevant work experience.	65	21.7
	5. Lack of access to professional networks.	18	6.0
	Total	300	100

The reasons for not finding a job and for experiencing a long waiting period were varied. As shown in Table19, what looms as the single most important reason for not having a job in this study is the non-availability of job opportunities (41.7%).The second factor indicated by the respondents was lack of work experience (22.7%), followed by no access to job search information (18.3%), and lack of career guidance (12.3%).The remaining respondents (6%) responded lack of access to professional networks as a reason for a long period of job search.

The finding of the study shows that graduates long duration of job search because of the lack of job opportunities and work experiences. These lead to the difficulties for graduates in obtaining jobs, which meet their qualification. There are graduates who-according to Thijssen (2000) - if jobs are scarce they may be willing to take up any job irrespective of whether or not it matches their qualifications to avoid unemployment. He said, this scenario, typically, leads to a qualification mismatch which may, consequently, lead to a skills mismatch which consequently leads to lack of employability.

In order for manufacturing technology graduates to have a paid position of regular employment, job experience is very important. Graduates failed to get employment due to the fact that they lack job experience because they completed vocational training and look for employment without work experience. International Labor Organization (2012) reports that firms may also be reluctant to hire young people because they lack work experience, youth are therefore often caught in the experience trap, where they have no work experience to show in their job applications simply because they have been unable to get a job in the first place. ILO (2010) mentions that two of the principal reasons for Africa's high unemployment rates are a mismatch between educational systems and the skills needed in the labor market and the saturated public services and small private sector bases that are unable to employ large numbers of people.

6.8. REQUIRED SKILLS WHEN HIRING GRADUATES

Employers were asked to indicate the skills they considered important when recruiting new graduates. The employers were asked on four point scales ranging between1=not important at all to 4=very important.

Table 20: Employers recruitment criteria when hiring graduates

No	Items	Mean	St.Dev.
1.	Academic Qualification.	4.30	.696
2.	Integrity.	3.42	.743
3.	Confidence.	3.35	.577
4.	Presentation skills.	3.90	.752
5.	Team work skills.	4.10	.706
6.	Analysis &decision making skills.	4.03	.712
7.	Flexibility/adaptability.	3.20	.777
8.	Relevant work experience.	4.20	.684
9.	Initiative.	3.27	.686
10	Communication skills.	3.82	.676

The majority of the respondents who employed TVET graduates indicated that they used academic qualification as the most preferred selection criterion in recruiting graduates, followed by relevant work experience and ability to work in teams (See Table 20). It is evident from the findings that the respondents' least favored skills were confident and flexibility as well as initiative as criteria in recruiting TVET graduates.

This result is consistent with findings in Australia by the National Board of Employment, Education and Training (1992:14) indicating that the majority of employees preferred academic qualification as a selection criterion to recruit new graduates. This finding suggests that employers expected graduates to have good academic results that would predict higher conceptual skills to address difficult tasks at a workplace. Academic qualification may also imply that graduates have acquired the necessary qualifications required by employers that would make them better employees in the workplace.

Moreover, employers attach great value to relevant work experience as it signals a range of important skills. Relevant work experience is associated with graduate's familiarity with the work environment. Graduates with relevant work experience have already made the transition from education to work and

have already applied the knowledge acquired in TVET to real life problems. Therefore, relevant work experience is an indicator for the work readiness of graduate's job applicants.

It is also crucial for manufacturing technology graduates to be able to work in teams due to the fact all individuals in organization are interconnected; thus, requiring sharing of ideas and expertise in pushing the organization forward. As a result of this, employers deem that these employability skills are amongst the more important skills that they require their potential employees to possess before recruiting them.

6. 9. Determinants of Manufacturing Technology Graduates Employability

6.9.1. Introduction

Logistic regression is a popular modeling approach when the dependent variable is dichotomous or polytomous. This model allows one to predict the log odds of outcomes of a dependent variable from a set of variables that may be continuous, discrete, categorical, or a mix of any of these. Hosmer and Lemeshow (2000) have described logistic regression focusing on its theoretical and applied aspect. Often the outcome variable in social data is, in general not continuous, instead is binary. In such a case, binary logistic regression is a useful way of describing the relationship between one or more independent variables and a binary outcome variable that has only two possible values.

6.9.2. Logistic Regression

The logistic regression is employed to look at the employability of the manufacturing technology graduates sometime after their gradation date. Whether a graduate was employed within three months after his/her graduation is chosen as a reference period for this study.

6.9.3. Response Variable

The response variable is the employability of the manufacturing technology graduates in Oromia region, which is classified as 'employed' (those who were employed within the first three months) and otherwise 'unemployed' graduates. Therefore, the outcome for the i^{th} graduate is represented by a random variable Y_i with two possible values coded as 1 or 0.In view of this, the outcome of i^{th} graduate, Y_i was measured as a dichotomous variable.

$$Y_i = \begin{cases} 1, & if \text{ ith graduate is } employed \\ 0, & otherwise \end{cases}$$

6.9.4. Explanatory Variables

Based on the reviewed literatures, some of the common predictors that are expected to influence the employability status of manufacturing technology graduates are demographic and socio-cultural factors including age, sex and residential place/location of a graduate, education and occupation of parents, types of the training attended by a graduate, graduate's academic achievement, efforts made by a graduate to seek job, access to information on employment opportunities, etc.

6.9.5. Model

Let the probability a graduate is employed within three months after graduation (probability of success) is given by:

$$\Pi = \frac{P\left(Y=\frac{1}{X}\right)=\exp(B0+B1X1+B2X2+\cdots+BKXK)}{1+\exp(B0+B1X1+B2X2+\cdots+BKXK)} = \frac{\exp(X'B)}{1+\exp(X'B)}$$

$$P_{i=1/}1 + e^{-BZi}$$

Where Z_i=explanatory variables of the Logit Model which are hypothesized to determine the employability of the graduate. B= Logit Coefficient.

The model equation with endogenous and exogenous variables is given as follows:

$P_i=B_0+B_1AGG+B_2SEXG+B_3MSG+ B_4FED+ B_5MED+ B_6FOC+ B_7MOC+ B_7TCG+ + B_8WIGG+B_9EGJ+ Ui$

The Table below presents the definitions of the variables in the model as hypothesized above.

Table 21. Variable Definition

Variable	Description	Value/category
AGG	Age of graduates.	0=Less than 30 1=31 and above
SEXG	Sex of graduates.	0=female 1=male
MSG	Marital status of graduates.	0=married 1=others
MSG	Father education of graduates.	0=Illiterate 1=Primary 2=Secondary 3=college/university
MED	Mother education of graduates.	0=Illiterate 1=Primary 2=Secondary 3=college/university
FOC	Father occupation of graduates.	0=farmer 1=merchant 2=technician 3=employees 4=others

6.9.6. Logit Regression Results

More of the model variables were not found significant in determining the employability of the manufacturing technology graduates in the case of this study. Table 22 presents only those variables, which were found to significantly influence the employability of the graduates.

Table 22: Test of Significance of Independent Variables Using Wald Test

Analysis of Maximum Likelihood Estimates								
Parameters	DF	Estimate	S.E.	Wald Chi-Square	Pr>Chi sq.	OR	95% Wald CL	
							Lower	Upper
Intercept	1	-0.282	-0.497	0.322	0.57	0.754		
Sex	1	0.49	0.26	3.56	0.059	1.632	0.981	2.714
Father's Education	3			3.317	0.345			
Primary	1	-0.438	-0.469	0.875	0.35	0.648	0.261	1.609
Secondary	1	-0.294	-0.41	0.515	0.473	0.745	0.334	1.664
College/University	1	-0.738	-0.443	2.772	0.096	0.478	0.201	1.14
Training Center	3			4.055	0.256			
Bishoftu	1	-0.478	-0.365	1.72	0.19	0.62	0.303	1.267
Asela	1	-0.728	-0.439	2.715	0.099	0.485	0.205	1.147
Ambo	1	-0.121	-0.375	0.104	0.747	0.886	0.425	1.848

6.9.7. Analysis of the Regression Results

The statistical significance of individual regression coefficients is tested using the Wald and score chi-square statistic. In this section, we identify the statistically significant predictor variables and determine the direction of relationship with and contribution to the dependent variable.

A negative sign in column labeled „Estimate‟ indicates an inverse relationship of explanatory variable with the log odds of the dependent variable. In contrast a positive coefficient column labeled „Estimate‟ indicates a positive relationship to the log odds of the dependent variable.

As appeared in the Table 22, sex of the graduates, father’s education and training centers have had influence on the employability of manufacturing technology graduates at 10% confidence level. The odd of employment for male graduates is 1.632 (OR=1.632) times higher than the odd of employment for female graduates. This means male graduates are 63.2% more likely to be employed than female graduates within three months after graduation.

The odds of employment of graduates whose father’s education is primary and secondary levels are not statically different from the odd of employment of graduates whose fathers are illiterates. The odd of employment of graduates whose fathers attained college/university education is less by factor of 0.478

when compared with odd of employment of graduates whose father had no education at 10% confidence level. In another word, graduates whose father's education is college or university level are 52.2% less likely to be employed than graduates whose fathers are illiterates.

The odds of employment of graduates from Bishoftu and Ambo Training Centers are not significantly different from the odd of employment of graduates from Adama Training Center. The odd of employment of graduates from Asella Training Center is less by factor of 0.485 when compared with the odd of the employment of graduates from Adama Training Center. Graduates from Asella are 51.5% less likely to be employed within three months of their gradation than graduates from Adama Training Center..

The questionnaire has open-ended questions which elicited information from the respondents about the major factors that influences manufacturing technology graduates employability. The most common responses of graduates and employers included the following:

Table 23: Major factors that influence graduate employability

no	Factors	Graduate views	Employers views	Teachers views
	Facilities& infrastructure	Inadequate provision of infrastructure.	_____	Lack of resources.
2	Curricular relevance.	Irrelevance of curriculum to the job market, lack of instructional materials.	Update training materials.	Programs are not demand driven.
3	Finance	Inadequate funding for TVET.	_____	Lack of finance
4	Cooperative training.	Little attention to internship/apprenticeship.	Industrial attachment is not adequate.	Poorly organized and coordinated.
5	Planning of TVET training.	Mismatch of curriculum &the labor market demand.	Mismatch between graduate skills& job requirements in industry.	Mismatch between training outputs &job requirements.
6	Personal experience.	Lack of work experience.	Lack of generic skills required.	Lack of market information.

1. Infrastructure and Facilities

Both graduates and teachers shared similar views with regard to infrastructures and facilities. They reported the inadequate supply of teaching and learning resources in technical institutions is one impediment to develop employability skills by technical students. But, employers may not provide

response with regard to this issue. The reason for this idea difference between respondents may be the proximity of respondents to the issue. All of the visited institutions lacked adequate number of learning and teaching resources such as classrooms, well equipped libraries, computer labs as well as facilities such as, internet services, power point projectors to mention just a few. Such deficiencies inevitably prevented students from acquiring employability skills necessary for their future job competence. Moreover, inadequate resources give room to teachers to focus more on theoretical knowledge rather than practical job skills needed by labor market.

Findings from the survey questionnaire support the viewpoints of the participants in the teachers' interviews. Data show there is inadequate funding for TVET programs. The data concur with the findings that TVET institutions lack functional workshops and labs for practical application of lessons studied in the classroom. Inadequate provisions of learning and teaching materials in technical and vocational schools as well as equipment/tools for hands-on activities in the labs reflects the poor funding for TVET institutions.

2. Curricular Relevance

As depicted from the Table 23 above, all groups (i.e. graduates, employers and teachers) indicates the present curricula do not match with the labor market demands. Data from the survey questionnaire also support the opinion of the participants on issues related to curriculum. For example, data in Table 9,item1, which include the following statement " Manufacturing technology courses provide chances of acquiring adequate skills" respondents responded their dissatisfaction with 2.55 mean value(i.e. which is below the average mean value 3).

Consequently**,** courses are not adequately relevant in providing the students with knowledge and skills necessary for acquiring, developing and mastering desired employability skills. Literature in support of this point maintains that the curricular for technical institutions have failed to shape the graduates to face the requirements of employers (Nkwame, 2015).

3. Finance

Both graduates and teachers shared similar views with regard to the low provision fund for TVET program**.** But, employers did not provide their opinion about finance, as they do not know the exact budget of TVET program**.**

Inadequate funding for technical and vocational education and skills training are among the reasons that influence student acquisition of adequate employability skills. Without adequate provision of learning and teaching materials, it is difficult to prepare students for the world of work.

In general, the provision of adequate training and teaching materials for the TVET institutions and programs is impossible without proper funding.

4. Cooperative training

As the responses of all groups reveals there was inadequate industrial attachment for trainees that denies them hands-on-experience**.** As the study reveals, field work attachment for technical students was poorly organized and implemented in all visited institutions. Data from the survey questionnaire also support the opinion of the participants on the issue related to industrial attachment. For example, data in Table 9,item 6 ,which has the following statement," my training included enough practical activities", majority of respondents show their disagreement with 2.50 mean value score(i.e. which is below average mean value 3).

As noted earlier, industrial attachment provides students an opportunity to learn from experienced workers on the job. Obviously, this is one of the reasons graduates of TVET institutions are lacking the employability and entrepreneurial skills that would enable them to secure viable paid employment or become self-reliant.

5. Planning of TVET

With regard to planning and implementation of the training, all groups reflected their views in similar ways. They indicates that there is skill gap between the skills graduates acquired from their TVET institutions and the skills employers required at the workplace. Moreover, Data from the survey questionnaire also support the opinion of the participants on the issue related to the mismatch between TVET program and the labor market demand. For example, data in Table 9,item 10, which has the following statement," Training offered at TVET institutions relevant to the existing labor market demands", majority of the respondents reveals their disagreement with 2.49 mean value score(i.e. Which is below the average mean value 3) .

From the above responses, one can infer that TVET curricular are not in line with the required workplace skills. This leads to the difficulties among the manufacturing technology graduates to obtain jobs, which match their skills and qualifications. This also leads to a problem, in which graduates are not able to implement what they have learned at the selected TVET institutions in their working field.

Hence, TVET curricular require adjustments of learning and teaching material and organization. These adjustments set out to synchronize what is taught in vocational education institutions with what is actually performed at work places. This implies that the competence needs of the labour market have to be matched by those developed within the vocational learning processes.

6. Personal experiences

With regard to personal experiences, there were different views among the respondents. Graduates mentioned lack of work experience, whereas teachers indicate lack of labor market information as a barrier for graduate employability. On the other hand, employers stress graduate deficient in generic skills as a factor for their employability. Thus, all these factors may have an influence to facilitate or impede the pace of manufacturing technology graduate employability.

7. Strategies needed to improve employability of future graduates.

Manufacturing technology graduates , employers and teachers suggestions are summarized and presented as follows regarding the required strategies for the future:

Table 24:Strategies that could improve employability of TVET students.

	Strategies	Graduates Views	Employers views	Teachers views
1	Effective curriculum implement ation.	Matching curriculum with labor market demand.	Employer involvement in curriculum development &review.	Periodic revision of curriculum.
2	TVET infrastructu re& facilities.	Provision of adequate infrastructure &facilities.	_____	Fulfill training materials for TVET.
3	Internship	Practical training needs to be considered seriously.	Provide relevant &sufficient opportunities for work experience..	Critical assessment of students in the internship program.
4	TVET-Industry partnership	Strengthen TVET& Industry linkage.	Better synergy between TVET& Industry.	Build up cooperation between TVET& Industry.
5	Funding	Allocate sufficient fund for TVET program.	_____	Provision of adequate fund.
6	Capacity building of teachers.	Training of teachers.	Employing qualified& experienced teachers.	Upgrading teachers knowledge &skills.

1. Making Curricular Relevant to Labor Market Demand

As to the curricular relevance and improvement, different opinions were forwarded by the three group of respondents. Graduates mentioned that the curricula should be relevant to the world of work. This means the competence needs of the labour market have to be matched by those developed within the TVET program. Teachers indicates periodic revision of curricula and making the materials update. Emphasizing the need for curricular review, one of the participants(A1) stated that: " identifying the needs of industry is crucial since these needs served as a basis for revising the content and strategies used in the current courses as well as designing new courses. '' In contrast, employers emphasize that, TVET curricula could be improved by directly involving employers in curricular design and development activities.

The suggestions discussed above indicated that graduate‘s employability requires greater attention . The relationships between TVET and manufacturing technology graduates competence in filling the available vacancies in the labor market has clearly shown that TVET institutions should make the curricula more relevant to the labor market demand. If this is not the case, skill mismatch between job seekers and employers, inadequate skilled workforce in some fields, coupled with under-employments have been prevalent in the labor market. The employment of manufacturing graduates or the risk of not finding adequate work greatly depends on whether the employability skills (such as communication, problem-solving skills) or competencies are compatible with available working positions in terms of variety and number. More important, this challenge will require the role of TVET in turning out employable manufacturing technology graduates who could readily fill available vacancies. To meet the challenge, TVET should have taken into cognizance the need to make contact and interaction with employers of labor and collaborate and explore the development of employability skill courses in the curriculum.

2. TVET Infrastructure and Facilities

All the three groups suggested the provision of sufficient training materials, facilities and establishing a good infrastructure play a paramount role for promoting quality training.

Adequate TVET facilities in the form of appropriate buildings, adequately equipped workshops, laboratories and necessary tools are very essential for the success of TVET programs .Besides that, machines and tools need to undergo periodical maintenances. A good infrastructure could improve the motivation of students, teachers and stake holders.

3. Effective Implementation of Internship program

As to the above Table 24, demonstrates the strategies the respondents indicates was not similar, Graduates recommended the proper planning, implementation and follow up by the concerned bodies(i.e.TVET coordinators, teachers and employer). Employers suggested the need to give more emphasis for practical work. On the other hand, teachers stressed on critical assessment of students in the workplace. They mentioned that the internship program was essential element to employability skills development and effectiveness of TVET program.

4. TVET-Industry Linkage

With regard to TVET-industry partnership, all groups shared similar views. They reported the need to establish strong linkage between TVET program and industry.

According to Becker (1974) training institutions' major role is to endeavor to produce trained work force. These institutions should therefore collaborate with the labor market in collecting feedback on performance of their graduates. Linkages and collaboration promotes graduates employability. This indicates the need to address five aspects (relationship between the training institutions and the industries, ability of the training institution to place their students to industrial attachment, opportunity for students to access internship programs, exposure of the lecturers to the new technologies and opportunity for the students exchange or joint programs).Thus, TVET institutions and industry linkage is among the important factors that influence the employability of trainees. From the study it can be concluded that TVET institutions and industry linkage play their joint role in producing competent, skilled and educated workforce that is relevant to the real world of work**.**

5. Adequate Funding for TVET Program

The provision of adequate funding is recommended by all groups**.** Without money, effective TVET courses cannot be delivered. It is essential to secure funding from the government, local private donors and overseas donors. So that effective delivery of TVET courses can be conducted.

6. Capacity building of teachers

The supply of adequate teachers with the required levels of qualification and competence is indisputable to maintain effective teaching-learning process at TVET institutions. With regard to ensuring quality of teaching and learning process, the role of teachers is very vital. In relation to this issue, one informant (A3) expressed his views as: "To ensure that employability skills are developed, one should have the skills and knowledge necessary to impart those skills to others. Teaching staff should receive appropriate training to be able to achieve it."

The responses given by all groups show those teachers at the sample TVET institutions should be given intensive training and consistent courses in order to increase their skills or competencies in line with the current technology and new information. This is a consequence from remarks by respondents, who stated that there are inexperienced lecturers, who are not able to properly manage students during the teaching and learning sessions. Consequently, the students do not get appropriate employability skills for their success in the workplace.

In general, the existing training infrastructure needs constant innovation to keep up with new technologies and learning methods. Flexibility is vital to ensure that institutions remain able to respond to the evolving challenges posed by dynamic labor markets. TVET institutions must have the capacity to periodically adapt curricula and update teachers' skills to the changing needs of the world of work. Good-quality training outcomes further depend on maintaining a high quality of training contents, methods, facilities and materials. Apprenticeships, and more generally the combination of classroom-based and work-based training, produce the best results.

CHAPTER SEVEN

7. SUMMARY, CONCLUSION(S) AND RECOMMENDATION

7.1. INTRODUCION

This final chapter summarizes and presents the major findings of the study. Hence, the Chapter is divided into three sections. The first section summarizes the thesis statement and the research questions. The main findings of the study are provided in the second section. In the last section, the conclusions and recommendations of the study are put forward. The dissertation is concluded with suggestions for further research arising from the study.

7.2. SUMMARY OF THE STATEMENT OF THE PROBLEM AND RESEARCH QUESTIONS

The issue of graduates' employability is considered among the focuses of the governments in different countries. This gets its focus from the human capital theory, which indicates fostering conditions to encourage growth of stock in human capital as the main responsibility of government. Among others, human capital is considered as the key to success and performance in the knowledge-based economies, and increases the productive potential of graduates via increasing their productivity (HM Treasury,2000).

Identifying the employability skills needed by employers and mainstreaming these skills on the education curriculum to equip graduates for enhanced employability are among the responsibilities of TVET institutions. This is mainly because, the likelihood of employment by graduates is considered as among success measures for the vocational education and training.

The prevailing condition in Ethiopia indicates that, the number of graduates is increasing despite limited employment provision by the government. This implies that, there is a need to consider ways of enhancing employability and employment among TVET graduates. Despite the increasing number of graduates, studies on the skills needed from these graduates to enhance their employability are not addressed well. To fill this gap, this study intended to assess the employability of manufacturing technology graduates in Oromia.

In line with the aims of the study stated above, the following main research question was formulated:

1. How do manufacturing technology graduates assess the quality and relevance of the training they received during their training program?
2. What is the skills employers look from manufacturing technology graduates? What recruitment procedures are used?
3. How do manufacturing technology graduates seek for employment?
4. What are the factors (problems) TVET institutions face to improve employability of manufacturing technology graduates?
5. How can TVETs enable manufacturing technology graduates to improve their employability?

The theoretical framework for this study is human capital theory. The human capital theory (Schultz, 1961; Becker, 1964) argues that education increases individuals' productivity, which consequently enhances job performance. As such, education provides marketable skills and abilities relevant to job performance, and thus the more highly educated people are, the more successful they will be in labor market in terms of both income and work opportunities.

There were three target populations for this study. The first population was employed manufacturing graduates (i.e. level III). The second was management personnel of industries. and the third population was, TVET trainers from four TVET institutions selected for the purpose of this study.

For the purpose of this research, probability sampling technique was chosen for quantitative data and non-probability sampling for qualitative data. Accordingly, the identification of TVET graduates for the administration of the questionnaire simple random and available sampling were utilized. Moreover, simple random sampling technique was used for the selection of management personnel from each industry.

This study employed mixed method approach which is an aspect of both quantitative and qualitative procedures (Creswell, 2003).This method emanates from the conviction that neither quantitative nor qualitative approach is self-sufficient. The study was shaped by pragmatist paradigm which was generally regarded as the philosophical partner for the mixed-methods research design. This study employed a mixed method approach using the concurrent nested strategy. This approach to research combines the elements of quantitative and qualitative data collection strategies, which allowed the researcher to present a complete analysis of the problem. This was advantageous to the research, as either the quantitative or qualitative method would not present a holistic view of the situation.

In the study, the quantitative method was used to gather the opinions of the respondents regarding the employability of manufacturing technology graduates. The qualitative approach was used to obtain

information in terms of the different dimensions of the participants' experiences, regarding the issues of employability of graduates. It also helped to obtain deeper insight in the issues under consideration, and capture some trends that emerged from the data.

In this study, both quantitative and qualitative data collection methods were used to answer the research questions. The data collection instruments used in the study was survey questionnaires and semi-structured interviews. Two types of questionnaires were developed based on the results of the literature review. The first type of questionnaire designed and administered to gather data from the graduated students of the four TVET institutions. The second type designed and administered to gather data from employers of selected industries in Oromia. Face-to-face semi-structured interviews with manufacturing technology teachers of the sample TVET institutions were used to elicit relevant information in terms of the attitude and perceptions of the participants regarding the employability of manufacturing technology graduates.Consequently,300 graduates' respondents and 60 employers were involved in the completion of the survey questionnaire; and 12 participants were selected for participation in the semi-structured one-to-one interviews.

In this study, the data collected by means of the questionnaires were coded, entered, cleaned and analyzed using the computer software program SPSS 20 (Statistical Package for Social Sciences).The quantitative data were analyzed using descriptive and inferential statistics such as percentages, mean scores, standard deviations-tests and binary logistic regression. The qualitative data were also transcribed, coded and interpreted thematically. The thematic approach was followed to display the analyses and findings from both quantitative and qualitative data.

7.3. SUMMARY OF MAJOR FINDINGS

This section attempts to summarize the major findings of the study as follows.

7.3.1. With regard to the graduates' retrospective views, the sample TVET institutions which they attended proved to be a major significant factor in developing and enhancing employability. The institution from which the individual graduated was found to have a significant effect up on the level of competency on technical and employability skills.

On the quality and relevance of training, the survey result indicated dissatisfaction of graduates with the capacity of the sample TVET institutions. The average score for curriculum, instructors, practical training, extra-curricular activities, work experience, and meet labor market demands were below the average mean value 3 points (See, Table 9).

The findings of the survey study revealed the inadequacy of the curriculum, inability of some instructors, practical training was not satisfactory and the training may not address the labor market demands.

Moreover, the qualitative data showed that the lack of adequate facilities and infrastructure, lack of well-developed curriculum, inability of the sample TVET institutions to work in collaboration with industries, low motivation of trainees, were the major factors that negatively affecting the quality and relevance of the training.

The above finding implies that, unless the students were given sufficient training in some of the employability skills and attributes, there is no guarantee of employment for the majority of TVET graduates. Therefore, students should acquire these employability skills and attributes at TVET level so that it would assist their transition from school to the world of work.

7.3.2. The finding of the study indicated the extent to which TVET institutions equipped graduates with employability skills required in the world of work. Accordingly, graduates highlighted the following skills which they acquired from the sample TVET institutions in their order of ranking; team work(mean=4.17), job-specific skills(mean=4.03), planning and organizing(mean=3.72) , interpersonal communication skills(mean=3.57), flexibility skills(mean=3.16) ,reasoning skills(mean=3.07). On the contrary, the study revealed that the selected TVET institutions did not equip the manufacturing technology graduates with the following employability skills; written communication(mean=2.84), customer services (mean=2.67), problem-solving (mean=2.59), and information communication technology (mean=2.51). TVET institutions therefore need to review their curricula to address the skills gaps that the labor market needs.

7.3.3 In referring to level of competence of transferable skills, graduates ranked seven skills above the mean value 3, whereas employers ranked five of the transferable skills above the mean value of 3 points (see Table 15).

In contrast, graduates rated three skills (i.e. customer services, reasoning and information communication technology skills) with the lowest mean score below the mean value 3, whereas employers rated five skills (i.e. problem solving, adaptability, ICT skills, reasoning, and written communication skills) lower than the mean value 3 points.

According to the result of the study, no significant differences were observed between graduates and employers with regard to information communication technology, job-specific, and reasoning skills. Similarly, as shown in Table 15, there were significant differences of 7 out of 10 employability skills.

The result of the study shows the discrepancy between the levels of competence graduates possessed in transferable skills as rated by them and graduates skills that are rated by the employers. The research shows that the skills acquired by manufacturing technology graduates do not match with the skills required by employers.

It seems that this lack of adequate employability skills has affected graduates competencies to the jobs they are assigned to do in the workplace.

7.3.4. Findings show that students sent for industrial attachments to firms and industries to practice on-the-job training did not adequately acquire practical skills during the training. Respondents mentioned lack of regular follow up, high number of trainees', lack of adequate facilities, limited means of communication with enterprises and other factors contribute for the low quality of internship training.

Therefore, trainees do not get appropriate training during cooperative training at enterprises. Moreover, the analysis obtained from qualitative data also shows that trainees are poorly exposed to equipment and machineries during cooperative training. Furthermore, trainees came to industries with poor orientation, poor work ethics, and poor preparation to accommodate trainees (i.e. imbalance between number of enterprises and number of trainees to attend cooperative training).

In fact, majority of manufacturing technology graduates survey and teachers' interviews result revealed that work experience is what is needed and that the four TVET institutions did not prepare them well because they were not adequately exposed to practical experiences(i.e. apprenticeship or internship) during their study.

7.3.5. In promoting employability skills, the study shows a number of approaches, ,such as practical demonstrations, project work, case studies. Interviewees were also of the view that employability skills could be better promoted using teaching strategies such as demonstrations, group work, case studies or visits to companies.

7.3.6. The study found that the predominant method used by graduates' in finding employment was responding to vacancies advertised in newspaper(55.3%).With regard to the application made by graduates' to find a job, it took relatively low effort to secure one, with 58.3% of the respondents making at most 1-5 times applications to the employers.

7.3.7. The majority of the respondents (i.e. 32.7%) got their first employment with less than 3 months, whereas the second largest number of respondents (i.e. 26.7%) got their first employment after staying

more than 1year. It was also found that reasons for a long period of job search, graduates identified major factor as limited job opportunities (41.7%) and lack of work experience (21.7%).

7.3.8. The findings result show the important skills employers consider when hiring manufacturing technology graduates. The findings indicate that employers consider academic result, work experience and team work are the most important skills needed by employers. Similarly, the study disclose that confidence, flexibility, and initiative are the skills least favored by the employers during the recruitment process..

7.3.9.The findings of the study reveals that, there was lack of systematic communication between the supply side(training providers and graduates) and the demand side(employers and private sectors).

This weak linkage between the sample TVET institutions and industries resulted in a training system which produce a large number of young people who are not readily employable and who lack the skills, knowledge and attitudes required to perform well in the modern workplace.

The study also revealed that there is low participation of employers in TVET curricula design and development. There is, therefore, the need to regularly review the TVET curriculum in order to produce employable graduates with relevant knowledge, skills and attitude to the world of work. This will require a working relationship between the training institutions and the business industry.

7. 3.10. The study shows that sex of the graduates, father's education, and training centers have had influence on the employability of manufacturing technology graduates at 10% confidence level. The analytical results of the determinants of graduates employability indicate that personal characteristics, parent's attributes and geographic location/ residence of the graduates (as proxies by location of training centers) have got influence on the likelihood of getting job within a given period of time following graduation for manufacturing technology graduates of the sample TVET institutions in Oromia.

7.3.11. The findings of the study also reveals the strategies that are essential to enhance the employability of TVET graduates. The main issues to be considered include review of curricula, provision of enough facilities and equipment, developing competency of teachers, adequate finance and linkage with industries.

7.4. CONCLUSIONS

On the basis of the findings of the study, the following conclusions are drawn regarding employability of manufacturing technology graduates**.**

7.4.1.The finding of the study shows that in the sample TVET institutions there are problems with regard to facilities, quality of curriculum, competency of teachers, practical skills and linkage of TVET and industry .Unless these deficiencies are addressed, sampleTVET institutions are unable to equip their students with knowledge and skills necessary that enhance their employability.

7.4.2. The respondents highlighted the employability skills are important in the region context and those TVET trainees should possess when entering the job market.

TVET, as well as the graduates themselves, must undertake the effort to equip graduates with the requirements identified by industry, especially, with regard to employability skills. On the one hand, TVET must have consistent engagement with industries in understanding their evolving requirements with regard to what employability skills TVET graduates should possess. On the other hand, TVET graduates must also be proactive in identifying what is required by their potential employers. If this is happening, then, there is a bigger opportunity for the gap between TVET, graduates and industries to be reduced in terms of what they can expect from one another.

7.4.3. There are significant gaps between the skills provided by the sample TVET institutions and those needed by employers. This is especially for computer skills, problem solving ability, capability of communicating in speech and writing, reasoning skills, customer services. Therefore, there are needs to encourage TVET institutions to review their curricula to address the skills gap that the labor market needs.

From the above discussion, it can be concluded that the current programs offered by the four TVET institutions require changes in the contents of the programs in order to develop their inputs and the methods of teaching to improve their output. TVET institutions can work side by side with employers in order to provide manufacturing technology students with necessary knowledge and skills to enhance the chances of their employability.

As a result of their academic preparations and experiences, the graduates of TVETs are expected to have acquired employers' desired employability skills and attributes, not just the job-specific knowledge and skills. Though employability skills do not ensure employment, the possession of these skills demanded by employers remains worthwhile when looking for good job opportunities that await the graduates. If graduates are not work-ready, a scenario of a huge mismatch between what TVET institutions produce and what employers need is created. Hence, this suggests a serious attention from TVET and labor market to close the gap. Moreover, this puts a big responsibility on TVET to bridge

education and employment by making graduates' knowledge and skills relevant to the needs of industry.

The researcher sees that Technical and Vocational Education and Training (TVET) institutions must make a greater effort to help students acquire the employability skills required by many organizations. The development of employability skills should be integrated into the curriculum to ensure that students graduate from these institutions with the skills needed by employers. If institutions do not attempt to integrate the development of these skills, they may end up graduating students who cannot fit into the 21st century workforce, thereby becoming unemployed in the society.

7.4.4. The objective of internship training is to increase the practical knowledge, skill and experiences of TVET students in their respective occupation. But the result of the study reveals lack of adequate co-operation between the sample TVET institutions and the industries to implement the program effectively. As a result of this, graduates were not getting appropriate training during internship training, which in turn may have significant negative impact on the development of trainee's practical skills and competencies. Moreover, without acquiring the specific technical skills they cannot become effective on the job after graduation.

Students should be encouraged to gain adequate work experience in industry before they graduate. The employability skills developed in students with such experiences are also important academic skills that will help them to be successful in their future career.

7.4.5. The general consensus among the respondents was that employability skills could be promoted through practical training, project work, self-study, group work, case studies and by visits to companies. It was also felt by respondents that inviting motivational speakers or experts from industries to talk to trainees about their experiences in the industry were alternative options to improve the delivery of employability skills at TVET. Trainees learn better in a situation in which they are involved, participate and assume responsibility for their own learning.

7.4.6. The study finding indicated that the link between the sampleTVET institutions and the industry sector is weak. TVET institutions produce graduates that are not meeting the industry needs. This clearly indicates that there is a gap between TVET output and industry requirements.

The establishment of the linkage program between the TVET institutions and the industries will have profound benefits on the students, teachers and the industries.

7.4.7. There are different factors that determines graduates' employability. According to the finding of this study, sex, fathers' education, and training centers were found to be the determinants factors of graduates' employability. However, there are also other factors that influence the employability of graduates.

In general, from the study one can realized that equipping learners with technical and soft skills plays a paramount role for gainful employment. Improving of employability skills and technical skills of TVET students is important in raising their competitiveness in the labor market.

7.5. IMPLICATIONS FOR POLICY AND PRACTICE

Based on the findings of the present study, the following implications are drawn for policy and practice.

7.5.1. Create proper curricula that are responsive to the labor market demands: The TVET system cannot be separated from the world of work, as the main goal of TVET is to develop occupational competencies and enable its graduates to meet the requirements of their future workplaces. The fulfillment of these goals depends on the availability of proper curricula that are responsive to the labor market demands.

As the study of the findings revealed, well developed curriculum materials were lacking in TVET institutions. This is due to TVET institutions inability to prepare their own training materials. This problem necessitated for training of teachers in the development of curriculum materials.

Moreover, in order to develop the desired competencies and skills of the graduates, the TVET institutions and industry should develop a close coordination in developing and revising the curriculum of the program.

7.5.2. Create TVET and industry links: 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 on one hand, and bridge the gap between supply and demand of local labor market, on the other hand.

At the same time, strengthening the link with enterprises and learning about business trends and up-to-date technologies are still important for TVET institutions to organize their basic educational and training programs based on industry’s needs. It is useful to explore ways that institutions can cooperate with enterprises to increase supplementary practical training opportunities through promotion of collaborative training, internships and other measures. To improve their cooperation with enterprises,

TVET institutions should have clear strategies based on their comparative advantages and future visions, such as what their priority technical fields are and what type of industrial human resources they want to supply to the labor market.

7.5.3.Provide adequate financial resources: One of the major factors that affect the effectiveness and quality of TVET institutions is lack of adequate budget. As a result of this, a great set back in the ultimate employability of graduates. Therefore, TVET institutions themselves have to look for various mechanisms to generate income and run the training delivery properly. Moreover, Government communities, industries, Non-Governmental Organizations (NGOs), wealthy individuals in the society should be encouraged in the funding of TVET for the smooth running of TVET in terms of the provision of infrastructural and workshop facilities such as tools, equipment and machines for the acquisition of skills by the graduates of TVET program to enable them fit into the labor market or be gainfully employed in industries or to become self-employed.

7.5.4. Design effective TVET-industry internship program: TVET institutions were working in collaboration with industries for cooperative training at expected level to materialize the already designed strategy of cooperative training. Therefore, TVET agency 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 and to work in collaboration in order to bring desired effects on trainees.

Moreover, to make TVET more responsive to market demands, it may be desirable for training institutions to establish stronger linkages with industry such that students could have extended practical attachments to various industrial establishments. This should be done in a more systematic manner by the Training Institutions identifying well-established industries where agreements could be reached to take a number of graduates annually on attachment for practical training as a necessary condition for graduation. Other ways of facilitating exposure of students to the real world of work are through mentoring, counseling and guest-lectures from industry practitioners. Such a linkage will ensure that graduates have an understanding of the demands of industry and thus be able to transform their knowledge in to relevant innovations for development.

7.5.5. Provide better career guidance services for all students: There is certainly a need for TVET colleges to play a more active role to smoothen the school to work transition process of the graduates. Some recommendations would be to provide better career guidance services for all the students. Providing alternative medium for information on job opening (currently students relied on newspaper and family and friends) will nevertheless open up more opportunities for students. Industrial attachment

and the digital media will be some areas to pay attention to. More emphasis should also be placed on the development of skills necessary for job search. For example: interviewing skills, writing reasonable curriculum vitae and so on.

7.5.6. Equip institutions with the necessary educational facilities: The availability of educational facilities and infrastructures is essential to improve 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 different level. Finally, instructors at government TVET colleges have not taken on a sense of ownership in improving the standards of the instructional process. Therefore, significant attention should be given to alleviate the problems through employing various learning strategies to address different learning styles, making students participate in problem-solving activities, adjusting appropriate project, research and academic advice to trainees.

In order to maintain relevant and quality of TVET institutions at all levels, good infrastructures, workshop facilities, as well as employing qualified teachers is very important for graduates of TVET programs to acquire the required skills for gainful employment.

7.5.7. Assist the graduates to start their own business: In fact, not all TVET graduates can be employed in government or private organizations. Therefore, in order to reduce the number of graduates' unemployment, government and private agencies which are working on employment of TVET graduates should assist the graduates to start their own business privately or in group. One way of doing this is to organize them in small business trade and assisting them to get start-up capital in the form of loan for materials purchasing from financial institutions and from the organized institutions. In general, friendly environment needs to be created for the graduates by avoiding a major bottleneck among micro financial institutions, MSE sectors and TVET institutions and also other related organizations those who are concerned about it so that the major constraints that prevented the graduates from starting their own business will be solved.

7.5.8**.** One of the major challenges in the present time is the rapid increase of unemployed graduates in Ethiopia in general and in Oromia in particular. Thus, expanding the job opportunities by diversifying and developing the manufacturing sector of the economy is very vital .In this regard, the government needs to continue further to encourage private investment by loosening all obstacles and paving the way for its rapid growth.

7.5.9. Ensure graduates are job-ready and motivated: TVET institutions should take steps to improve students' 'hard' and 'soft' skills. This can be achieved by integrating on-the-job training, lifelong learning and entrepreneurial thinking into the TVET curriculum.

7.5.10. Gather evidence on 'what works' in TVET: TVET providers should regularly and rigorously monitor and evaluate their programs to ascertain quality, effectiveness and efficiency, as well as to strengthen the evidence base on 'what works' in TVET interventions aimed at facilitating the employment opportunity of TVET graduates.

7.6. **Implications of the Research**

7.6.1 **Theoretical implications**

Not many studies, especially using mixed methods to understand the employability of manufacturing technology graduates' in Oromia have been conducted. Therefore, though a small research investigation, this study may trigger interest for more extensive research to confirm the findings of this research. Other countries research findings are more abundant, but they may not be widely in our local situations.

7.6.2 **Practical implications**

From the practical perspectives, the research findings can help the local TVET institutions to better understand the employability of their graduates, the values they uphold and certain areas of knowledge and skills which the TVET can supply to make the graduates more work-ready for their first work appointments. Educational intervention can be planned and implemented more effectively by adjusting existing policies or introducing new policies that can help the critical factors that can contribute to better prepare graduates for the diversified job markets for the manufacturing technology graduates.

7.7. Recommendations for further Research

1. This study focused on a specific population of graduates and employers from the selected industries in Oromia.As consequence, the findings may not be generalized . Therefore, further studies using larger sample sizes, covering a greater geographic area, and including different department or disciplines will be necessary to provide a more in depth insights of TVET graduates and their attributes of their employability.
2. More research should also be conducted on how teaching and learning- in terms of integrating employability skills may result in the enhancement of employability of graduates.

3. Future research should target a large population involving other regions in Ethiopia, employers from different industries, in comparison with graduates from public and private TVET colleges and Universities. It would be better if more researchers could be involved in order to conduct comprehensive study and identified the major factors that influence graduate employability.

REFERENCES

Abraham, K.(1993**)**. Ethiopia: The Challenge of the 20th Century Education and Modernization. IDA: Stockholm.

Abosetegne, M. (2000). "Employment Market Information and Occupational Guidance Services for Tertiary Level Students in Ethiopia: The Case of Prospective Agricultural College Graduates". Addis Ababa: Addis Ababa University (Unpublished MA Thesis).

Adane, T. (1996). A Historical Survey of State Education in Ethiopia. Addis Ababa: Asmara.

Adams, A.V.(2006).The role of skills development in the transition to work: A global review. Back ground paper for the World Development Report, 2007.

AFORDAD (2006).Assessing the impact of the poverty reduction and growth facility on social services; the case of Ethiopia. African Forum and Network on Dept. and Development.

African Union (2007).Strategy to Revitalize Technical and Vocational Education and Training (TVET) in Africa. Bureau of the Conference of Ministers of Education of the African Union (COMEDAF II), Addis Ababa :Ethiopia African Union.

Albadri,A.(2007).Some Problems of Higher Education Policies. Paper Presented in the First National Conference on Public Policies in Libya, Garyounis University, Benghazi, Libya 12-14,June 2007.

Al-Ansari,I.(2008).From education to the work and training and hiring of youth. In: STUDIES, A.I.F.(ed.). Beirut.

Allen, J., & Van der Velden, R. (2001). Educational mismatches versus skill mismatches: effects on wages, job satisfaction and on-the-job search, Oxford Economic Papers, volume 3: 434-452.

Alrubaie, F.(2004). Education System and Labor Market Requirements in Libya. *Journal of Humanities and Social Sciences*,volume15(1):1-8.

Alzu'be, A.F.(2012).The Quality of Saudi Graduates and the Needs of Saudi Labor Market. *Research on Humanities and Social Science, volume* 2(1):140-148.

Andrews, J., and Higson, H.(2008). Graduate employability, 'soft skills' versus 'hard 'business knowledge: a European study. ***Higher*** Education ***in Europe***, 33(4): 411- 422. Arthur, M., Khapova , S., & Wilderom, C. (2005). Career success in a boundary less career world. *Journal of Organizational Behavior*, volume 26(1): 177-202.

Ascher, C. (1988). High school graduates in entry level jobs: What do employers want? ERIC Digest, 1-6. doi: ED293972.

Ashton,D., & Green, F.(1996**).** Education, training and the global economy. Cheltenham: Edward Elgar.

Ashton, David. N., & Johnny Sung. (2002). Supporting Workplace Learning for High Performance Working. Geneva: the International Labor Organization.

Atchoarena, D.,& A. Delluc. (2002). Revisiting Technical and Vocational Education and Training in Sub-Saharan Africa, Paris: STEDI publishers.

Australian Association of Graduate Employers [AAGE] (2012**).**AAGE employer survey. Sydney, Australia: AAGE.

Ayalew Shebeshi (1989). Some trends in regional disparities in primary school participation in Ethiopia. *The Ethiopian Journal of Education*, volume 11(1): 25-51.

Ayele Abebe(2010). Influences of Individual and contextual Factors on improving the professional Development of TVET Teachers in Ethiopia. Kaiserslautern: Kaiserslautern University.

Bailey, T., Hughes, K., &Barr, T. (1998).Achieving Scale and quality in School- to-Work internships: Findings from an employer survey. Berkeley, CA: National Center for Research in Vocational Education.

Bak, N. (2004**).***Completing your thesis: A practical guide*. Pretoria: Van Schaik.

Barker, J. (2000**).** School counselors' perceptions of required workplace skills and career development competencies. *Professional School Counseling*, 4(2): 134–139.

Becker, GS. (1964**).** Human Capital: *A Theoretical and Empirical Analysis, with Special Reference to Education:* National Bureau of Economic Research. General Series No.80; New York.

Becker, G. (1974). Human capital: A theoretical and empirical analysis with special reference to education. New York: Columbia University Press.

Belete Demissie (1995).''General picture on what Technical and Vocational Education and Training is'' Ministry of Education, unpublished Work shop paper. Addis Ababa.

Berhanu, D., Abraham, T., &Van der Deijil, H.(2005/07**).** Characteristics and determinants of youth between Education and Labor Market Segmentation. *Journal of* Comparative *Economics*, 37 (3): 387-401.

Berhe, G. H. (2011)."Factors Affecting the Implementation of Technical and Vocational Education and Training in Selected Public Institutions of Southern Zone of Tigray". Addis Ababa University, Addis Ababa(Unpublished MA thesis).

Birhane Sime .(2014).Leading Changes in Arsi Administrative Zone Technical and Vocational Education Training Institutions of Oromia Region, Ethiopia. Journal of Educational and Social Research,Vol.4,No.3,May 2014,Page:109-117.

Birhanu, D., &Demeke, M. (1995).Education for production in Ethiopia. In W Hoppers and D. Komba (eds.), Productive Work in Education and Training: A State-of-the Art in East Africa, The Hague: Center for the Study of Education in Developing Countries.

Berthoud, R. (2003). Multiple disadvantage in employment: a quantitative analysis, York: Joseph Rowntree Foundation.

Berthoud, R. (2007) .Work rich and work poor: Three decades of change, London: Family Policy Studies Centre.

Blasko, Z., Brennan, J., Little, B., and Shah, T. 2002. *Access to what? Analysis of* factors *determining graduate employability.* Bristol: Centre for Higher Education Research and Information (CHERI).

BoFED(2008). Oromia Atlas. Oromia Finance and Economic Development Bureau. Addis Ababa.

Boheim, R. & Taylor, M. (2001**).** Job search methods, intensity and success in Britain in the 1990s, Colchester: Institute for Social and Economic Research, University of Essex.

Borg., & Gall, D. (1989). Educational research: An introduction. (5th ed.). New York: Longman.

Bouchard, P. (1998). Training and work: Some myths about human capital theory. In B. Spencer & S. Scott (Eds.), A Canadian reader in adult education (pp.33–68).Toronto, Canada: Thompson Educational Publishers.

Boushey, H. (2005). No way out: how prime age workers get trapped in minimum wage jobs, Washington, DC: Center for Economic and Policy Research.

Branine, M. (2008**).**Graduates recruitment and selection in the UK: A study of recent changes in methods and expectations. Career Development International, volume 13(6): 497-513.

Bridges.(1994). Job shift: how to prosper in a workplace without jobs, Reading: Addison-Wesley.

Bridgstock,R.(2009).The graduate's attributes we have overlooked: Enhancing graduates employability through career management skills. Higher Education Research and Development, volume 28(1): 31-44.

Brown, P., Hesketh, A., & Williams, S. (2003**).** Employability in a knowledge- driven economy. *Journal of Education & Work*, volume 16(2): 107.

Bryman, A . (1998). Quantitative & Qualitative Research Strategies in Knowing the Social World. In May, T. & Williams, M. (Eds.) Knowing the Social World. Buckingham: Open University Press.

Buhler, (2001**).** The growing importance of soft skills in the work place. Supervision, volume 62 (6):23-45.

Butterwick, S & Benjamin, A. (2006). The road to employability through personal development: A critical analysis of the silences and ambiguities of the British Columbia (Canada) Life Skills curriculum. *International Journal of Lifelong Education*, volume 25(1): 75–86.

Callan, N.,& Ashworth, P.(2004**).**Working Together: Industry and VET provider Training Partnerships. National Centre for Vocational Education Research (NCVER), Adelaide.

Canadian Labor Force Development Board (1994). The Conference Board of Canada Employability Skills Profile, Ottawa: Canadian Labor Force Development Board.

Chandler, N., Ringsell, L., & Lindop, E.(2007).Time Well Spent: Embedding Employability in Work Experience. Department for Education and Skills, UK.

Cherryholmes , C.(1992**).**Notes on Pragmatism and Scientific Realism. In Educational Researcher, Volume 21(6): 13-17.

Cheetham, G. &Chivers, G. (1996). Towards a holistic model of professional competence. *Journal of European Industrial Training*, 20(5), 20-30.

Clarke, M. (2008). Understanding and managing employability in changing career contexts. *Journal of European Industrial Training*, volume 32 (4): 258-284.

Coates, H., & Edwards, D. (2011). The Graduate Pathways Survey: new insights on education and employment outcomes five years after Bachelor degree completion. Higher Education Quarterly, volume 65(1): 74–93.

Coetzee, M., & Roythome, Jacobs, H.(2007**).** Career counseling &guidance in the work place: manual for career practitioners. Cape Town. Juta&co.

Cohen, L., Manion, L., & Morrison, K.(2007). Research methods in education (6th ed.). London & New York: Routledge Falmer.

Copps, J., & Plimmer, D. (2013). Inspiring impact—The journey to employment: A guide to understanding and measuring what matters for young people. NPC.

Council of Oromia Regional State.(2012).Implementation of major activities of 2012 plan and direction of 2013 plan of Oromia Regional State. Addis Ababa: Unpublished report.

Creswell, J., & Plano Clark, V.(2011). Designing and conducting mixed methods research (2nd ed.). UK: sage publications.

Creswell, J. (2003**).** Research Design: Qualitative, Quantitative and Mixed Methods Approaches. (2nd eds.) London: Sage Publications, Inc.

Creswell, J. W. (2005**).** Educational research: Planning, conducting, and evaluating quantitative and qualitative research (2nd eds.). Upper Saddle River, NJ: Pearson Education.

Creswell, J. W. (2009). Research design: Qualitative and quantitative approaches (3rd ed.). London: SAGE Publication.

Creswell, J.W. & Plano Clark, V.L. (2007). Designing & Conducting Mixed Methods Research. London: Sage publication.

Crossman, J. E., & Clarke, M. (2009). International Experience and Graduate Employability: Stakeholder Perceptions on the Connection. Higher Education. 59(5): 558-613.

CSA (2007). Central Statistics Authority: House and Population Census Results. Addis Ababa.

Dafou, E. (2009). Qualification and skills: The organizational perspective. *Journal of education and work*, volume 22(2): 91-104.

Danson, M. (2005**).**Old industrial regions and employability. Urban Studies, volume 42(2): 285–300.

Damtew Teferra and Philip G. Altbach, eds.(2003). *African Higher Education: An International Reference Handbook* (Indiana University Press), pp. 316-325

De Grip, A., Van Loo, J., & Sanders, J. (2004). 'The Industry Employability Index: taking account of supply and demand characteristics', International Labor Review, volume 143 (3): 211-233.

De Guzman, A.B., & de Castro, B.V. (2008**).**Employment and employability profile of a select group of Filipino college graduates, KJEP 5:1, pp. 63-81).

De la Harpe , B., Radloff , A., & Wyber , J.(2000).Quality and Generic (Professional) Skills. Quality in Higher Education, volume 6(3): 231–243.

De Leon, J. (1998). High school graduate employment trends and the skills graduates need to enter Texas manufacturing industries. *Journal of Vocational and Technical Education*, volume 15(1).

DeFillippi, R. J., &Arthur, M. B. (1994). The boundary less career: a competency based perspective. *Journal of Organizational Behavior*, volume 15: 307-324.

De la Harpe, B, Radloff, A & Wyber, J. 2000. Quality and Generic (Professional) Skills. *Quality in Higher Education*, 6(3): 231–243.

Deloza, L. (2013). Is career readiness a neglected standard? Reading Today, 8-1.

Denscombe, M. (2002**)**. Point guide for Ground rules for good research: A 10 social Researchers'. Berkshire: Open University Press.

Denscombe, M. (2008). Communities of Practice: A Research Paradigm for the Mixed Methods Approach. *Journal of Mixed Methods Research*, 2(3):270-283.

Denu, B., A. Tekeste and H. van der Dijl (2005)'Characteristics and Determinants of Youth Unemployment, Underemployment and Inadequate Employment in Ethiopia'Employment Strategy Paper, Addis Ababa: Ministry of Labor and Social Affairs of Government of Ethiopia.

Devins, D., & Hogarth, T. (2005) 'Employing the unemployed: some case study evidence on the role and practice of employers', Urban Studies, 42 (2): 245-256.

Devins, D., & Johnson, S. (2003). 'Training and development activities in SMEs: some findings from an evaluation of the ESF Objective 4 program in England', *International Small Business Journal*, 21 (2): 213-228.

DiRenzo, M. S.(2010). An Examination of the Roles of Protean Career Orientation and Career Capital on Work and Life Outcomes. Retrieved October 15, 2010, from ProQuest Digital Dissertations. (AAT 3416081).

Donahoe, D., & M. Tienda.(1999)." Human Asset Development and the Transition from School to Work: Policy Lessons for the 21st Century", paper prepared for the Ford Foundation Conference on "Investing in Children" Princeton: Princeton University Office of Population Research.

Eby, L., Butts, M., & Lockwood, A. (2003). Predictors of success in the era of the boundary less career. *Journal of Organizational Behavior*, 24(6): 689–708.

Educans Foundation.(2012**).**Technical Vocational Education and Training in Ethiopia Mapping: Learn 4 work. Schokland Program on TVET. Addis Ababa.

Elias, P., and Purcell, K.(2004). Is Mass Higher Education Working? Evidence from the Labor Market Experiences of Recent Graduates. ***National Institute Economic Review***, 190: 60– 74

Enders, J. & Fulton, O. (2002).Higher Education in a Globalizing World. International Trends and Mutual Observations, Dordrecht: Kluwer Academic Publishers.

European Commission. (2004**).** E. Skills for Europe: 2010 and beyond. Brussels: European Commission, Enterprise and Industry Directorate General.

Eurofund(2012).Recent policy development related to those not in employment, education and training(NEETs).Dublin: Eurofund.

Fallows, S & Steven, C.(2000**).** Building employability skills into the higher education curriculum: A university-wide initiative. Education and Training, 42(2/3): 75–82.

Federal Democratic Republic Government of Ethiopia (FDRGE**),** **(**1994). Education and Training Policy. E.E. P-86.

Federal Ministry for Economic Cooperation Germany (1992).Importance of vocational Training: The context of Developing Countries. Bonn: NP.

Finch.(1993).The high performance workplace and the evolving nature of vocational education research. *Journal of Vocational Education Research*, volume 18(2), 1-19.

Finch, C. R. &Crunkilton, J. R. (1999**).** Curriculum development in vocational and technical Education: Planning, content, and implementation (5th ed.). Needham Heights, MA: Allyn and Bacon. France: UNESCO.

Finch, D. J., Hamilton, L. K., Baldwin, R., and Zehner, M. (2013). An exploratory study of factors affecting undergraduate Employability. ***Education + Training,*** 55(7): 681-704.

Franklin, S.(2014).Job Search, Transport Costs and Youth Unemployment: Evidence from Urban Ethiopia, Oxford: Oxford University Press.

Friedman, T. L. (2006). The world is flat: A brief history of the 21st century. New York: Farrar, Straus, & Giroux

Fugate, M., Kinicki, A., & Ashforth, B.(2004).'Employability: a psycho-social construct, its dimensions, and applications', *Journal of Vocational Behavior*, volume 65 (1): 14-38.

Fugate, M., & Kinicki, A. J. (2008). A dispositional approach to employability: Development of a measure and test of implications for employee reactions to organizational change. *Journal of Occupational and Organizational Psychology* 81(3):503-527.

Gazier, B.(1998a**)**.Observations and recommendations , in B. Gazier (ed.), Employability Concepts and Policies. Berlin: European Employment Observatory, 1998: 298-315.

Gazier, B. (1998b**)**.Employability – definitions and trends, in B. Gazier (ed.), Employability Concepts and Policies. Berlin: European Employment Observatory, 1998: 37-71.

Gazier, B. (2001**)**. Employability: the complexity of a policy notion, in Weinert, P., Baukens, M., Bollerot, P. (eds.), Employability: From Theory to Practice. New Brunswick, NJ: Transaction Books, 2001: 3-23.

Geddes M., Mair, A, Green. A., &Hasluck, C. (1993).The Engineering industry in South East England: towards a regional strategy, Harlow: South East Economic Development Agency.

Giroux, H. (1991). Series introduction: Reading work education as the practice theory. In R.I. Simon, D. Dippo, & A. Schenke (Eds.), Learning work: A critical pedagogy of work education. New York: Bergin & Garvey.

Golden, W., & Powell, P. (2000). Towards a definition of flexibility: in search of the Holy Grail? Omega, volume *28*: 373-384.

Graham, D. (2001).Employer perception of the preparation of agricultural and extension education graduates. *Journal of Southern Agricultural Education Research,* volume 51(1): 88-101.

Green, A., & Owen, D. (2006).The geography of poor skills and access to work, York: Joseph Rowntree Foundation.

Green, F., Felsteed, A., Gillie, D., &Zhou. (2007). Computers and pay. National Institute Economic Review, 201(1): 63-75.

Green.(2009).Employee involvement ,technology, and job tasks (NIESR Discussion paper No,326). London.

Groot, W. and Maasen van den Brink, H.(2000). Education, training and employability. *Applied Economics Journal***,** 32: 573-581.

Gopal, N & Stears, M. (2007). An alternative approach to assessing science competencies. *African Journal of Research in SMT Education*, 11(2): 15–24.

Gore,T. (2005). Extending employability or solving employers recruitment problems? Demand-led approaches as an instrument of labor market policy. Urban studies, volume 42(2) :341-353.

Grierson, J. (1997). Where there is no job: Vocational training for self employment in developing countries. University of Edinburgh: Centre of African Studies.

Hage, J., & Powers, C.H. (1992). Post-Industrial Lives: Roles and Relationships in the 21st Century. Newbury Park: Sage.

Hargis, K. B. (2011). Career and technical education program alignment with local workforce needs (Ed.D. dissertation). Eastern Kentucky University.

Hartshorne ne, C., &Sear, L. (2005**).**Employability and Enterprise: Evidence from the North East, Urban Studies, volume 42 (2):271-283.

Harvey, L.(2001).Defining and measuring employability. Quality in Higher Education , 7(2): 97-109.

Hassan,H., Ahmad, R., & Bahari, A.(2008). International Conference on the Roles of the Humanities and Social Sciences in Engineering 2008 (ICOHSE08): 634-644.

Hillage, J.P.(1998). Employability: Developing a Framework for Analysis, DfEE. Research Brief, No.85.

Hirsch, D., &Wagner, D.A. (1995).What makes workers learn: The role of incentives in workplace education and training. Cresskill, NJ: Hampton Press.

HM Treasury (2000). Productivity in the UK: The evidence and the government's approach. London, UK Treasury.

Holzer, H. (1988). 'Search methods used by unemployed youths', Journal of Labor Economics, 6 (1): 1-20.

Hosmer, D. W., & Lemeshow, S. (2000**).** Applied logistic regression (2nd ed.) New York: Wiley.

Houston, D. (2005).'Employability, skills mismatch and spatial mismatch in metropolitan labor markets', Urban Studies, 42 (2): 221-243.

International Labor Organization.(1998a).World Employment Report 1998-99; Employability in the Global Economy, How Training Matters. Geneva.

International Labor Organization (ILO). (2000). Training for Employment: Social Inclusion, productivity and youth employment.

International Labor Organization (ILO).(2003). Industrial Training Institutes of India: The Efficiency Study Report. Geneva: ILO.

ILO.(2010**).**Global Employment Trends for Youth. International Labor Office, Geneva.

Jackson, A., Tienda, M., & Huang, C. (2001). 'Capabilities and employability of unwed mothers', Children and Youth Services Review, 23 (4): 327-351.

Jackson, D. (2013a). Business graduate employability – where are we going wrong? Higher Education Research and Development 32(5): 776-790.

James, R. (2007). 'Job capability match, adviser skills and the five self-efficacy barriers to employment', Journal of Occupational Psychology, Employment and Disability, 9 (1): 32-40.

Jeilu Hussein.(2011).Meeting middle level man power to labor market needs: Challenges and opportunities for Adama and surrounding TVET institutions. Addis Ababa: Addis Ababa University**.**

Johnson, R. B., & Christensen, L. B. (2004). Educational research: Quantitative, qualitative, and mixed approaches. Boston, MA: Allyn & Bacon publishers.

Johnson, R.B. & Onwuegbuzie, A.J. (2004). Mixed methods research: A research paradigm whose time has come. Educational Researcher, 33(7):14-26.

Jomo, K.S.(1993**).**Industrializing Malaysia: Policy, performance, prospects. London: Routledge.

Kanfer,R, Wanberg, C. R., & Kantrowitz, T.M.(2001). 'Job-search and employment: a personality motivational analysis and meta-analytic review'. *Journal of Applied Psychology,* 86 (5): 837-855.

Kearns, P.(2001b).Review of research generic skills for the new economy. Kensington : NVCR.

Kenneke,L.(1995**).**A Guide for Evaluation of Technical and Vocational Education Curricula. UNIVOC Studies in Technical and Vocational Education, Paris.

Klaus, P.(2010). Communication breakdown. California Job Journal, 28: 1-9.

Knight, P., &Yorke , M.(2003**).**Employability and Good Learning in Higher Education. Teaching in Higher Education, Volume 8 (1): 3-16.

Knight, P., & Yorke, M. (2004). Learning, curriculum and employability in higher education. London: Rutledge Falmer.

Kraak, A. (2000). Changing modes: A brief overview of the mode 2 knowledge debate and its impact on South African policy formulation. In A Kraak (ed.), *Changing modes: New knowledge and its implications for higher education in South Africa*. Pretoria: Human Sciences Research Council, 2000: 9–33.

Krahn, H., Lowe, G., & Lehmann, W. (2002). Acquisition of employability skills by high school students. University of Toronto Press, volume 28(2): 275-296.

Krug, G., &Rebien, M.(2011). Job search via social networks: an analysis of monetary and non monetary returns for low-skilled unemployed. IAB, Discussion Paper No. 201123.

Lauglo, J., Akyeampong, A.K., Mwiria, K., & Weeks, S.G. (2002). *Vocationalised secondary education revisited.* Washington D.C: World Bank. Publications.

Leckey, J.F., &McGeehan.(1997). Right tracks-wrong rails: the development of generic skills in higher education. Research in Higher Education, 38(3): 365-378.

Levy, F. (2010). How Technology Changes Demands for Human Skills. OECD Education Working Papers 45. Paris: OECD Publishing.

Lewis, J., Mitchell, L., Woodland, S., Fell, Rand Gloyer, A. (2000) .Employers, lone parents and the work-life balance, Sheffield: Employment Service.

Little, B., Moon, S., Pierce, D., Harvey, L., & Marlow-Hayne, N. (2001). Nature and Extent of Undergraduates Work Experience. London, CIHE/DFES.

Lowden, K., Hall, S., Elliot, D., &Lewin , J.(2011).Employers' perceptions of the employability skills of new graduates. Project Report. Edge Foundation, London, UK.

Lowe, G. S., &Schellenberg , G. (2001).What's a Good Job? The Importance of Employment Relationships. CPRN Study No. W-05. Ottawa: Enough Publishing..

Marew, Z. (2000**)**.A Study Guide for Curriculum Implementation and Evaluation, Unpublished Teaching Materials for the Course Educ.676, Addis Ababa University.

Mason, G. (1999). The Labor Market for Engineering, Science and IT Graduates: Are There Mismatches Between Supply and Demand**,** Research Employment.

Mason, G., Williams, G. , & Cranmer, S. (2006), Employability Skills Initiatives in Higher Education: What Effects do they have on Graduate Labor Outcomes? National Institute of Economic and Social Research, London.

Mayston , D.(2002). Evaluating the benefits of career guidance. Derby, UK: Center for Guidance Studies, University of Derby.

Mc Cable, G. (2010).Graduate attributes and employability : Helping university and students prepare for the changing landscape. Interchange, University of Edinburg.

McArdle, S., Waters, L., Briscoe, J. P., & Hall, D. (2007). Employability During Unemployment: Adaptability, Career Identity and Human and Social Capital. *Journal of Vocational Behavior*, volume 71 (2): 247-264.

McGrath, S, Needham, S., &Papier, J, Wedekind,V, Attwal, H.(2010). Employability in the college sector: Lessons from England and South Africa. London: British Council.

McKeown, T., & Lindorff, M. (2011). The graduate job search process - a lesson in persistence rather than good career management? Education & Training, 53(4):310-320.

McLaughlin, M. A. (1995). Employability skills profile: What are employers looking for? ERIC Digest, 95(44):67.

McQuaid, RW. Greig, M. , & Adams, J. (2001). 'Unemployed job seeker attitudes towards potential travel-to-work times', Growth and Change, 32(4):356-69.

Mc Quaid, R.W., &Lindsay. (2005).The concept of Employability. Urban Studies, volume 42 (2):197-219.

McQuaid, R. W. (2006). Job search success and employability in local labor markets. *Annals of Regional Science, 40*(2), 407-421.

Mertens, D. M. (2005**).** Research and Evaluation in Education and Psychology: Integrating diversity with quantitative, qualitative, and mixed methods (2nd ed.). London: Sage.

Meyer, M.(2003). International human resource development. In M Meyer (ed.), Managing human resources development: An outcomes-based approach. Second edition. Durban: LexisNexis, Butterworth, 2003: 347–358.

Middleton, J., Ziderman. A., & Adams, A.V. (1993). Skills for productivity: Vocational education and training in developing countries. New York: Oxford University Press.

Min, W. (1995).Vocational education and productivity. In M. Carnoy (Eds.), International encyclopedia of economics of education, (pp. 140-145).Oxford: Pergamon.

Ministry of Education (2002). Education and Training Policy and Its Implementation. Addis Ababa: Mega Printing Enterprise.

_____ **(**2005.**)** Education Sector Development Program (ESDP III) Program Action Plan for 2005/6- 2010/11), Addis Ababa.

_____(2008)National Technical & Vocational Education & Training Strategy**:** 2nd Edition, MoE.

_____ (2010**.)** Education Sector Development Program (ESDP IV) , Addis Ababa. Ethiopia.

_____**(**2010).Education Statistics Annual Abstract. Addis Ababa; Ministry of Education.

_____ **(**2011/12).Educational Statistics Annual Abstract, Addis Ababa; MoE.

Ministry of Higher Education, Science and Technology(2003). Report on rapid appraisal on the status of Technical Vocational Education and Training(TVET) in Kenya.

MoI (Ministry of Information), 2004. *Facts about Ethiopia*. Addis Ababa, Ethiopia: Press and Audiovisual Department, Ministry of Information.

Morgan, D.L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research,* 1(1):48-76.

Mulcahy, D.(2000). Body matters in vocational education: The case of the competently trained. *International Journal of Lifelong Learning*, 19(6): 506–524.

Mustapha.(1999).The role of vocational and technical education in the industrialization of Malaysia as perceived by educators and employers. Unpublished doctoral dissertation, Purdue University, West Lafayette.

Nauta, A., Vianen, A., Heijden, B., Dam, K., and Willemsen, M. (2009). Understanding the factors that promote employability orientation: the impact of employability culture, career satisfaction, and role breadth self-efficacy. *Journal of Occupational and Organizational Psychology,* 82(2): 233-25.

Nielsen, J. (1999**).** 'Employability and workability among Danish employees', Experimental Aging Research, 25 (4): 393-397.

Nkwame, M. (2015). Varsity Graduates lack special skills: The Daily News Paper, September, 21/2015.

OEB (2003).Regional Technical and Vocational education and Training (TVET) policy. Addis Ababa: OEB.

OEB (2005**).** Oromia Regional State Perspective Plan for Universal Primary Education, Addis Ababa: OEB.

O'Leary,N.,Murphy,P.D.,Latreille,P.,Blackaby,(2005)*Accounting for Differences in Labor Market Outcomes in Great Britain: Regional Analysis Using the Labor Force Survey*, Institute for the Study of Labor (IZA) IZA Discussion Papers.

Olsen, W. (2004**).** Triangulation in Social Research: Qualitative & Quantitative Methods Can Really Be Mixed. In Holburn, M. (Ed.) Developments in Sociology. Ormskirk: Causeway Press.

Onwuegbuzie , A.J., & Teddlie, C.(2003). A framework for analyzing data in mixed methods research. In: A.Tashakkori and C. Teddlie (eds.).Hand book of methods in social and behavioral research. Thousand Oaks, CA: Sage (pp. 351- 383).

OECD (Organization for Economic Co-operation and Development). (1994a). Jobs study: Facts, analysis, strategies. Part 2(a). Paris.

Organization for Economic Co-operation and Development (OECD). (2001). The well-being of nations: The role of human and social capital. Paris: OECD.

Overtoom , C.(2000). Employability Skills: An update. Columbus, OH: ERIC Clearing house on Adult Career and Vocational Education. (ERIC Document Reproduction Services No.ED445236).

Paisey, C., & Paisey, N. J. (2010). Developing skills via work placement in accounting: Students and employers views. Account Forum, 34, 89-108.

Pankhurst, R. (1974). Education, language and history: an historical background to post-war Ethiopia. *Ethiopian Journal of Education*, 7(1): 75-97.

Patton, M.Q.(2002**).** Qualitative research and evaluation methods (3rd ed.). Thousand Oaks, California: Sage.

Pavlin, S., &Svetlik , I.(2011).The World of Work and the Demand for Competences. In: J. Allen, S. Pavlin., & R. Van der Velden (eds.). Competencies and Early Labor Market Careers of Higher education Graduates in Europe. University of Ljubljana: Faculty of Social Sciences, 73-106.

Pegg et al., (2012). Pedagogy for employability in New York. UK Higher education academy.

Petersen., Saporta, I., & Seidel, M. (2000**).** 'Offering a job: meritocracy and social networks', *American Journal of Sociology*, 106 (3): 763-816.

Phillips, L. (2007). Skills to promote employability. People Management Volume ,13(7): 14-15.

Piyasiri TA, Suraweera B & M Edirisooriya (2008). Identify Benefits and Analyze Issues related to Partnership Programs between Public TVET Institutions and Private Sector Enterprises. National Education Commission: Sri Lanka.

Pitan, O .S., & Adedeji , S.O.(2012).Skills Mismatch among University Graduates in the Nigeria Labor Market.US-China Education Review, A(1):90-98.

Pool L. D. & Sewell P. (2007**).** The key to employability: developing a practical model of graduate employability. Education &Training, Volume 49 (4): 277-289.

Proclamation No.351/2003. Federal Negarit Gazeta of the Federal Democratic Republic of Ethiopia. Addis Ababa. Ethiopia.

Proclamation No.391/2004. Federal Negarit Gazeta of the Federal Democratic Republic of Ethiopia. Addis Ababa. Ethiopia.

Purcell, K., & Hogarth, T. (1999**)**.Graduate Opportunities, Social Class And Age: Employers' Recruitment Strategies In The New Graduate Labor Market, *(*London Council for Industry and Higher Education).

Purcell, K., Elias, P., Atfield, G.,& Behle, H., Ellison, R.(2013).Transitions into employment, further study and other outcomes. Warwick, UK: Warwick Institute of Employment Research.

Ramlee Mustapha, &Greenan, J. P. (2002).The role of vocational and technical education in economic development in Malaysia: Educators and employers perspective. *Journal of Industrial Teacher Education*. 39 (2).

Reddan, G., &Harrison (2010).Restructuring the bachelor of exercise science degree to meet industry needs. *Asia-Pacific Journal of Cooperative Education*, 8(1): 1-21.

Riley, R. (2007**).** Introduction : Technology, jobs and skills. National Institute Economic Review, 201(1): 61- 62.

Robinson, J. (2000**).** What are employability skills? Alabama Cooperative Extension System: The Workplace, 1(3): 1-3.

Robles, M. M. (2012). Executive perceptions of the top 10 soft skills needed in today's workplace. Business Communication Quarterly, 75(4): 453-465.

Roeske, J. (2003). Skills training strategies to combat worst forms of child labor in the urban informal economy: Ghana country study. Marseille: International Program on the Elimination of Child Labor (IPEC).

Sale, J., Lohfeld, L., &Brazil.(2002**).** Revisiting the Qualitative Debate: Implications for Mixed-Method &Research. Quality & Quantity, 36: 43-53.

Sanders, J., &de Grip, A. (2004).Training, Task Flexibility and the Employability of Low-Skilled Workers. *International Journal of Manpower*, volume25 (1):227-289.

Sanderson, I.(2006).Worklessness in deprived neighborhoods: a review of evidence, London: Department for Communities and Local Government.

Sanderson, I., &Johnson ,S. (2002) . Quantitative baseline employer survey, Employment Service Research Report ESR 107, Sheffield: Employment Service.

Saunders, M., Lewis, P., &Thornhill, A. (2009). Research methods for business students(4th ed.). Essex: Person Education Limited.

Schultz, T.W. (1961). Investment in human capital. American Economic Review, *51*(1): 1-17.

Schultz, T.W. (1963**)**. The Economic Value of Education. New York: Columbia University Press.

Seyoum Tefera (1996). Attempts of educational reform in Ethiopia: A top-down or a bottom-up reform? *The Ethiopian Journal of Education*, 16 (1):1-37.

Smith, R., & Betts, M. (2000). Learning as Partners: Realizing the Potential of Work-based Learning. *Journal of Vocational Education and Training*,52(4):589-604.

Srinivasan, S., J. Guan, J.& Wright, A.L.(1999). A new CIS curriculum design approach for the 21st century. *Journal of Computer Information Systems*. 39(3):99-106.

Stafford, B., Heaver, C.,& Ashworth, K, Bates, C., Walker, R.(1999).Work and young men, York: Joseph Rowntree Foundation.

Stake, R.E.(1995**)**. The Art of Case Study Research. Thousand Oaks, CA: Sage.

Stasz, C.(2001). Assessing skills for work: Two perspectives. Oxford Economic Papers, 3: 385–405.

Stetar, J. (2000).Tensions between globalization and nationalism in higher education: Implications for quality assurance efforts. *South African Journal of Higher Education,*14(2): 28–33.

Stewart,J.,&Knowles,V.(2000).Graduate recruitment and selection: Implication for HE, graduates and small business recruiters. Washington Dc: Lahmp.

Syakir,R.(2009**)**.Soft Skills at The Malaysian Institutes Of Higher Learning. Education Research Institute, Seoul National University, Seoul, Korea. *Asia Pacific Education Review*,10(3):309-315.

Tariq, VN, Scott, EM, Lee, M & Ryles, L. (2004). Auditing and mapping key skills within university curricula. *Quality Assurance in Education,* 12(2): 70–81.

Tashakkori, A., &Teddlie, C. (2003**)**. Handbook of mixed methods in social and behavioral research. Thousand Oaks, CA: Sage.

Tashakkori, A., &Creswell, J. W. (2007). Exploring the nature of research questions in mixed methods research. *Journal of Mixed Methods Research*,1(3): 207–211.

Taylor, A. (2005). 'what employers look for: the skills debate and the fit with youth perceptions', *Journal of Education and Work* , 18 (2): 201-218.

Teddlie, C., & Tashakkori, A. (2009). Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral Sciences. London: Sage.

Teferra, D., Altbach, P. (2004**)**. African Higher Education: Challenges for the 21st Century. In: *Journal of Higher Education*, 47(1): 21-50.

Teh, H., Pendergast, D. (2009). Graduate and employer perspectives on course efficiency. A study of VET in a developing economy. Paper presented at the AVETRA 12th annual conference 2009, Sydney, New South Wales.

Teichler ,U.(1999**).** Higher Education Policy and the World of Work: Changing Conditions and Challenges. In: Higher Education Policy, 12: 285-312.

Tekeste , N. (1990).The crisis of Ethiopian education: Some implications for nation-building. Department of Education, Upsala University.

Teklehaimanot Haile Selassie (2002**).** Misconceptions on Technical and Vocational Education and Training in Ethiopian .IER Flambeau, volume 10, No.1, December 2oo2, Addis Ababa University Press.

Teshome, W. (1979). Education in Ethiopia: Prospects and retrospect. Ann Arbor: The University of Michigan Press.

Thijssen,J.(2000). Employability in the focal point. Impetus for Clarification of a diffuse phenomenon of' HRM,magazine,1: 7-34.

TGE (1994). Ethiopian Education and Training Policy. Addis Ababa: EMPDA.

Tomlinson, M. (2008**).** The degree is not enough: Students' perception of the role of higher education credentials for graduate work and employability. *International British Journal of Sociology of Education*, 29(1): 49-61.

Tola Berieso(2016).The Implementation of Cooperative Training in Technical and Vocational Education and Training Colleges of Oromia. *Educational Journal,Vol.5,issue 4,July* 2016,page:43-48.

Try, S. (2005). 'The use of job search strategies among university graduates' in *Journal of Socio-Economics*, 34 (2): 223-243.

Urwin, P. and Shackleton, J. (1999) "Search methods and transitions into employment and inactivity: An analysis of linked records from the Labor Force Survey", *International Journal of Manpower*, vol. 20, no. 3/4, pp. 189-237.

UNESCO (2001). Revised Recommendation Concerning Technical and Vocational Education Paris; UNESCO.

UNESCO. (2002). Technical and Vocational Education and Training for the Twenty-First Century. Paris: UNESCO.

Van der Heijde, C., Van der Heijden, B. (2006). A competence-based and Multi- dimensional Operationalization and Measurement of Employability. Human Resource Management, 45(3): 449-476. doi:10.1002/hrm.20119.

Velde,C., & Cooper, T.(2000). Students' Perspectives on Work place Learning and Training in Vocational Education. Education and Training, 42(2):83-92.

Vermeulen, L. & Schmidt, H.G. (2008). Learning environment, learning process, academic outcomes and career success of university graduates. Studies in Higher Education, 33(4): 431-51.

Wallenberg , M. (2010**)**. Vocational Education and Training and Human Capital Development: Current practice and future options. *European Journal of Education,* 45(2): 181-198.

Wanberg , C.R., & Banas, J.T. (2000). 'Predictors and outcomes of openness to changes in a reorganizing workplace', *Journal of Applied Psychology,* 85 (1): 132-142.

Wanna Leka(1992). Assessing vocational Education out comes: with special reference to Ethiopia. The Ethiopian journal of Education, Volume XIII, No.1, 1992. Addis Ababa University.

Wanna Leka. (1998).The current status of vocational technical education in Ethiopia: Problems and prospective; In Amare Asgedom and others (Eds.) Quality of Education in Ethiopia: Vision for the 21st century, proceeding of national conference held at Awassa 12-18 July, 1998.

Watts, A.(2005). Career guidance policy: an international review. *Career Development Quarterly,* September, 1–8.

Webster, J., Castano , C., & Palmen, R. (2011). Special Issue: Editorial. *International Journal of Gender, Science and Technology*, 3(2):358-362.

Wentling ,T. (1993**)**. Planning For Effective Training: A Guide to Curriculum Development. Rome: FAO.

White, S.B. & Geddes, L.A. (2002). 'The impact of employer characteristics and workforce commitment on earnings of former welfare recipients', *Economic Development Quarterly,*16 (4): 326-341.

Wilton, N. (2008**)**. Business graduates and management jobs: An employability match made in heaven? *Journal of Education and Work,* 21(2) : 143-158.

Wilton, N. (2011). Do employability skills really matter in the UK graduate labor market?

Work Experience Group (2002**).**Work Related Learning Report. DFES Publication, Nottingham.

World Bank (2002).Constructing Knowledge Societies: New Challenges for Tertiary Education. A World Report, Washington, DC: The World Bank.

World Bank (2006**).** Skill Development in India: The Vocational Education and Training System. Human Development Unit, South Asia Region, World Bank.

Wubit Kifle(2006) .“Human Capital and Economic Growth in Ethiopia”. Addis Ababa.: Addis Ababa University(Unpublished MA Thesis).

York, M(2004).Employability in the undergraduate curriculum. Some student perspective. *European Journal of Education*,39(4),409-427.

Yorke, M. & Knight, P. (2006) Embedding employability into the curriculum, No. 3 of the ESECT/Higher Education Academy "Learning and Employability" series, The Higher Education Academy.

The Young Foundation (2012). Developing skills for life and work: Accelerating social and emotional learning across South Australia. South Australia: Kahn, L., McNeil, B., Patrick, R..

Appendix A:Graduate Questionnaire

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF CURRICULUM AND TEACHERS PROFESSIONAL DEVELOPMENT

TVET GRADUATE'S SURVEY QUESTIONNAIRE

Dear Graduate:

You are invited to participate in a research study. The objective of this study is to analyze the employability and employment of manufacturing technology graduates in Oromia Region from the perspective of graduates and the employers.

The information gained through the research will inform the current status of preparation in terms of employability skills and competency in TVET institutions, identify gaps in student preparation, and indicate opportunities to better prepare graduates with skills needed and expected by employers in the manufacturing industry work place.

Your participation in this research is completely voluntary. All your answer is confidential. You can withdraw from this research project at any time prior to completing survey questionnaire. Last but not least, I would like to thank you for spending your time to fill up this questionnaire. Your participation will certainly make a significant contribution to my research and my understanding of graduate's employability. I hope that you will respond as honestly and sincerely to each of the questions based on your true feelings and experiences.

Thank you.

PART I.PERSONAL INFORMATION

DIRECTION: please put a ‘’✓ ‘’ mark in the appropriate box that corresponds to your choice or write the information needed in brief on the space provided where necessary.

1. AGE

A) 16-20 ☐ B) 21-25 ☐ C) 26-30 ☐ D) Above 30 ☐

2. SEX

A) Male ☐ B) Female ☐

3)Marital Status

A) Single ☐ B) Married ☐ C) Separated ☐ D) Widowed ☐

4. Name of TVET institution attended _____

Zone_____ Woreda _____

5. What level of training did you complete at vocational training institution?

A. Level I ☐ B. Level II ☐ C. Level III ☐ D) Level IV ☐

E) Level V ☐

6. What is your area of specialization? _____

7. Graduation Date: Date _____Month_____Year_____

8. Parent’s highest educational attainment:

I) Father

A. Illiterate ☐ B. Primary School ☐ C. Secondary School ☐

D. College (University) Education ☐

II) Mother

A. Illiterate ☐ B. Primary School ☐ C. Secondary School ☐

D. College (University) Education ☐

9. Parent’s occupation:

A) Father_____ B) Mother_____

10. Have you had any other work experiences during your study?

A) Yes ☐ B) No ☐

11. If your answer for question number **10 is "Yes",** how relevant was to your field of study?

A) Not at all relevant ☐ B) Somewhat relevant ☐ C) fully relevant ☐

12. Did you have interest to be trained in manufacturing technology department?

A) Yes ☐ B) No ☐

PART II. Graduate's perceptions on the quality and relevance of TVET.

How do you rate the following statements on your training? Please answer the questions by putting a tick (✓) in the box given. 5-Strongly agree.4=Agree, 3-undecided, 2-Disagree, 1=strongly disagree.

No	STATEMENTS	5	4	3	2	1
1	TVET courses provide chances of acquiring new skills.					
2.	There are sufficient classrooms, equipment, workshops, and machinery for practical training.					
3.	My teachers/trainers were competent and committed.					
4	The lessons at the training center were interesting.					
5	The supplied training materials (manuals, handouts, illustrations) were relevant and useful.					
6	My training included enough practical lessons.					
7	Extra-curricular activities at the training center helped me to acquire different skills.					
8	While at TVET program, I had plenty of to gain work experiences(e.g. apprenticesh...p)					
9	TVET institutions provide adequate guidance and counseling services.					
10	Training offered at TVET institution is relevant to the existing labor market demands.					

PART III. JOB SEARCH

1. How long did it take to get the job after completing your training?

A) Less than 3 months. ☐

b) Less than 6 months. ☐

c) Less than 1 year. ☐

d) More than one year. ☐

2. How much effort did you put in to your job search?

A) A lot ☐ C) A little ☐

B) Some ☐ D) None ☐

3. How did you get your present job? (Please select one answer only).

A) Through a vacancy advertised in newspaper, internet etc. ☐

B) By contacting employers on my own initiative. ☐

C) Through personal connections (e.g. parents, relatives, friends). ☐

D) Through employment agency. ☐

E) Others (please specify)_____

4. Can you estimate how many jobs you applied for?

A) 1-5 ☐ C) Above 10 ☐

B) 6-1o ☐ D) None ☐

5. How difficult did you find the process of getting a job?

A) Very easy ☐ C) Difficult ☐

B) Easy ☐ D) Very difficult ☐

6. What do you think are the biggest obstacles to getting a job?(multiple choices are possible)

A) Limited employment opportunities in my area of specialization. ☐

B) Lack of career guidance at TVET institutions. ☐

C) Lack of access to job search information. ☐

D) Lack of opportunities to gain relevant work experiences. ☐

E) Lack of right contacts/access to professional networks. ☐

F) Others, please specify-_____

PART IV. Employability Skills

1. To what extent did the TVET institutions studies help you to develop following competencies and skills. Please answer the questions by putting a tick (✓) in the box given. **5=Very high extent, 4=High extent, 3=some extent 2=Barely 1=Not at all**

Employability Skills and Competencies	5	4	3	2	1
3.Transferable Skills					
3.1.Team working					
3.2.Problem solving					
3.3,Adaptability/Flexibility					
3.4.Basic ICT skills					
3.5.Reasoning skills					
3.6.Job-Specific skills					
3.7.Planning and organization skills					
3.8.Interpersonal and communication skills					
3.9.Customer service skills					
3.10.Written communication					

2.How competent are you in the following skills listed below?

5=extremely competent, 4=Very competent, 3=Competent, 2= Least competent,

1=not competent.

Employability Skills and Competencies	5	4	3	2	1
1. Essential Skills					
1.1.Positive attitude to work.					
1.2.Honesty and Integrity.					
1.3.Responsibility					
1.4.Willingness to work.					
1.5.Self-discipline.					
1.6.Basic social skills					
1.7.Basic personal presentation skills					
2. Personal competencies					
2.1.Initiative					
2.2.Self-motivation					
2.3.Self-awareness and confidence					
2.4.Reliability					
2.5.Assertiveness					
2.6.Act independently					
3.Transferable Skills					
3.1.Team working					
3.2.Problem solving					
3.3,Adaptability/Flexibility					
3.4.Basic ICT skills					
3.5.Reasoning skills					
3.6.Job-Specific skills					
3.7.Planning and organization skills					
3.8.Interpersonal and communication skills					
3.9.Customer service skills					
3.10.Written communication					

PART V. Open –ended Questic

1.How should the acquisition of employability skills be promoted at TVET institutions? Give your views.

A) _____

B) _____

C) _____

D) _____

2. What are the major factors that affect TVET graduate employability?

A) _____

B) _____

C) _____

D) _____

E) _____

3. What changes and strategies would you recommend to TVET institutions in Oromia Region that could improve the employability skills and employment opportunities of future graduates?

A) _____

B) _____

C) _____

D) _____

E) _____

Appendix B:Employer Questionnaire

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF CURRICULUM AND TEACHERS PROFESSIONAL DEVELOPMENT

ADDIS ABABA

EMPLOYER'S QUESTIONNAIRE

Dear Employer:

You are invited to participate in a research study. You have been selected to participate in a survey of graduate's employability skills because of your knowledge and experience as an employer. Your perspective is very important and will provide valuable information to better prepare TVET graduates for employment. Thus, the objective of this study is to analyze the employability of manufacturing technology graduates in Oromia Region from the perspectives of graduates and the employers.

The information gained through the research will inform the current status of preparation in terms of employability skills and competency in TVET institutions, identify gaps in student preparation, and indicate opportunities to better prepare graduates with skills needed and expected by employers in the manufacturing industry.

Your participation in this research is completely voluntary. All your answers are confidential. You can withdraw from this research project at any time prior to completing survey questionnaire. Last but not least, I would like to thank you for spending your time to fill up this questionnaire. Your participation will certainly make a significant contribution to my research and my understanding of graduate's employability. I hope that you will respond as honestly and sincerely to each of the questions based on your personal feelings and experiences.

Thank you.

PART I. BACKGROUND INFORMATION OF THE RESPONDENTS

Direction: Please put a ‘ ✓ ‘mark in the appropriate box that corresponds to your choice or write the necessary information needed in brief on the space provided where ever necessary.

1. SEX

A) Male ☐ B) Female ☐

2. AGE

A) 18-25 ☐

B) 26-30 ☐

C) 31-35 ☐

D) 36-40 ☐

E) Above 40 years ☐

3. Your position in the company

A) Managing Director ☐

B) Human resource manager ☐

C) Project manager ☐

D) Supervisor ☐

E) Other: specify_____

4. How many years have you worked in the current position?

A) 1-3years ☐

B) 4-6years ☐

C) 7-10years ☐

D) Above 10years ☐

5. What is your highest education level?

A) Masters ☐

B) Bachelor ☐

C) Diploma ☐

D)Other qualification _____

(Please specify in the space provided)

PART.II. This section seeks to assess the employment status of graduates.

Direction: Please put a '' ✓ ''mark in the appropriate box that corresponds to your choice or write the necessary information needed in brief on the space provided where

necessary.

1.Has your company employed TVET graduates during the past five years?

A) Yes ☐ B) No ☐ C) Not Sure ☐

2. If your answer is yes ,how many, please indicate: _____

3. What educational level of trainees does your organization recruit each year?

A) Level I ☐

B) Level II ☐

C) Level III ☐

D) Level IV ☐

E) Graduates with more than one year's work experience. ☐

4. What kind of procedures does the industry/organization use to recruit graduate employees? (Multiple responses is possible)

A) Advertisements of vacancies in news paper ☐

B) Internal advertisements of vacancies ☐

C) Direct application of graduates ☐

D) Personal contacts to graduates ☐

E)Others(specify) _____

5. How important are the following employability skills and competencies for the recruitment of new graduates? Please indicate the importance of each of the following aspects with help of the scale from 4-very important, 3-important, 2-moderately important, and 1-not important at all.

No.	Skills	4	3	2	1
1.	Academic Qualification.				
2.	Integerity.				
3.	Confidence.				
4.	Presentation skills.				
5.	Team work skills.				
6.	Analysis&decision making skills.				
7.	Flexibility/adaptability.				
8.	Relevant work experience.				
9.	Initiative.				
10.	Communication skills.				

6. Does your organization have sufficient information about the level and range of courses offered at TVET institutions?

A) Yes ☐ B) No ☐

7.If your answer for question 6 is ‘’Yes’’, how did you get the information?

_____ _____

8. The interaction between TVET providers and Industry ıs:

1) Weak ☐ 2) Moderate ☐ 3) Considerable ☐ 4)Strong ☐

9.The involvement of employers in manufacturing technology curriculum development is:

1)Weak ☐ 2)Moderate ☐ 3)Considerable ☐ 4)Strong ☐

PART III. Employability Skills.

1.How competent are TVET graduates in the world of work when viewed from the skills listed below.

5= extremely competent, 4=Very competent, 3=Competent, 2= Least competent,1=Not competent

Employability Skills and Competencies	5	4	3	2	1
1. Essential Skills					
1.1.Positive attitude to work.					
1.2.Honesty and Integrity.					
1.3.Responsibility					
1.4.Willingness to work.					
1.5.Self-discipline.					
1.6.Basic social skills					
1.7.Basic personal presentation skills					
2.Personal competencies					
2.1.Initiative					
2.2.Self-motivation					
2.3.Self-awareness and confidence					
2.4.Reliability					
2.5.Assertiveness					
2.6.Act independently					
3.Transferable Skills					
3.1.Team working					
3.2.Problem solving					
3.3,Adaptability/Flexibility					
3.4.Basic ICT skills					
3.5.Reasoning skills					
3.6.Job-Specific skills					
3.7.Planning and organization skills					
3.8.Interpersonal and communication skills					
3.9.Customer service skills					
3.10.Written communication					

IV. Open-ended Questions

1. What are the major factors do you think affect TVET graduate employability?

A_____

B._____

C) _____

D) _____

E) _____

2. How should TVET institutions promote employability of their graduates?

A_____

B._____

C._____

D) _____

3. What changes and strategies would you recommend to TVET institutions in Oromia Region that could improve the employability skills and employment opportunities of future graduates?

A) _____

B) _____

C) _____

D) _____

Appendix C: The Interview Protocols

Interview Questions (For manufacturing technology department teachers).

This research aims at investigating employability of manufacturing technology graduates in industrial zones in Oromia. Involvement in this interview is entirely voluntary. You may refuse to answer of the interview questions you do not wish to answer. All information you provide will be considered confidential. The interview will take about 30 minutes. If you have any comments or concerns resulting from your participation in this study, please let me know.

Part one: Personal Information

- What is your name?
- What is your major?
- What is your level of qualification?
- How long have you been working in teaching?

Part two: Questions refers to Employability of Graduates

Q.1.Do you think that TVET programs meet labor market requirements?

Q.2.How relevant is the current TVET curriculum to the labor market?

Q.3.which employability skills are main skills in terms of their importance in assisting a smooth transition from TVET to employment sectors?

Q.4.Do you think there is adequate facilities, equipment, machine etc in TVET institutions to implement quality training?

Q.5.Howshould the acquisition of employability skills be promoted at TVET institutions ?

Q.6.To what extent TVET institutions have linkage with industries?

6.1. What type of support do they make for TVET institutions?

6.2. Do they allow the trainees to practice freely in their industry?

6.3. Do they provide sufficient materials for practice?

6.4.Do they assign competent supervisors to support students practice*?*

Q.7.What is the major factors that influence graduate employability?

Q.8.what strategies could improve the employability skills of graduates?

Thank you for kindly cooperation.